2020 Census Count Question Resolution Operation (CQR) Participant Guide

Instructions for Digital Participants and Paper Participants

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BACKGROUND

The Census Bureau estimates that completing this program will take 5.2 hours on average. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to <dcmd.2020.cqr.submissions@census.gov>. This collection has been approved by the Office of Management and Budget (OMB). The eight-digit OMB approval number that appears on the introductory email/letter and on the cover page of this material confirms this approval. If this number were not displayed, the Census Bureau could not conduct this operation. The Census Bureau conducts this operation under the legal authority of the Title 13 U.S. Code, Section 141.

A. Operation Overview

In December 2021, the U.S. Census Bureau announced the 2020 Census Count Question Resolution operation (2020 Census CQR) by distributing an introduction letter and flyer to the highest elected or appointed official in each eligible tribal, state, and local governmental units (GUs) in the United States, including the District of Columbia and Puerto Rico. This operation is open for voluntary participation from January 3, 2022 through June 30, 2023.

The 2020 Census CQR provides a mechanism for GUs to request the Census Bureau review their 2020 Census housing counts. Specifically, tribal chairpersons and the highest elected officials (or their representative) from tribal, state, and local GUs in the 50 states, the District of Columbia, and Puerto Rico can submit a CQR case to request review of their official 2020 Census count of housing and to correct boundary and housing count issues. The 2020 Census CQR is focused on housing inventory (e.g., housing units and group quarters) [1] for specific 2020 tabulation blocks identified by the GU, not the population count[2] for those census blocks, or the overall population count for the GU.

Through this formal process, the Census Bureau reviews cases received to determine whether certain geographic or processing errors affected the 2020 Census count of housing (e.g., housing units and/or group quarters). Corrections made to housing counts by this operation will

[1] A housing unit may be a single-family home, townhouse, condominium, mobile home, trailer, apartment, group of rooms, or a single room occupied as a separate living quarters or, if vacant, intended for occupancy as a separate living quarters. A group quarters is 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. People living in group quarters are usually not related to each other. Group quarters include such places as college residence halls, residential treatment centers, skilled nursing facilities, group homes, military barracks, correctional facilities, and workers' dormitories. For detailed descriptions of group quarters types and codes, refer to the 2020 Census Group Quarters Definitions and Code List.

[2] Population counts for a census block or other geographic units below the state level may seem inaccurate due to disclosure avoidance measures the Census Bureau applies to the published data. Population counts at the block level have the most "noise" of any geographic level due to use of differential privacy to protect against data disclosure. Additional information on both disclosure avoidance and differential privacy is available at the following <www.census.gov/programs-surveys/decennial-census/decade/2020/planning-management/process/disclosure-avoidance.html>.

result in the issuance of new, official 2020 Census counts to the tribal chairperson or highest elected official of all affected GUs, which will also be posted on the CQR website as errata. GUs may use the revised counts for future programs requiring official 2020 Census data products.

IMPORTANT: The URL for the 2020 Census CQR website is <www.census.gov/programs-surveys/decennial-census/decade/2020/planning-management/evaluate/cqr.html>.

The revised counts are integrated into all population estimates released after the 2020 Census CQR case is closed. The American Community Survey (ACS) and Puerto Rico Community Survey (PRCS) use population totals from the Population Estimates Program at the incorporated place, minor civil division, and county levels to adjust the population totals published by the survey. Thus, to the extent that the population estimates incorporate the 2020 Census CQR results, the ACS and PRCS will also reflect those revisions.

Note: The Census Bureau will not incorporate CQR revisions into the 2020 Census data summary files and tables or re-tabulate any of the other 2020 Census data products.

B. Eligible Participants

The Census Bureau will only accept cases from the eligible participants listed below. A file of eligible participants, including the entity identification codes, is available for reference from the CQR website.

- Tribal areas, including federally recognized American Indian tribes with reservation and/or off-reservation trust lands, Alaska Native Regional Corporations, and Alaska Native villages.
  - Federally recognized American Indian tribes can ask the Census Bureau to review their legal boundary and the housing counts for any of the 2020 tabulation blocks within their American Indian reservation or off-reservation trust lands.
    - A review of statistically defined boundaries (e.g., boundaries of the tribal designated statistical areas (TDSAs), Oklahoma tribal statistical areas (OTSAs), and OTSA tribal subdivision) is out of scope for 2020 Census CQR.
  - Alaska Native Regional Corporations (ANRCs) can ask the Census Bureau to review their legal boundary and the housing counts for any of the 2020 tabulation blocks within their regional corporation boundary.
    - A review of the statistically defined Alaska Native village statistical area (ANVSA) boundaries is out of scope for 2020 Census CQR.
  - Alaska Native villages can ask the Census Bureau to review the housing counts for any of the 2020 tabulation blocks within their ANVSA.
    - A review of the statistically defined ANVSA boundaries is out of scope for 2020 Census CQR.
- States and equivalent entities (e.g., District of Columbia and Puerto Rico).
  - States and equivalent entities can ask the Census Bureau to review their legal boundary and the housing counts for any of the 2020 tabulation blocks within their jurisdiction.

    - States and equivalent entities can also ask the Census Bureau to review the boundaries for all legally functioning governments within their jurisdiction.
        - Hawaii can ask the Census Bureau to review the boundaries for the Hawaiian home lands and census designated places within their state.
        - Puerto Rico can ask the Census Bureau to review the boundaries for their sub-minor civil divisions (e.g., subbarrios).
        - A review of the statistically defined boundaries, such as those for state designated tribal statistical areas (SDTSAs) is out of scope for 2020 Census CQR.
- Counties and equivalent entities (e.g., parishes in Louisiana, boroughs in Alaska, municipios in Puerto Rico).
    - Counties and equivalent entities can ask the Census Bureau to review their legal boundary and the housing counts for any of the 2020 tabulation blocks within their jurisdiction.
    - Counties and equivalent entities can also ask the Census Bureau to review the boundaries for all legally functioning governments within their jurisdiction.
        - Counties in Hawaii can also ask the Census Bureau to review the boundaries for the census designated places within their jurisdiction because they are the equivalent of an incorporated place.
        - Municipios in Puerto Rico can also ask the Census Bureau to review boundaries for their sub-minor civil divisions (e.g., subbarrios).
- Minor civil divisions (e.g., townships).
    - Minor civil divisions can ask the Census Bureau to review their legal boundary and the housing counts for any of the 2020 tabulation blocks within their jurisdiction.
    - Minor civil divisions can also ask the Census Bureau to review the boundaries for all legally functioning governments within their jurisdiction.
- Consolidated cities.
    - Consolidated cities can ask the Census Bureau to review their legal boundary and the housing counts for any of the 2020 tabulation blocks within their consolidated city.
- Incorporated places (e.g., villages, towns, cities).
    - Incorporated places can ask the Census Bureau to review their legal boundary and the housing counts for any of the 2020 tabulation blocks within their incorporated place.
        - Because census designated places in Hawaii are the equivalent of an incorporated place, they can ask the Census Bureau to review the boundary and housing counts for their census designated place.

C. Case Types

There are two case types for 2020 Census CQR: boundary and housing count. A submission can include both case types.

Boundary cases request a Census Bureau review of legal boundaries[3] in effect as of January 1, 2020, and the associated housing affected by the boundaries. Boundary cases may correct the inaccurate recording of boundaries legally in effect on January 1, 2020 and update the housing counts for the blocks affected by the boundary correction if the GU supplies the required individual, residential address records for the affected blocks.

Boundary cases must include:

- A map (digital or hard copy) indicating the portion of the boundary that the Census Bureau potentially depicted incorrectly, as well as depicting the corrected boundary.
  - Locally created maps must include the 2020 tabulation blocks and block numbers associated with the boundary correction.
  - GUs must follow boundary correction guidance as detailed in the Boundary and Annexation Survey (BAS) Respondent Guide that applies to the method of CQR participation. Non-tribal, digital participants use "2021 BAS Guide – Digital" while tribal digital participants use "2021 BAS Guide – Tribal Digital." Both non-tribal and tribal paper participants use "2021 BAS Guide – Paper." These guides are available for download on the CQR website. Additional guides are on the CQR website for participants that plan to use the Geographic Partnership Update Software (GUPS) to prepare their CQR case.
- A list (digital or hard copy) of residential addresses in the 2020 tabulation blocks affected by the incorrect boundary, indicating their correct coordinates or location in relation to the boundary. This list must follow the style from the Address List Template File provided by the Census Bureau as detailed in section **1.5**.
- Supporting documentation, as described in section **D** of the guide. Note that supporting documentation for boundary cases may include legal documentation for certain circumstances.

Note: Boundary changes effective after January 1, 2020, boundary corrections submitted without individual address records, and boundary corrections that do not affect housing counts are out of scope for 2020 Census CQR. GUs are encouraged to participate in the annual Boundary and Annexation Survey to make boundary updates that are out of scope for CQR. To learn more review the BAS website: <www.census.gov/programs-surveys/bas.html>.

Housing count cases request a Census Bureau review of the geographic location or placement of housing within specified 2020 tabulation blocks (i.e., a potential geocoding issue), as well as a review of the enumeration records for census processing errors that excluded valid housing (i.e., a potential coverage issue).

[3] With one exception (e.g., census designated places in Hawaii) only legal boundaries are in scope for inclusion with a 2020 Census CQR boundary case. Because census designated places in Hawaii are treated as legal boundaries (per an agreement between the state and the Census Bureau), the state of Hawaii and its counties can request the Census Bureau review, and potentially correct, the boundaries of census designated places within their jurisdiction. Census designated places in Puerto Rico and the tribal statistical areas mentioned as eligible geographies for review are ineligible for submission as a boundary case.

Note: Housing count cases may also be termed "count cases" in various 2020 Census CQR materials; however, GUs can only request a review of housing counts during 2020 Census CQR. They cannot request a review of population counts.

Housing count cases with geocoding issues may correct inaccurate geographic locations or placement of housing within the correct GU legal boundaries and 2020 tabulation blocks. Housing count cases with coverage issues may result in the addition of specific housing identified during the census process, but erroneously excluded from enumeration. Coverage corrections are limited to census processing errors, i.e., erroneous exclusions of housing identified as existing in census records as of April 1, 2020.

Housing count cases must include:

- A list (digital or hard copy) that includes the contested 2020 tabulation blocks in their GU, their current housing counts, and the corrected housing counts for both housing units and group quarters as of April 1, 2020. This list must follow the style from the CQR Block Count List Files provided by the Census Bureau as detailed in section **1.2**.
- Supporting documentation, as described in section **D**.

Note: Please be aware that corrections to the housing counts may not change the total housing and/or population counts for the GU. Situations arise where the redistribution of housing counts between blocks will change the respective housing counts for those blocks, but not result in an overall increase/decrease for the GU.

D. Supporting Documentation

The Census Bureau requires specific information from the GU before committing resources to investigate a CQR case. The Census Bureau labels this specific information as supporting documentation. In general, supporting documentation includes information or details that assist the Census Bureau with reviewing and processing a CQR case. Include supporting documentation with the CQR case submission .zip file or paper case materials. Use the bullets below as a checklist when preparing the supporting documentation for your GU's 2020 Census CQR case submission.

Supporting documentation for a <u>boundary case</u> includes:

- Written correspondence from the highest elected or appointed official, or their designated representative, that:
  - Specifies the case disputes the location of a legal boundary within the GU. If the case also disputes the housing count, then review the information below that outlines the supporting documentation for a housing count case.
    - Consider inclusion of a summary that confirms the contents of the submission, i.e., like an inventory of the case.
  - Discusses and certifies the accuracy and validity of the source materials used to prepare the case by including information on the creation date/timeframe, usual use, and maintenance cycle.

        - Source(s) must include the legal boundary in effect as of January 1, 2020 and the addresses affected by the boundary correction as of April 1, 2020. More recent source material must include a way to determine the boundary and addresses that were valid on January 1, 2020 and April 1, 2020, respectively.
- Confirmation the boundary was legally in effect as of January 1, 2020.
    - If required by state law, the GU must also provide evidence the required state agency approved the boundary change and provide a statement that the boundary is not under litigation.
- Legal documentation describing legal boundary changes to the GU, which may include annexations, incorporations, etc. Local laws, ordinances, or other types of legal documentation would fulfill this requirement.
    - Legal documentation is only required if it is applicable for the boundary correction submitted for CQR. It may not apply in all instances of boundary cases.
    - Legal documentation, as cited in the Boundary and Annexation Survey materials, includes change type (e.g., annexation, deannexation, boundary correction, and other), authorization type (e.g., ordinance, resolution, local law, state-level action, and other), documentation number, and effective date (i.e., month, date, year).
- Confirmation the individual addresses included in the Address List Template are residential and were available for occupancy[4] on April 1, 2020.

Supporting documentation for a housing count case includes:

- Written correspondence from the highest elected or appointed official, or their designated representative, that:
    - Specifies the case disputes the housing counts for one or more 2020 tabulation blocks within the GU and includes details, if known, about the suspected housing count error(s). If the case also disputes a GU boundary, review the information above that outlines the supporting documentation for a boundary case.
        - Provide as much detail as possible about the housing count discrepancy to assist the Census Bureau with its research of your GU's case. Examples of valid details to include might be information about the conversion of a commercial building into residential housing units prior to April 1, 2020, or an incorrect geocode of an address to the incorrect side of the street.
        - Consider inclusion of a summary that confirms the contents of the submission, i.e., like an inventory of the case.
    - Discusses and certifies the accuracy and validity of the source materials used to prepare the case by including information on the creation date/timeframe, usual use, and maintenance cycle.
        - Source(s) to revise the housing counts must include the addresses as of April 1, 2020. More recent source material must include a way to determine the addresses that were valid on April 1,2020.
- Confirmation that the updated count information includes only residential addresses that existed and were available for occupancy on April 1, 2020.

[4] The Census Bureau uses the terminology "available for occupancy" to mean the housing was closed to the elements, i.e., final roof, windows, and doors in place on April 1, 2020.

IMPORTANT: If the GU's case asks for a review of both the boundary and housing counts, the GU must include supporting documentation for both case types.

E. Getting Help and Using this Guide

The CQR website provides useful content on 2020 Census CQR. A glossary of geographic and census terminology and a main Census glossary are available online for reference. For questions not covered in the materials available online or in this guide, contact the Census Bureau by email at <dcmd.2020.cqr.submissions@census.gov> or by phone at (888) 369-3617.

This guide provides specific instruction through "Step – Action and *Result(s)*" tables, where the Action is usually a command or action to perform a task and the *Result(s)* of the action(s) display in *italics*. Hyperlinks appear as underlined, light blue text. Because this material combines instruction for both digital and paper participants, readers can navigate to chapters, tables, figures, and appendices by use of the Table of Contents and by use of cross-referenced links shown in **bold blue font**. Part 1 introduces the operation itself. Part 2 focuses on digital participation, while Part 3 covers paper participation. Part 4 concludes with the next steps for the operation. Lastly, the appendices provide important, supplemental information. All participants use the information within Parts 1 and 4. Digital participants use specific instructions from Part 2 while paper participants use the instructions in Part 3.

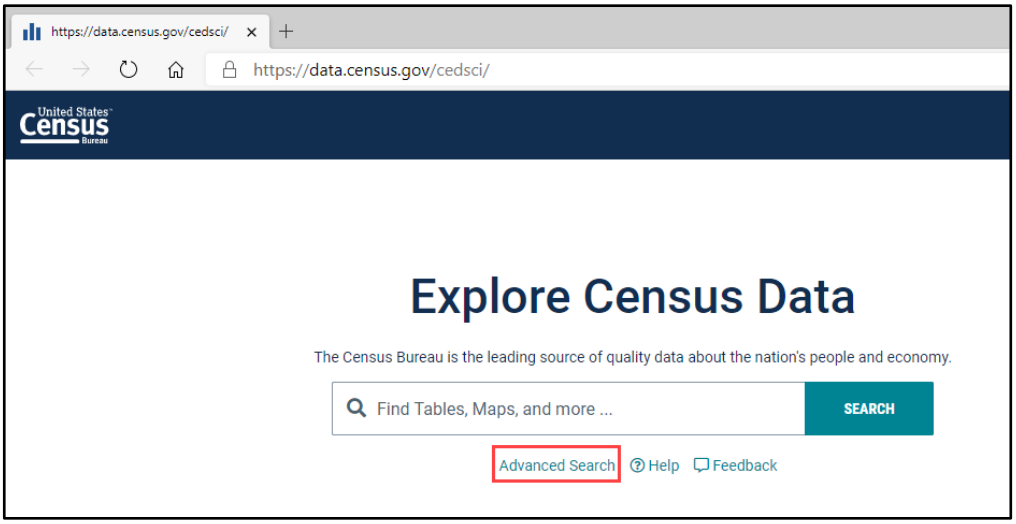
IMPORTANT: The CQR website as well as the tools and materials in support of the 2020 Census CQR were in the final stages of development when this guide was created. As a result, the images may vary slightly. Though the images may differ, the overall instruction, actions, and results remain consistent with what is anticipated in the finalized versions.

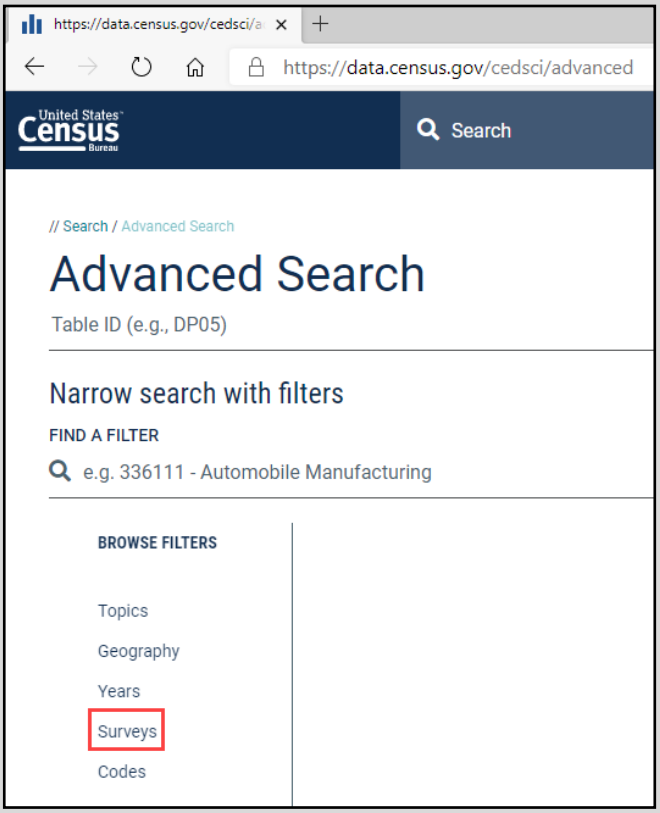
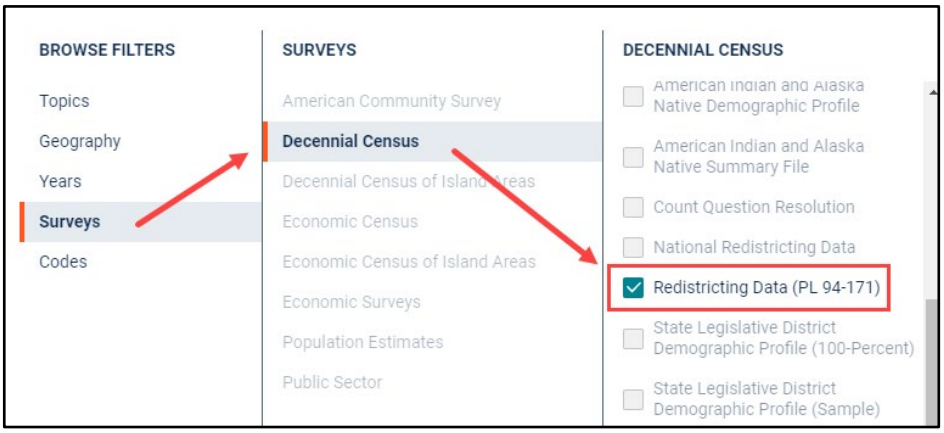
PART 1 INTRODUCTION TO 2020 CENSUS CQR

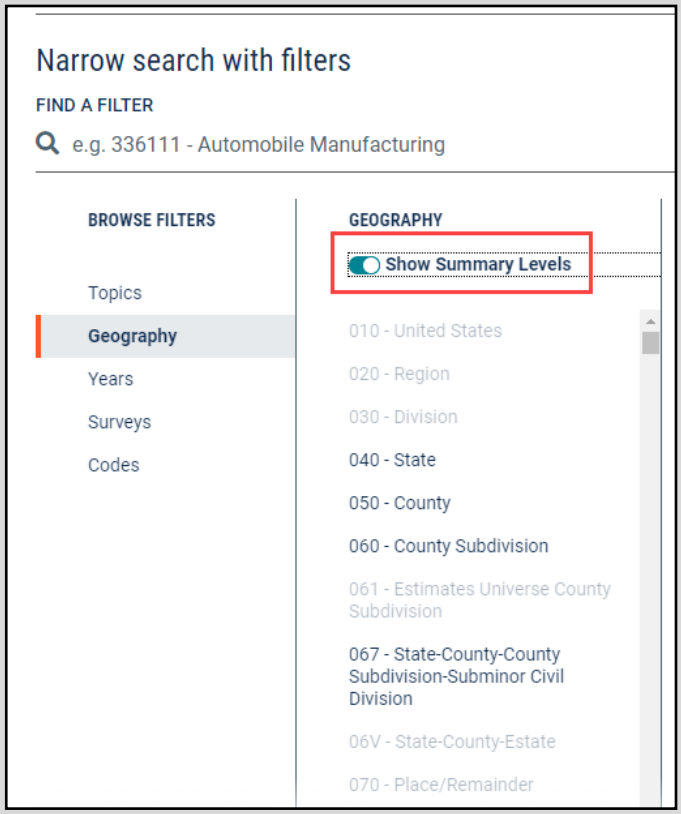
This first part of the guide begins by detailing the initial step, reviewing the overall 2020 Census results. Subsequent chapters in this part of the guide detail the tools and materials for use in 2020 Census CQR and provide two high-level examples for conducting a detailed review of the 2020 Census results.

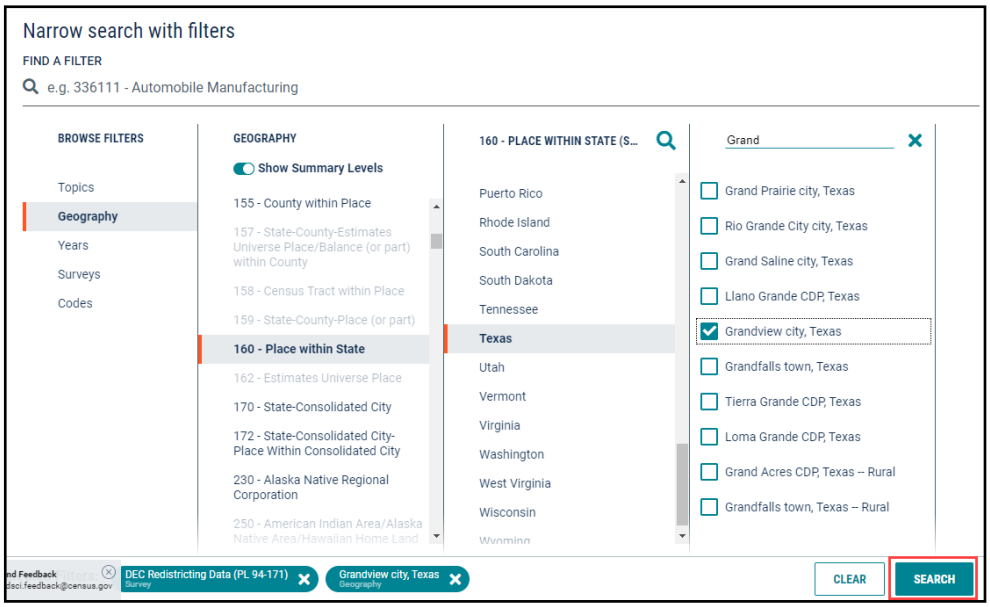
The initial step for 2020 Census CQR is to review your GU's overall 2020 Census results to determine if they align with your GU's expectations. **Table 1** provides the steps to locate the 2020 Census results using the <data.census.gov> website. Refer to appendix **A1** for more information.

Table 1: Locating a GU's 2020 Census Counts for Total Population and Total Housing

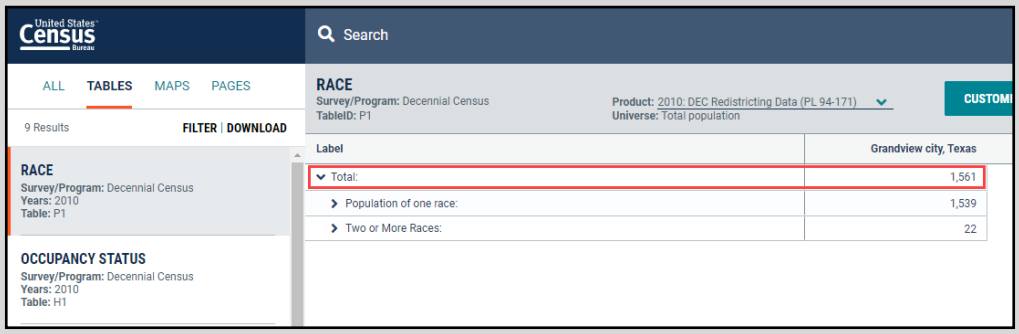
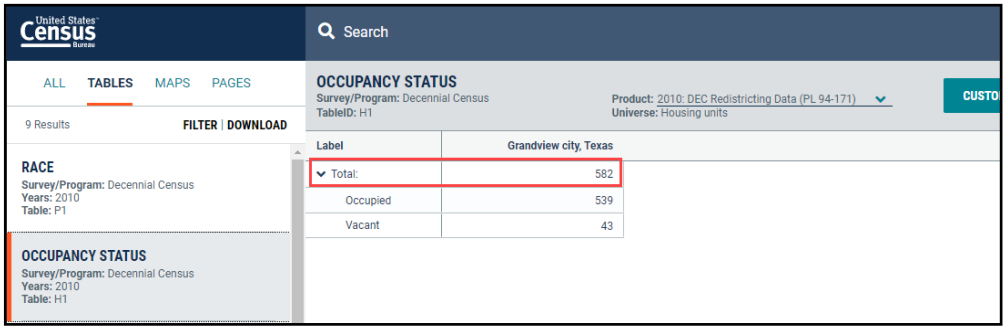
Step	Action and *Result(s)*
Step 1	Access <data.census.gov> and choose **Advanced Search**. 

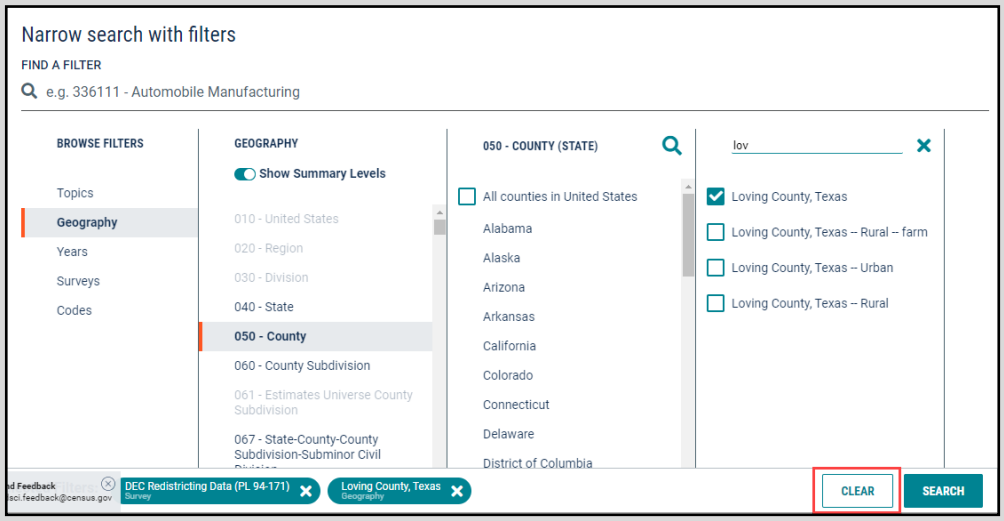
Step	Action and *Result(s)*
Step 2	From the left margin of the page beneath **Browse Filters**, choose **Surveys**. This allows for the selection of the proper dataset to use to conduct your search. 
Step 3	In the list of surveys that appear, scroll down to select **Decennial Census** then select **Redistricting Data (P.L. 94-171)**. 

Step	Action and *Result(s)*
Step 4	With the **Redistricting Data (P.L. 94-171)** survey still selected, choose the **Geography** filter along the left margin of the window and toggle on **Show Summary Levels**. 

Step	Action and *Result(s)*
Step 5	Choose the level of geography that matches your GU and continue to select the subsequent levels of information until you reach the list with your GU. Select **Search**. In the example below, Texas is selected in the summary level (second) column, and then rather than scrolling through the entire list of places in Texas, the image shows “Grand” entered as a search method in the top of the third column. This reduces the number of places to scroll through and allows for easier selection of “Grandview city, Texas.” It is important to note that multiple selections can be made prior to choosing Search. 

Step	Action and *Result(s)*
Step 6	A new window appears with the results of the search. **Table P1 – Race** includes the total population while **Table H1 – Occupancy Status** includes the total housing unit count. Not shown in the screenshot above is a new table for 2020 known as **Table P5 – Group Quarters Population by Major Group Quarters Type**. The new table, shown in the image below taken from the 2020 Census State (P.L. 94-171) Redistricting Summary File Technical Documentation, includes 10 fields of information and the total group quarters population by the major group quarters types. **P5. GROUP QUARTERS POPULATION BY MAJOR GROUP QUARTERS TYPE [10]** *Universe: Population in group quarters* Total: P0050001 03 9 Institutionalized population: P0050002 03 9 Correctional facilities for adults P0050003 03 9 Juvenile facilities P0050004 03 9 Nursing facilities/Skilled-nursing facilities P0050005 03 9 Other institutional facilities P0050006 03 9 Noninstitutionalized population: P0050007 03 9 College/University student housing P0050008 03 9 Military quarters P0050009 03 9 Other noninstitutional facilities P0050010 03 9
	The screenshots in this table show results from the 2010 Census because at the time of preparation of this material the 2020 Census information was unavailable. When 2020 Census CQR begins the tables will reflect 2020 information and Table P5 will be available.

Step	Action and *Result(s)*
Step 7	Selecting **Table P1 - Race** opens with the total population shown at the very top of the table. For 2010, Grandview city, Texas, had total population of 1,561. If the population figure that appears is not what Grandview anticipates as its total population, they may want to investigate further by reviewing the information in tables H1 and P5. 
Step 8	Selecting **Table H1 – Occupancy Status** opens with the total housing units shown at the very top of the table. For 2010, Grandview city, Texas, had a total of 582 housing units. If this housing unit figure is not what Grandview anticipates, they may want to investigate further by reviewing the census block level data that is available in the CQR Block Count List Files and/or in the 2020 Address Count Listing Files Viewer. Both of those are described in Chapter 1.  IMPORTANT: The total in Table H1 does not include group quarters. To see the group quarters population information, Grandview city, Texas, would review the results **in Table P5 – Group Quarters Population by Major Group Quarters Type**. The information in Table P5 is an indicator of the presence of a group quarters, but does not provide a count of the group quarters themselves. If the information in the Table P5 seems incorrect, then additional research is necessary.

Step	Action and *Result(s)*
	The **Clear** button at the bottom right of the page clears all selections (geography and survey) so GUs will have to begin again at Step 3 with reselecting the **Survey** (e.g., **Decennial Census - Redistricting Data (P.L. 94-171)**) and then reselecting the **Geography**. 

In summary, the total population of the GU is found within Table P1, while the total count of housing units is in Table H1. The total group quarters population is in Table P5. There is no table that contains the total count of group quarters.

If, after reviewing the official 2020 Census results using the process described above, a GU believes its official 2020 Census results are inaccurate, they may use information presented in Chapter 1 and Chapter 2 of this guide to conduct a more detailed review of their 2020 Census results. Conducting a detailed review of the 2020 Census results includes a review of the legal boundary and housing counts by 2020 tabulation blocks. Should a GU identify a discrepancy in the legal boundary and/or housing counts at the block level that affects their official 2020 Census count, they may wish to submit a case for 2020 Census CQR.

CHAPTER 1 TOOLS AND MATERIALS FOR 2020 CENSUS CQR

This chapter discusses the preferred tools and materials available to conduct a review of the 2020 Census results and to prepare a case for digital and paper participants. **Appendix A** describes additional materials available for use in 2020 Census CQR, specifically the 2020 Census P.L. 94-171 Redistricting Data Files and Geographic Products and the Census Block-based Work Maps.

The CQR website provides links to all these materials. Contact the Census Bureau by phone at (888) 369-3617 or by email at <dcmd.2020.cqr.submissions@census.gov> if the GU is unable to download the materials from the website. Please be aware the Census Bureau also provides the Geographic Update Partnership Software (GUPS) to prepare a CQR case. Details on GUPS are included in a separate participant guide.

Note: The CQR Block Count List Files, 2021 Partnership shapefiles, and 2020 Census Block Maps have two uses during 2020 Census CQR. They are used to conduct a detailed review of 2020 Census results and to prepare a CQR case. The Address List Template File is only used for preparing a boundary case.

The Census Bureau recommends the creation of a local directory on a local computer workstation or perhaps on a shared network storage area (e.g., a folder named "CQR") to organize the CQR materials. Save the materials, whether downloaded from the CQR website or received in another manner from the Census Bureau, in the newly created directory.

1.1 Address Count Listing Files Viewer

The Address Count Listing Files Viewer is a web-based, map viewer that supplements the address count listing files with an interactive map of census blocks. Users of this tool can select a block on the map or use the Search functionality to obtain the same information contained in the files, such as the total housing in the block. Locate this tool by accessing the following link: 2020 Census Address Count Listing Files Viewer. Searching for a block can be especially useful rather than panning on-screen to visually locate a block.

The viewer uses address count listing files, also known as block count files, that differ slightly from the CQR Block Count List Files used in 2020 Census CQR. It will not display the counts in a manner identical to the CQR Block Count List Files, but it is an effective tool to view the blocks within a GU and the housing counts within the blocks rather than using the other materials outlined in this chapter. The viewer does not allow for edits or exports of the data within it; however, some GUs may wish to conduct the review of their legal boundaries and their 2020 tabulation blocks using this tool instead of the using the materials described in the remainder of this chapter.

Figure 1 provides a visual of how the viewer appears with a block selected (denoted by turquoise boundary instead of purple).

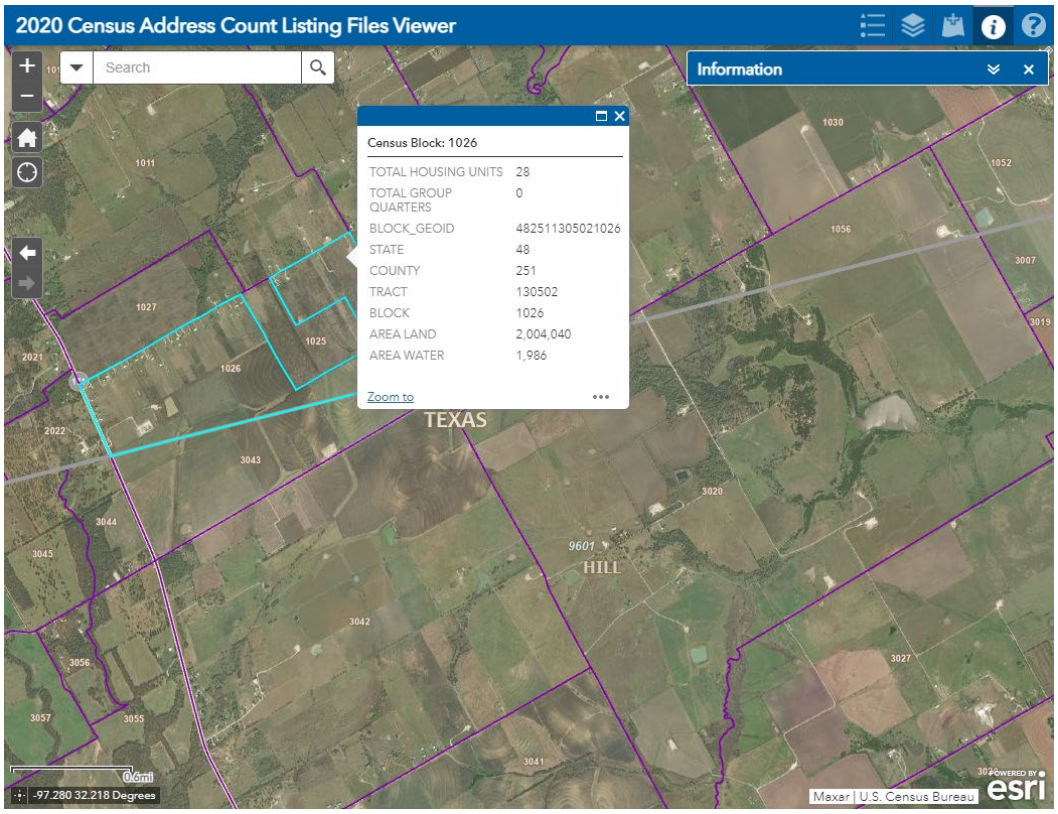


Figure 1: Example of the Address Count Listing Files Viewer with a Block Selected

Note: The "Search by BLOCK_GEOID" option zooms directly to the specific block if the complete block code (STATE, COUNTY, TRACT, and BLOCK) is provided. Locate this option within the Search section along the upper left corner of the viewer or from an icon that will appear just beneath the Search section.

If a discrepancy in either the counts of total residential or total group quarters is identified, the GU can determine whether they want to prepare a housing count case. Digital participants use section **3.2** and paper participants use section **5.2** for details on preparing a housing count case.

1.2 CQR Block Count List Files

The CQR Block Count List Files provide separate housing counts for housing units and group quarters by 2020 tabulation block for each of the 50 states, the District of Columbia and Puerto Rico. The Census Bureau makes these files available as comma separated values (.csv) files (i.e., comma-delimited text files), for use in a geographic information system (GIS) and in GUPS, and as Microsoft Excel workbook (.xlsx) files. GUs use this material with the 2021 Partnership shapefiles (described in section **1.3**) or with the 2020 Census Block Maps (described in section **1.4**) to review their block level housing counts from the 2020 Census. If a given block level housing counts differ from the count the GU anticipated, this material becomes a key component of their CQR case. Instructions for preparing a case using this file are detailed in sections **3.2** (digital participants) and **5.2** (paper participants).

The individual, state-based files contain nine fields of information. **Table 2** provides the field specifications, names, descriptions, and requirements for this material. The last two fields are blank for entering the GU's housing count information (e.g., CQRHU for GU's housing unit counts and CQRGQ for GU's group quarters counts). If a GU chooses to create their own file of corrected housing counts, it must follow the structure outlined below. The Census Bureau will not accept files in the incorrect format or with inadequate information.

Table 2: Details Regarding the CQR Block Count List Files

Field Number	Max Characters	Field Name	Field Description	Required (Yes or No or Recommended)
1	12	ENTITYID	Field to denote the unique identification number assigned by the Census Bureau to each entity. Field is blank for participant to complete.	Yes. Insert the Entity ID for the GU on each record with a revised housing count. Locate this code on the top of the Introduction Letter sent to the Tribal Chair or Highest Elected/Appointed Official in December 2021 or from a file on the CQR website.
2	2	STATEFP	Field to denote the two-digit Federal Information Processing Standards (FIPS) state code.	Prefilled. DO NOT EDIT.
3	3	COUNTYFP	Field to denote the three-digit FIPS county code.	Prefilled. DO NOT EDIT.
4	6	TRACT	Field to denote the six-digit 2020 census tract number, with an implied decimal point between the fourth and fifth digit, consisting of a four-digit base number, including leading zeros, plus two-digit number suffix, with trailing zeros. For example, 123401 and 000300.	Prefilled. DO NOT EDIT.
5	4	BLOCK	Field to denote the four-digit 2020 tabulation block number uniquely numbered from 0000 to 9999 within 2020 census tract. The first digit of the census block identifies the block group.	Prefilled. DO NOT EDIT.
6	4	CENSUSHU	Field to denote the total number of addresses identified as housing units by data in the Master Address File (MAF).	Prefilled. DO NOT EDIT.
7	4	CENSUSGQ	Field to denote the total number of addresses identified as group quarters by data in the MAF.	Prefilled. DO NOT EDIT.

Field Number	Max Characters	Field Name	Field Description	Required (Yes or No or Recommended)
8	4	CQRHU	Field to denote the total number of addresses identified as housing units by CQR participants.	Yes, if housing count discrepancy exists for CENSUSHU; otherwise leave blank.
9	4	CQRGQ	Field to denote the total number of addresses identified as group quarters by CQR participants.	Yes, if housing count discrepancy exists for CENSUSGQ; otherwise leave blank.

IMPORTANT: All fields within this file, or within a file created by the GU, must remain in Text format. This is critical for fields that may include numbers with leading and trailing zeros (e.g., STATEFP, COUNTYFP, TRACT, and BLOCK) to ensure the information remains accurate in those fields.

Figure 2 provides a visual of a CQR Block Count List File with handwritten corrections, but the Census Bureau will also accept housing corrections keyed directly into the template.

ENTITYID	STATEFP	COUNTYFP	TRACT	BLOCK	CENSUSHU	CENSUSGQ	CQRHU	CQRGQ
CO36999	36	999	905100	1004	100	2	99	3
CO36999	36	999	905100	1007	5	1	4	
CO36999	36	999	906100	1009	13	0	12	1

Figure 2: Example of a CQR Block Count List File with Handwritten Corrections

1.3 2021 Partnership Shapefiles

The 2021 Partnership shapefiles are extracts of selected geographic and cartographic information from the Master Address File/Topologically Integrated Geographic Encoding and Referencing (MAF/TIGER) System. The version used for 2020 Census CQR, which is the same version used for the 2021 Boundary and Annexation Survey, includes geographical boundaries as of January 1, 2020 for the United States, District of Columbia, Puerto Rico, and the Island Areas. They include polygon features including boundaries of legal and statistical geographic areas, linear features including roads and hydrography, and point features including landmarks. This version (PVS_20_v2) is the first partnership shapefile source to include the 2020 tabulation geography (i.e., the 2020 census tracts and 2020 tabulation blocks). These shapefiles are used as a reference for the 2020 tabulation blocks and the legal boundaries as of January 1, 2020, by GUs that are using a GIS or GUPS to participate in 2020 Census CQR.

IMPORTANT: Regardless of the year (e.g., 2022 or2023) the GU chooses to review the 2020 Census results and prepare a CQR case, the 2021 Partnership shapefiles (e.g., the PVS_20_v2 file naming convention) is the version of shapefiles required for 2020 Census CQR. This version contains the official boundaries as of January 1, 2020, and the 2020 tabulation blocks without any subsequent year's edits. Using a different version of shapefiles will prevent processing of your case.

The shapefiles do not include demographic data, but they do contain geographic entity codes (e.g., BLOCKID) that can be used to link to block level demographic data in a GIS software. After joining the 2020 tabulation block file (e.g., tabblock shapefile layer) from the 2021 Partnership shapefiles to the CQR Block Count List File, GUs can review their housing counts and perform comparisons/analysis with their own locally sourced data to determine if a housing count discrepancy exists. If a discrepancy is discovered, GUs decide whether to file a housing count case.

IMPORTANT: A concatenation of the STATEFP, COUNTYFP, TRACT, and BLOCK fields in the CQR Block Count List File is required to create a field (i.e., GEOID) for joining with the tabblock layer (e.g., BLOCKID) within the 2021 Partnership shapefiles.

In addition, GUs can use the appropriate boundary layer from the 2021 Partnership shapefiles in comparison with their local sourced boundary data to review their legal boundary and determine whether a boundary discrepancy exists. If a discrepancy is discovered, GUs must determine if the boundary discrepancy is in scope for 2020 Census CQR and whether to file a boundary case. For GUs that decide to prepare a digital boundary case, these shapefiles form the spatial base of the GU's CQR case.

Appendix B provides important information for the 2021 Partnership shapefiles, including information regarding the initial setup of the files and lists the shapefile layers of interest to CQR eligible participants (e.g., tribal areas, states and equivalents, counties and equivalents, minor civil divisions, consolidated cities, and incorporated places). Review the information in that appendix to prepare for the use of this material.

1.4 2020 Census Block Maps

The 2020 Census Block Maps are GU-based maps produced to support the decennial census data release. These large-scale, large format (i.e., 36"x32") maps show and label all 2020 tabulation blocks within a GU. They also show the boundaries, names, and codes for American Indian/Alaska Native areas, Hawaiian home lands, states (or state equivalents), counties (or county equivalents), county subdivisions, consolidated cities, places, and 2020 census tracts. Additionally, these maps show and label (as space allows) base features, such as roads, railroads, and hydrography.

They are Adobe Portable Document Files (PDFs) and are available for all tribal, state, and local GUs eligible to participate in 2020 Census CQR. GUs use these maps as a reference to review their legal boundary and locate the 2020 tabulation blocks to review in combination with the

CQR Block Count List Files to determine if filing a case is necessary. If preparing a boundary case, GUs use them to show their boundary correction and individual map spots for the residential addresses affected by the boundary correction. Maps are not required with a housing count case.

Contact the Census Bureau by email at <dcmd.2020.cqr.submissions@census.gov> or by phone at (888) 369-3617 to discuss alternative access methods if your GU is unable to use these PDFs online or print them locally.

Note: For densely clustered areas of these maps, where features may be cluttered preventing the clear visualization of a GU boundary or of certain small 2020 tabulation blocks, the Census Bureau can create census block-based work maps upon request from the GU. See appendix **A2** for a summary of this product.

The maps are available through a link on the CQR website to the 2020 Census – Census Block Maps web page. The web page has six main map categories (**Figure 3**). GUs locate their maps by selecting the appropriate category for their GU. Continue navigating the subsequent screens that appear to view the maps online. Once open, the map can be downloaded to a local computer rather than continuing to view them online.

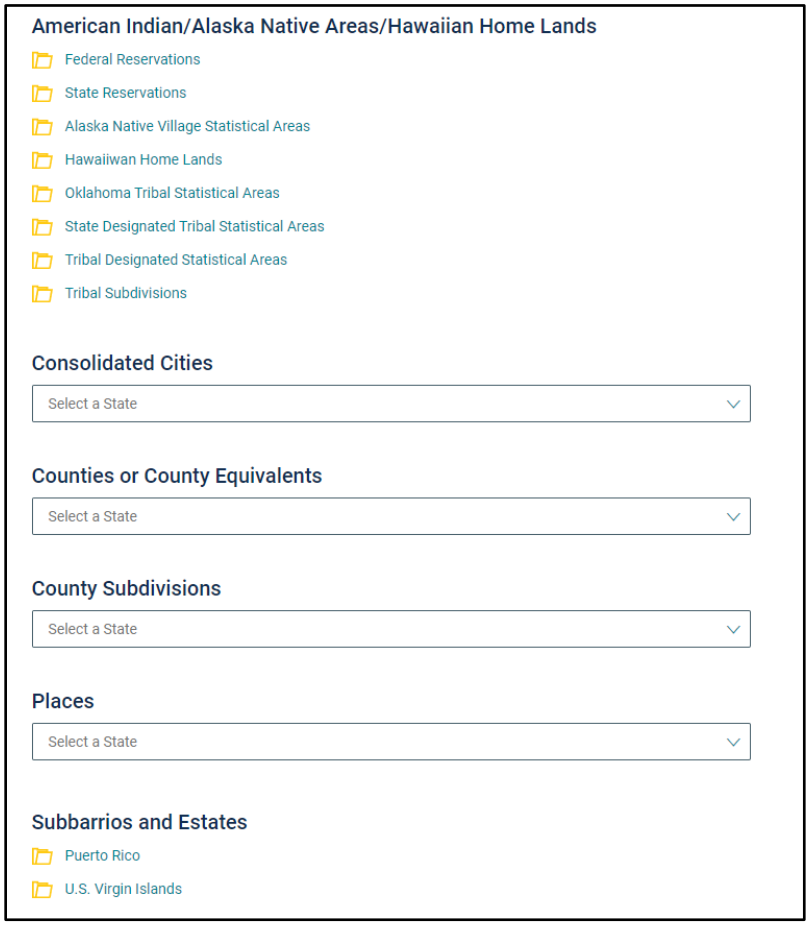


Figure 3: Map Categories on the 2020 Census - Census Block Maps Website

The file naming convention for the 2020 Census Block Maps is as follows: DC20BLK_<entity_type><entity_code>.pdf. For Puerto Rico, maps in Spanish have 'SP' appended to the map project abbreviation (e.g., DC20BLKSP_<entity_type><entity_code>.pdf).

Where "entity_type" is as follows:

- C for county.
- CC for consolidated city.
- CS for county subdivision (e.g., minor civil division and census county division).
- P for incorporated place (e.g., cities, towns, villages, and census designated places).
- FR for federal American Indian reservation.
- SR for state American Indian reservation.
- NV for Alaska Native village statistical areas (ANVSAs for use by Alaska Native villages).
- OT for Oklahoma tribal statistical areas (OTSA).
- SD for State designated tribal statistical areas (SDTSA).
- TD for Tribal designated statistical areas (TDSA).

Where "entity_code" is the FIPS code for the GU or the four-digit census code for the American Indian Areas. States and equivalent entities review these materials by county or lower level of geography. Alaska Native Regional Corporations use the county and/or ANVSA maps to view their ANRC.

If more than one large format map sheet exists in the bundled PDF, GUs must scroll through each sheet to see the entire extent of their GU. Adjust the zoom level as necessary to view the 2020 census tract and 2020 tabulation block numbers on-screen.

IMPORTANT: Use of Adobe Reader® or Acrobat Professional® software is required to properly view and print these PDFs. Other software or browser readers may distort symbology and fill patterns on these maps. Download the free Adobe Reader software from <acrobat.adobe.com/us/en/acrobat/pdf-reader.html>.

There are three types of large format maps: Index, Parent, and Inset. All map types are identified along the lower right margin within the barcode of the map. The lower right margin is also the location of the state and county FIPS information. These maps contain the common elements of most map materials (e.g., title, north arrow, barcode, scale, projection information, source information, coordinate information, etc.) and the map border contains a legend to describe the symbology used within the map. The map examples (e.g., Figures 6 – 10) are prototypes. The final 2020 Census Block Map products may have minor modifications to design and/or content.

A Block-to-Map-Sheet relationship file exists to assist GUs with locating the 2020 tabulation block(s) on the 2020 Census Block Maps. This material, found in the same location as the map files, identifies each 2020 tabulation block in the GU and the map sheet(s) they fall within. The semicolon delimited text file contains a list of all the blocks within the GU's jurisdiction and sheet/grid number that identifies the large format parent sheet(s) or inset sheet(s) where the

block is located. It also includes fields that list the incorporated place, county subdivision, consolidated city, and American Indian/Alaska Native/Native Hawaiian (AIANNH), as applicable.

GUs can open this file with a simple text editor such as Notepad or WordPad or import the file into a spreadsheet software like Microsoft Excel. **Figure 4** shows an example of how a Block-to-Map-Sheet relationship file (e.g., DC20BLK_C38065_BLK2MS.txt) appears when opened in Notepad. The data shown within the example is based on a prototype map example and is for visualization purposes only.

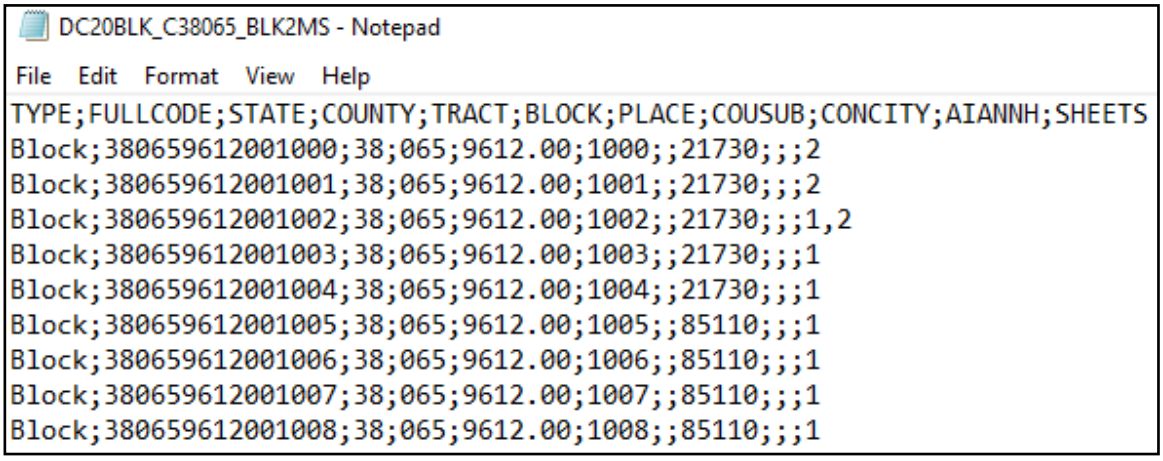


Figure 4: Example of a Block-to-Map-Sheet Relationship File in Notepad

1.4.1 Index Maps

Index map sheets cover the entire extent of the GU. They are divided into numbered grids that correspond to the parent sheets. They exist for GUs with more than one parent sheet and are for reference purposes only. Index map sheets are noted for summarizing the total number of sheets for the GU along the bottom of the right margin. See **Figure 5** for an example.

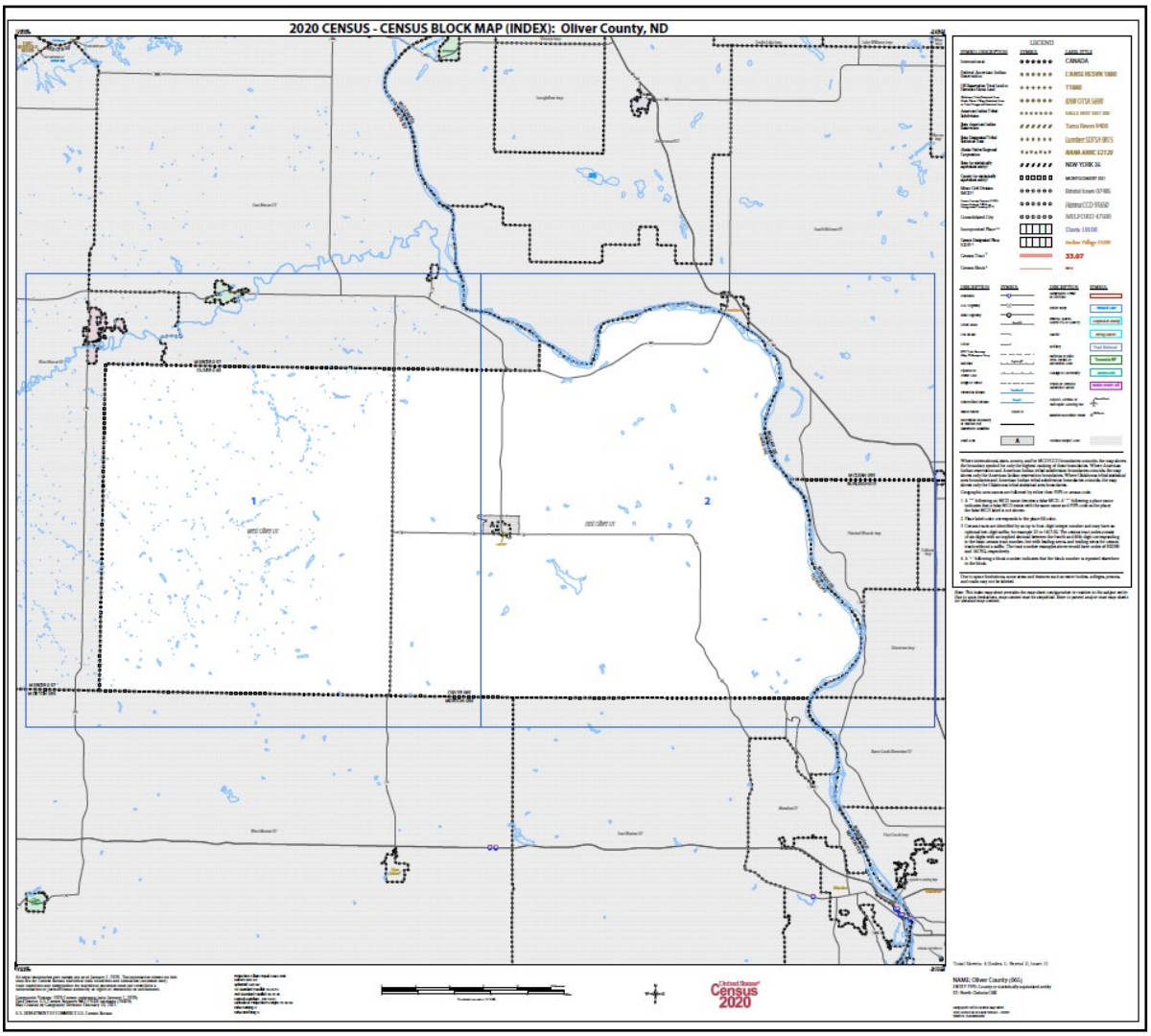


Figure 5: Example of a Large Format Index Map

1.4.2 Parent Maps

Parent map sheets provide a detailed view of a portion of the GU. They correspond to the numbered grid on the index sheet. They show detail for features and geographic areas and are used to identify the 2020 census tract and 2020 tabulation blocks within the GU. The lower right margin of a parent sheet includes a key to adjacent sheets and a sheet location graphic that provide an overview of the map layout for the GU. See **Figure 6** for an example and **Figure 7** for a zoomed depiction showing details of the map content. Note the zoomed example includes the symbology denoting the presence of an inset map (e.g., A).

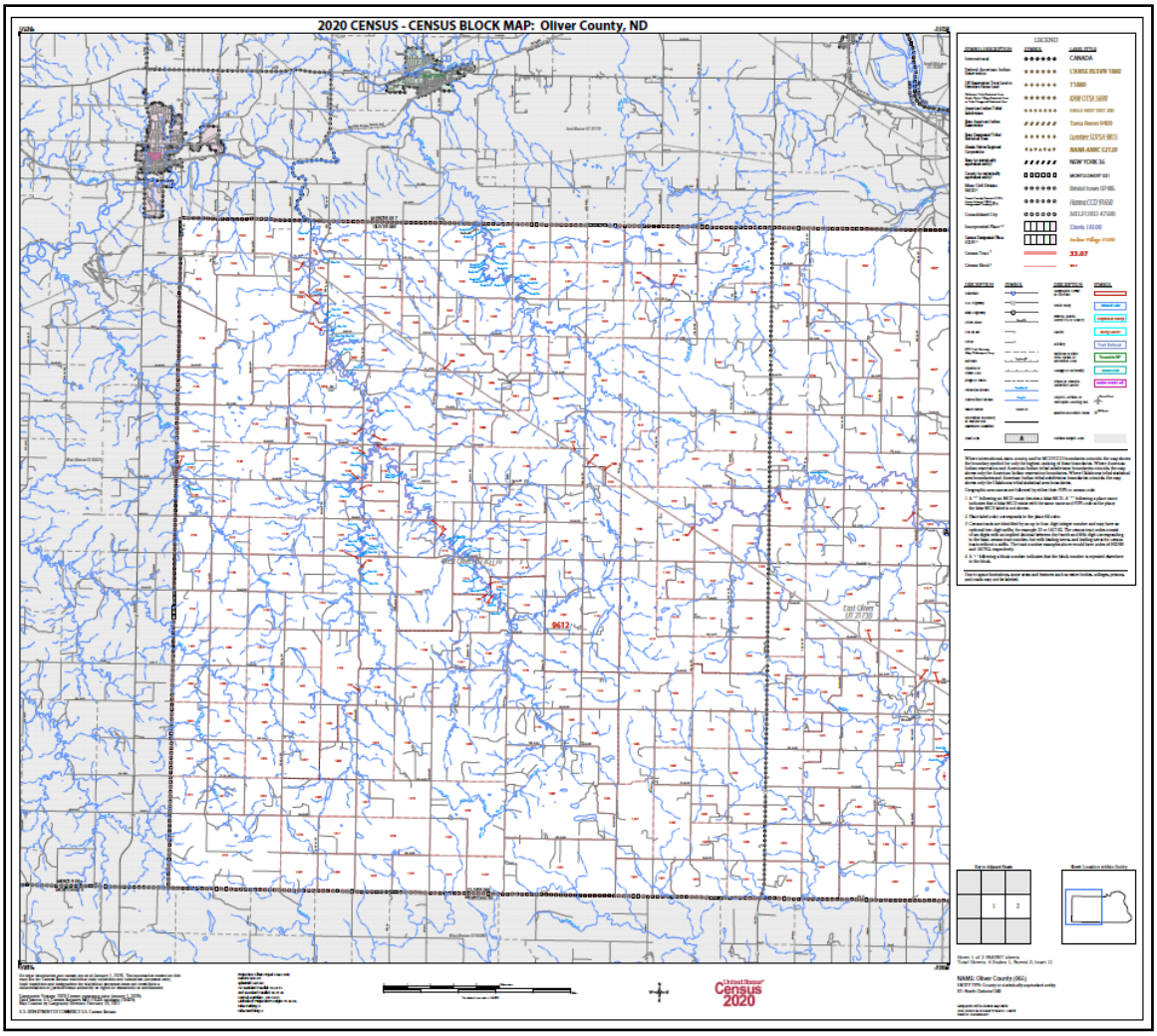


Figure 6: Example of a Large Format Parent Map

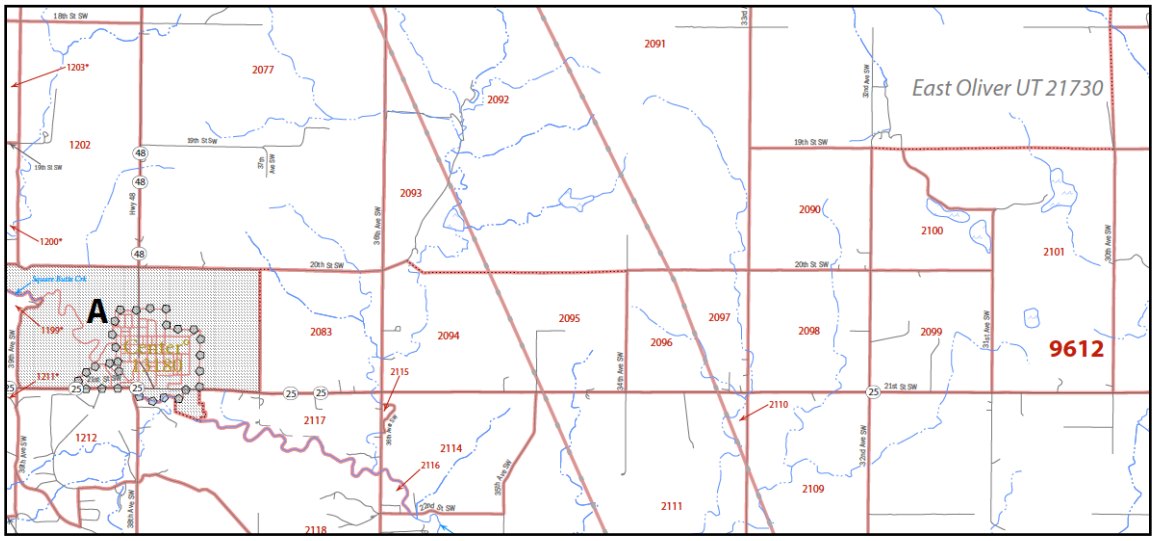


Figure 7: Example of a Large Format Parent Map (Zoomed View)

1.4.3 Inset Maps

Inset map sheets do not exist for every GU or on every parent map sheet. They show detail for congested areas on parent map sheets. They are denoted by an alpha character (e.g., A) and may be multi-sheeted (e.g., A1, A2, B1, etc.). They, like parent sheets, show detail for features and geographic areas and are used to identify 2020 census tracts and 2020 tabulation blocks for a specific area within a GU. See **Figure 8** for an example and **Figure 9** for a visual of the lower right margin of the map that identifies the map type and other important information.

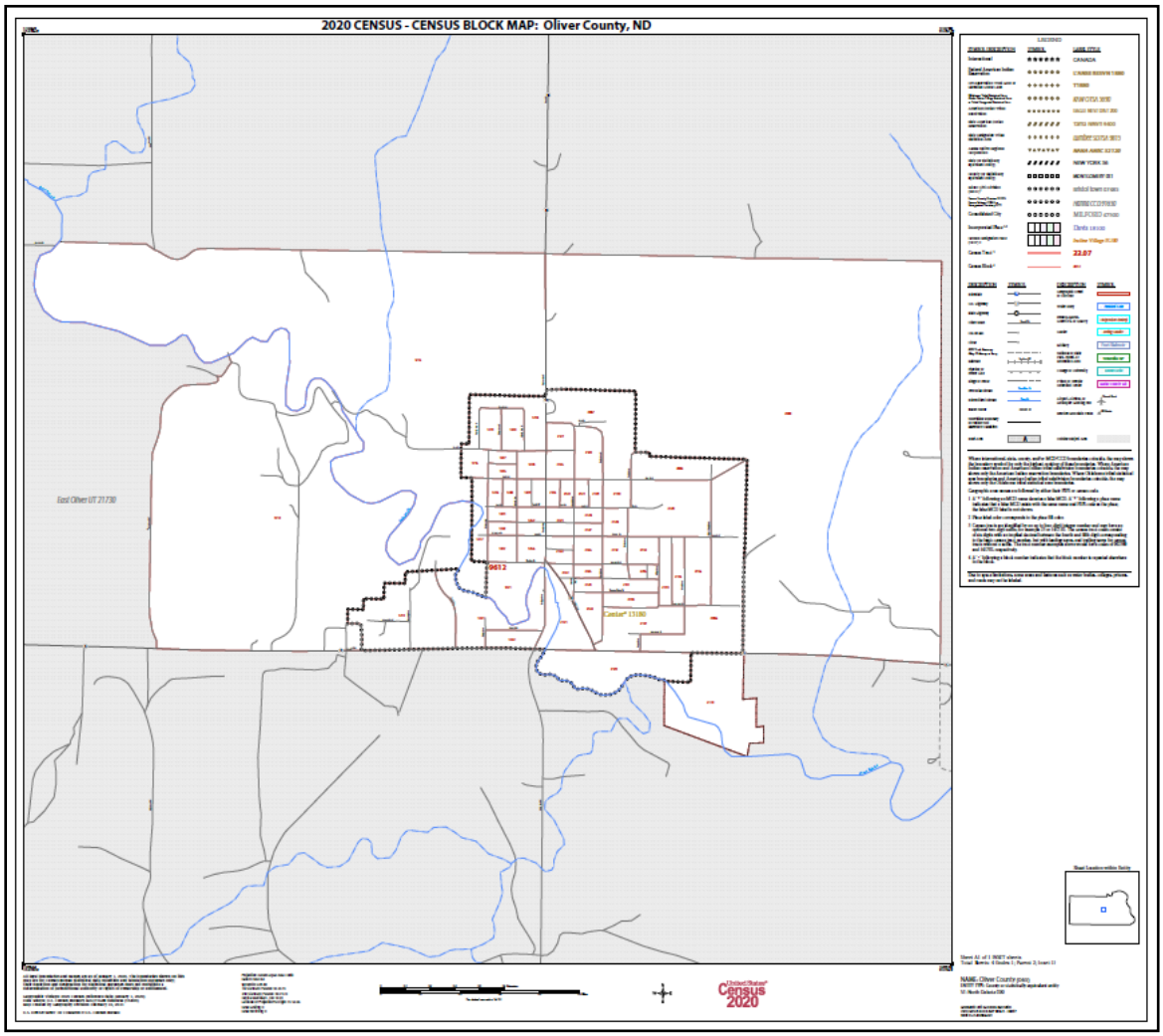


Figure 8: Example of a Large Format Inset Map

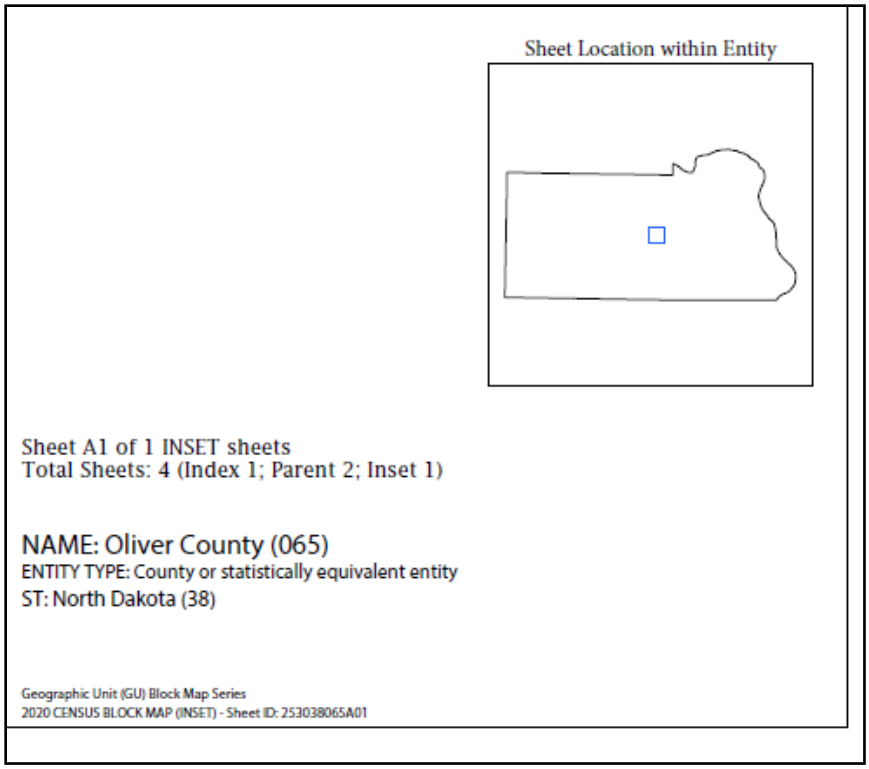


Figure 9: Example of a Large Format Map Margin

1.5 Address List Template File

IMPORTANT: CQR cases that do not contain a boundary discrepancy (i.e., a boundary case type) can skip this section. This file is only used to submit individual, residential addresses affected by a boundary correction.

If a GU discovers a boundary discrepancy when conducting their review of 2020 Census results and wants to prepare a CQR case, they may use this file to prepare their list of residential addresses to accompany their boundary correction. The Address List Template File is available either as a comma separated values (.csv) file (i.e., comma-delimited text file)or as a Microsoft Excel® workbook (.xls) file. It contains a header row with 25 fields of information formatted as Text. **Table 3** provides the field specifications, names, descriptions, and requirements for this material. As recommended in section **1.2**, save this file in the newly created local directory (e.g., CQR) with the other CQR related materials.

GUs use this file as a digital participant or print the template with the header and blank rows for use as a paper participant. If a GU chooses to create their own file and not use this material, the locally created file must follow the structure of the Address List Template File exactly. The Census Bureau will not accept addresses in the incorrect format or with inadequate information. Instructions for preparing a case using this file are detailed in sections **3.1** (digital participants) and **5.1** (paper participants).

Table 3: Details Regarding the Address List Template File

Field Number	Max Characters	Field Name	Field Description	Required (Yes or No or Recommended)
1	1	CITY_STYLE_FLAG	Field to denote the address record as city style or non-city style. Enter 'Y' for city style or an 'N' for non-city style.	Yes, for all records.
2	1	GQ_FLAG	Field to denote the address record as a group quarters. Enter 'G' for group quarters.	Yes, if adding a group quarters address.
3	12	ENTITY_ID	Field to denote the unique identification number assigned by the Census Bureau to each entity. Locate this code on the top of the Introduction Letter sent to the Tribal Chair or Highest Elected/Appointed Official in December 2021 or from a file on the CQR website.	Yes, for all records (please copy/paste this information to all records added to the template).
4	2	STATE	Field to denote the two-digit FIPS state code.	Yes, if not using shapefiles. Must also complete the 'COUNTY', '2020_TRACT', '2020_BLOCK', and 'MAPSPOT' fields.
5	3	COUNTY	Field to denote the three-digit FIPS county code.	Yes, if not using shapefiles. Must also complete the 'STATE', '2020_TRACT', '2020_BLOCK', and 'MAPSPOT' fields.

Field Number	Max Characters	Field Name	Field Description	Required (Yes or No or Recommended)
6	6	2020_TRACT	Field to denote the six-digit 2020 census tract number, with an implied decimal point between the fourth and fifth digit, consisting of a four-digit base number, including leading zeros, plus two-digit number suffix, with trailing zeros. For example, 123401 and 000300.	Yes, if not using shapefiles. Must also complete the 'STATE', 'COUNTY', '2020_BLOCK', and 'MAPSPOT' fields.
7	4	2020_BLOCK	Field to denote the four-digit 2020 tabulation block number uniquely numbered from 0000 to 9999 within 2020 census tract, which nest within state and county. The first digit of the census block identifies the block group.	Yes, if not using shapefiles. Must also complete the 'STATE', 'COUNTY', '2020_TRACT', and 'MAPSPOT' fields.
8	35	COMPLETE_ADDRESS_NUMBER	Field to denote the housing unit or group quarters assigned address number, alone or with an address number prefix and/or address number suffix that identifies a location along a thoroughfare or within a community. For 123 Main St, the "123" is the complete address number.	Yes, if 'Y' appears in 'CITY_STYLE_FLAG' field.

Field Number	Max Characters	Field Name	Field Description	Required (Yes or No or Recommended)
9	100	COMPLETE_STREET_NAME	Field to denote the full street or road name. The official name of a thoroughfare as assigned by a governing authority or used and recognized alternate (alias) name. For 123 Main St, “Main St” is the complete street name. For 456 W Apple St N, “W Apple St N” is the complete street name.	Yes, if ‘Y’ appears in ‘CITY_STYLE_FLAG’ field.
10	65	APTUNIT_NUMBER	Field to denote the combination of within structure descriptor and identifier, e.g., "Apt 1", "Ste 22", “Unit A”, “Bldg 2 Unit 10”, etc. Populate with a value other than one already used for the address.	Yes, if the address is a duplicate (same State/County/Tract/ Block, House #, Street Name, ZIP or Lat/Long, House #, Street Name, ZIP). Commonly occurs with multi-unit addresses.
11	5	MAILING_ZIP_CODE	Field to denote the five-digit United States Postal Service (USPS) mailing ZIP Code for the city style address.	Yes, if a ‘Y’ appears in the ‘CITY_STYLE_FLAG’ field. It must be five-digit numeric characters only. Cannot be "00000", "11111", "33333", "66666", "77777", "88888", or "99999."
12	50	URBANIZACION	Field to denote the name of the neighborhood or group of houses (e.g., URB Manzana or URB Flora).	FOR PUERTO RICO RECORDS ONLY. Required if an ‘Urbanizacion’ based address. Providing as much information about the address as possible helps the Census Bureau with CQR research.

Field Number	Max Characters	Field Name	Field Description	Required (Yes or No or Recommended)
13	100	CONDO_RES	Field to denote the name of the residential complex of apartments, condominiums, or public housing (e.g., Cond Jardín de Rosas or apartamentos de árboles verdes).	FOR PUERTO RICO RECORDS ONLY. Required if a Condominium, Apartment Complex, Public Housing based address. Providing as much information about the address as possible helps the Census Bureau with CQR research.
14	22	COMPLEX_DESCRIPTOR	Field to denote the descriptor or identifier of the building (e.g., Torre 2 o Edificio III).	FOR PUERTO RICO RECORDS ONLY. Recommended if known. Providing as much information about the address as possible helps the Census Bureau with CQR research.
15	50	AREA1	Field to denote the name of a geographic area that typically delimits a neighborhood. Include the type of neighborhood barrio (BO), sector (SEC), neighborhood barriada (BDA), community (COM), or parcel (PARC) with the geographical name.	FOR PUERTO RICO RECORDS ONLY. Recommended if known. Providing as much information about the address as possible helps the Census Bureau with CQR research.
16	50	AREA2	Field to denote the name of a geographic area that typically delimits a neighborhood. Include the type of sector (SEC), neighborhood (BDA), community (COM), or parcel (PARC) with the geographical name	FOR PUERTO RICO RECORDS ONLY. Recommended if known. Providing as much information about the address as possible helps the Census Bureau with CQR research.

Field Number	Max Characters	Field Name	Field Description	Required (Yes or No or Recommended)
17	12	KMHM	Field to denote the road marker values in kilometers and hectometers.	FOR PUERTO RICO RECORDS ONLY. Recommended if known. Providing as much information about the address as possible helps the Census Bureau with CQR research.
18	100	GQ_NAME	Field to denote the name of group quarters (e.g., Dobbs Hall, Bayside Nursing Home, Eastfork Prison, or Salón Jiménez).	Yes, if 'G' in 'GQ_FLAG' field. Cannot be "null" if there is a value in "GQ_FLAG" or "FACILITY_NAME" field. Cannot contain a comma (e.g.",").
19	100	FACILITY_NAME	Field to denote the name of the group quarters facility. Usually a broader name than the GQ name (e.g., University of Illinois or Universidad de San Juan).	No, but recommended if group quarters addresses being added are associated with a facility (e.g., The University of Illinois for dorms on its campus).
20	100	LOCATION_DESCRIPTION	Field to denote a short description of the location and physical characteristics of living quarters (e.g., Apt above gas station on the SE corner of N Main St and N Elm Ave or tent city behind hardware store).	No. Use only if a non-city style address is not available or if providing extra information can assist the Census Bureau in locating the address during CQR research.
21	50	NONCITYSTYLE_ADDRESS	Field to denote the rural route and box number or highway contract route and box number (e.g., RR 2 Box 34, or HC 1.Box 135).	Yes, if 'N' appears in the 'CITY_STYLE_FLAG' field. If not available or unknown, the 'LOCATION_DESCRIPTION' field becomes required.

Field Number	Max Characters	Field Name	Field Description	Required (Yes or No or Recommended)
22	5	NONCITYSTYLE_ZIP_CODE	Field to denote the five-digit USPS mailing ZIP Code for the non-city style address.	Yes, if 'NONCITYSTYLE_ADDRESS' field is not "null." Omit if uncertain. If included, it must be five-digit numeric characters only. Cannot be "00000", "11111", "33333", "66666", "77777", "88888", or "99999."
23	11	LATITUDE	Field to denote the latitude coordinate of address in decimal degrees with minimum of 6 digits following the decimal.	Yes, if using shapefiles. Optional if using maps, but this is helpful to provide if known. Cannot contain special characters, except the decimal (e.g. ".").
24	12	LONGITUDE	Field to denote the longitude coordinate of address in decimal degrees with minimum of 6 digits following the decimal.	Yes, if using shapefiles. Optional if using maps, but this is helpful to provide if known. Cannot contain special characters, except the decimal (e.g. ".") and the negative sign (e.g. "-") for this hemisphere.

Field Number	Max Characters	Field Name	Field Description	Required (Yes or No or Recommended)
25	4	MAPSPOT	Field to denote a number, assigned by the GU, associated with a map spot that uses the same number on a CQR map material. Numbering can start over at '1' in each block.	Yes, if not using shapefiles. Must also complete the 'STATE', 'COUNTY', '2020_TRACT', and '2020_BLOCK' fields. The Census Bureau must be able to locate the address affected by the boundary correction on a map. This field serves as a link between the individual address in the address list template and the map with the boundary correction.

IMPORTANT: All fields within this file, or within a file created by the GU, must remain in Text format. This is critical for fields that may include numbers with leading and trailing zeros (e.g., the STATE, COUNTY, 2020_TRACT, LATITUDE, LONGITUDE, and the two ZIP Code related fields) to ensure no information is lost.

1.5.1 Acceptable Address Types

When preparing address records to support a boundary correction, there are three types of acceptable addresses: city style, non-city style, and group quarters that can be inserted into the Address List Template File. These three acceptable address types apply to both stateside and Puerto Rico addresses.

Appendix C provides examples of acceptable address types in an Address List Template File for stateside address records while **Appendix D** shows examples of acceptable address types for Puerto Rico address records. None of the examples shown below or included in the two appendices contain Title 13 U.S.C. information. All records are fictitious. Title 13 U.S.C. does not apply to generalized address information (e.g., address range data in shapefiles) or housing counts by census block.

IMPORTANT: Implement the United States Postal Service (USPS) abbreviations for the individual address records included to support a boundary case. For acceptable addressing standards and abbreviations that the Census Bureau recognizes for its individual address records, refer to the USPS *Publication 28, Postal Addressing Standards* from <pe.usps.com/text/pub28/welcome.htm>.

1.5.1.1 City Style Addresses

The Census Bureau defines addresses, for both housing units and group quarters, with a house number and street name as city style. City style addresses are used as mailing addresses and/or as addresses that provide location for emergency services, such as fire, police, and rescue (also termed E-911 addresses).

City style examples include:

- 20 N Main St
- 1 Apple Ct Apt 300
- 35A County Road 1413 N
- 87 Cll Sabanetas, Apto 1

Refer to **Table 3** for specifics on requirements for including city style address records in the Address List Template File for addresses affected by a boundary correction.

1.5.1.2 Non-City Style Addresses

The Census Bureau classifies addresses, for both housing units and group quarters, that do not include a house number and/or a street name as non-city style. Non-city style addresses include rural route and highway contract route addresses, physical location descriptions, and any other addresses that do not contain components of a city style address.

Non-city style addresses often do not follow any numeric sequence and may not be associated with the name of the street or highway on which they are located. Rural routes and highway contract routes are mailbox delivery routes served by rural carriers to deliver and collect mail from roadside mailboxes. In addition to the route and box numbers, these addresses may also include a complete address number, complete street name, and location description, or any combination used for emergency location services, such as police, fire, and rescue (E-911 addresses). In some instances, the complete address number and box number are identical. In other instances, the rural or highway contract route and box number and the complete address number are different.

Non-city style examples include:

- RR 2 Box 34
- HC 1 Box 135
- Red House on corner of US Highway 1 and N Elm Ave
- Casa de ladrillo c/ garaje a la derecha

Refer to **Table 3** for specifics on requirements for including non-city style address records in the Address List Template File for addresses affected by a boundary correction.

Note: Since PO Box numbers and general delivery addresses are mailing addresses only and not associated with a housing unit or housing unit location, they were not part of the address list used for the 2020 Census and the Census Bureau cannot accept them as valid addresses for the 2020 Census CQR.

1.5.1.3 Group Quarters Addresses

Group quarters addresses include such places as college residence halls, residential treatment centers, skilled nursing facilities, group homes, military barracks, correctional facilities, etc. Group quarters addresses can be city style or non-city style.

Group quarters address examples include:

- 2200 Achilles Dr, Dobbs Hall, University of Illinois
- 120 N Elm Ave, Bayside Nursing Home
- RR 3 Box 100, Eastfork Prison
- 198 Cll Vole, Salón Jiménez, Universidad de San Juan

Refer to **Table 3** for specifics on requirements for including group quarters addresses in the Address List Template File for addresses affected by a boundary correction.

CHAPTER 2 REVIEWING THE 2020 CENSUS RESULTS

GUs would only proceed with a detailed review of the 2020 Census results if they believe the official 2020 Census count of housing and population, described in Table 1, is inaccurate. This chapter includes two, high-level overviews for conducting a detailed review of the 2020 Census results using the CQR Block Count List Files and the two mapping materials introduced in Chapter 1.

Note: The two sections included within this chapter assume the GU has downloaded the materials from the CQR website or has worked with the Census Bureau to receive the materials necessary to conduct a review of the 2020 Census results.

2.1 Using CQR Block Count List Files with 2021 Partnership Shapefiles

Refer to appendix **B1** to determine the specific shapefile layers to download for each GU type, then follow the guidance presented below to review the 2020 Census results using the CQR Block Count List Files and 2021 Partnership shapefiles.

IMPORTANT: GUs must use the 2021 Partnership shapefiles (e.g., PVS_20_v2 file naming convention) for 2020 Census CQR. This version of partnership shapefiles is the first source of the finalized 2020 legal boundaries and 2020 tabulation blocks. Do not use any other version of census shapefiles for 2020 Census CQR.

The steps below are not detailed instructions for conducting a review of the 2020 Census results because there are simply too many options to list. They provide a high-level approach using common ideas and concepts that GUs familiar with GIS should understand.

1. Assemble a local spatial data source(s) for the GU's legal boundary. Ensure the legal boundary for the GU was in effect as of January 1, 2020 and is accurate in the local data.
2. Refer to **Table 4** if the initial setup for the shapefiles has not occurred.
3. Use GIS to compare the GU's legal boundary in the 2021 Partnership shapefiles with the legal boundary in the local data source.
   a. If no discrepancy exists with the legal boundary, skip to Step 4 to proceed with a review of the housing counts for your GU.
   b. If a discrepancy exists for a boundary that was not legally in effect as of January 1, 2020, file the boundary update as part of the next annual Boundary and Annexation Survey. Do not file a CQR case. Proceed to Step 4 to conduct a review of the housing counts for your GU.
   c. If a discrepancy exists for a boundary but does not affect housing counts for the GU (i.e., minor spatial alignment issues), submit the boundary correction as part of the next annual Boundary and Annexation Survey. Do not file a CQR case. Proceed to Step 4 to conduct a review of the housing counts for your GU.
   d. If a boundary discrepancy exists and does affect the housing counts for the GU, note/flag the area/blocks/feature IDs within the spatial data, specifically in the shapefile layer with the errant boundary (varies based on type of GU) to navigate back to this discrepancy if the GU wishes to prepare a CQR case.

4. Assemble a local source(s) of individual addresses and/or housing counts at the block level for the GU. These sources should be digital. Ensure the source information includes residential addresses that existed and were available for occupancy on April 1, 2020.
    a. If the source includes a mix of residential and non-residential record types or includes records available for occupancy after April 1, 2020, ensure a method exists to identify and exclude the records that do not qualify for inclusion in the CQR case (i.e., those that are non-residential and available for occupancy after April 1, 2020).
    b. If the source includes individual, residential addresses only, proceed with generating locally derived housing counts by block, splitting the whole count into both housing units and group quarters categories using the 2021 Partnership shapefiles as the geographic base.
        i. GUs with address data in shapefile format can generate counts by geocoding the individual address records to the 2020 tabulation block layer (e.g., tabblock) using their GIS. If a GU does not have address data in a shapefile with latitude and longitude coordinates, the Census Bureau hosts a tool for geocoding at <geocoding.geo.census.gov>. Review the Census Geocoder Documentation for details. This tool may not provide geocodes for all records in the local file because the Census Bureau may not have updated the area since concluding fieldwork. Conduct a review of the geocoder's results to ensure the information is as expected.
5. Navigate to the local directory (e.g., CQR) and open the CQR Block Count List File(s).
6. Concatenate the STATEFP (two-digits), COUNTYFP (three-digits), TRACT (six-digits), and BLOCK (four-digits) fields within the GU's CQR Block Count List File(s) to create a new field, i.e., GEOID (15-digits). Save the file.
    a. IMPORTANT: Keep a copy of the original CQR Block Count List File in case the file corrupts the during the concatenation process or the GU decides to use GUPS.
7. Use GIS to join the BLOCKID field from the 2021 Partnership shapefiles tabblock layer to the newly created GEOID field in your GU's CQR Block Count List File(s).
    a. Label, or thematically map, the housing counts from the CQR Block Count List File(s) by 2020 tabulation block.
    b. Label, or thematically map, housing counts from the local source(s) by 2020 tabulation block.
    c. Additionally, even though your GU has chosen to use the 2021 Partnership shapefiles rather than the 2020 Census Block Maps, the blocks listed in your GU's Block-to-Map-Sheet relationship file (BLK2MS) are the blocks for your GU. This file is located online with the 2020 Census Block Maps and may be beneficial for your research.
8. Compare the two sets of housing counts to determine if housing count discrepancies exist.
    a. If no discrepancy exists for either housing counts or the legal boundary, the review of 2020 Census results is complete. Take no further action. It is unnecessary for your GU to prepare a case for 2020 Census CQR.
    b. If a discrepancy exists for housing counts, note/flag the area/blocks within the spatial data to navigate back to this discrepancy if the GU wishes to prepare a CQR case.
9. Use the information gathered on the discrepancies (boundary and/or housing count) to prepare a CQR case.

The Census Bureau assumes a GU using shapefiles to conduct their review will be a digital participant and not a paper participant. If this is an inaccurate assumption, skip to **Part 3** for guidance on paper participation (i.e., submitting hard copy address and/or count materials); otherwise, proceed to **Part 2** for instructions on digital participation.

2.2 Using CQR Block Count List Files with 2020 Census Block Maps

Follow the high-level guidance presented below to review the 2020 Census results using the CQR Block Count List Files and 2020 Census Block Maps. They do not provide exact instructions for conducting a closer review of the 2020 Census results because there are simply too many options to list. They provide a high-level approach using common ideas and concepts that GUs using these materials should understand.

1. Assemble a local source(s) for the GU's legal boundary. Ensure the legal boundary for the GU was in effect as of January 1, 2020 and is accurate in the local source(s).
2. Compare the GU's legal boundary in the 2020 Census Block Maps with the legal boundary in the local source(s).
   a. Depending on the number of map sheets for the GU, participants may wish to review 2020 Census Block Maps on-screen rather than downloading them, but if discrepancies are identified, the GU will need the maps downloaded to make corrections.
3. Pan around the legal boundary shown in the census maps on-screen to conduct a visual comparison between the census material and the local source(s).
   a. If no discrepancy exists with the legal boundary, skip to Step 4 to proceed with a review of the housing counts for your GU.
   b. If a discrepancy exists for a boundary that was not legally in effect as of January 1, 2020, submit the boundary update as part of the next annual Boundary and Annexation Survey. Do not file a CQR case. Proceed to Step 4 to conduct a review of the housing counts.
   c. If a discrepancy exists for a boundary but does not affect housing counts for the GU (i.e., minor spatial alignment issues), file the boundary correction as part of the next annual Boundary and Annexation Survey. Do not file a CQR case. Proceed to Step 4 to conduct a review of the housing counts.
   d. If a boundary discrepancy exists and does affect the housing counts for the GU, note or flag the map sheet or blocks to navigate back to this discrepancy if the GU wishes to prepare a CQR case.
4. Assemble a local source(s) of individual addresses and/or housing counts at the block level for the GU. These sources can be in digital or paper format. Ensure the source information includes residential addresses that existed and were available for occupancy on April 1, 2020.
   a. If the source includes a mix of residential and non-residential record types or includes records available for occupancy after April 1, 2020, ensure a method exists to identify and exclude the records that do not qualify for inclusion in the CQR case (i.e., those that are non-residential and available for occupancy after April 1, 2020.
   b. If the source includes individual, residential addresses only, proceed with generating locally derived housing counts by block, splitting the whole count into both housing units and group quarters categories using the 2020 Census Block Maps as the geographic base.
      i. GUs can generate counts by geocoding the individual address records to the 2020 tabulation blocks using the 2020 Census Block Maps as their geographic base or by using the Census Bureau's tool for geocoding, <geocoding.geo.census.gov>. Review the Census Geocoder Documentation for details. This tool may not provide geocodes for all records in the local file because the Census Bureau may not have updated the area since concluding fieldwork. Conduct a review of the geocoder's results to ensure the information is as expected.

5. Determine the 2020 tabulation blocks that fall within your GU.
    a. The blocks listed in your GU's Block-to-Map-Sheet relationship file (BLK2MS) are the blocks for your GU.
6. Review only the 2020 tabulation blocks for your GU in the CQR Block Count List File(s).
    a. This involves sorting/culling the state-level CQR Block Count List File(s) to reduce it to include just the blocks within the GU.
7. Use Ctrl-F, a search function in most applications, to find specific blocks if viewing the maps on screen or refer to the Block-to-Map-Sheet relationship file that accompanies the 2020 Census Block Maps to identify the 2020 tabulation blocks and corresponding map sheets.
8. Compare the two sets of housing counts to determine if housing count discrepancies exist.
    a. If no discrepancy exists for either housing counts or the legal boundary, the review of 2020 Census results is complete. Take no further action. It is unnecessary for your GU to prepare a case for 2020 Census CQR.
    b. If a discrepancy exists for the housing counts, note/flag the map sheet or blocks to navigate back to this discrepancy if the GU wishes to prepare a CQR case.
9. Use the information gathered on the discrepancies (boundary and/or housing count) to prepare a CQR case.

Proceed to **Part 2** for guidance on digital participation (i.e., submitting digital address and/or housing count materials); otherwise, skip to **Part 3** for guidance on paper participation (i.e., submitting hard copy address and/or housing count materials).

PART 2 DIGITAL PARTICIPANTS

Once your GU determines a CQR case is necessary and wants to participate digitally rather than using the Geographic Partnership Update Software (GUPS) or paper materials, use the guidance in this part of the guide to prepare and submit your CQR case to the Census Bureau.

Participating digitally in CQR means a GU will supply digital address-related materials (i.e., an address list file to support a boundary case and/or block count list file to support a housing count case) with their CQR case submission. Participating digitally does not prohibit a GU from submitting paper map materials to support a boundary correction; however, additional steps are required to ship paper map materials. Also recall that maps are only required for boundary cases.

CHAPTER 3 PREPARING A DIGITAL CASE

The type of discrepancies uncovered while reviewing the 2020 Census results dictates the type of materials to use to prepare a digital case. The first two sections discuss preparing each type of digital case while the third section discusses conducting quality checks and finalizing the submission.

IMPORTANT: A CQR case can be comprised of both boundary and housing count discrepancies. If your GU has both boundary and housing count discrepancies, review both sections below for instructions on preparing your CQR case.

The Census Bureau recommends the use of the Address List Template File for cases with boundary discrepancies and the CQR Block Count List Files for cases with housing count discrepancies. Refer to **Table 2** for information on the CQR Block Count List Files and to **Table 3** for specifics on the Address List Template File. If using locally created files, ensure they include the same information and field format as the files provided by the Census Bureau.

3.1 Preparing a Digital Case with a Boundary Discrepancy

IMPORTANT: Boundary cases request a Census Bureau review of legal boundaries in effect as of January 1, 2020. Cases submitted with a boundary correction that is effective after January 1, 2020 will be forwarded to the Boundary and Annexation Survey staff for research and potential update.

As first introduced in the Case Types section, section **C**, for the Census Bureau to successfully review and process a digital case with a boundary discrepancy, it must include the following items:

- A map (e.g., digital or hard copy) showing both the incorrect and correct boundary.
- A file of individual residential addresses affected by the boundary correction with latitude/longitude coordinate information (with a minimum of six-digits after the decimal point) or with a map spot number that matches to a map spot on the map for each record.
  - Do not create a complete address list for the GU. Only addresses affected by the boundary correction are eligible for submission and review during CQR.
- Supporting documentation, as detailed in section **D**.

To make the boundary correction(s) in the CQR map materials, GUs use either the 2021 Partnership shapefiles or the 2020 Census Block Maps that were used to conduct the review of the 2020 Census results described in **Chapter 2**. Review the applicable section below that describes the boundary correction process at a high-level. For specific instructions on making digital boundary corrections, review the 2021 BAS respondent guides (e.g., Digital or Tribal-Digital) available for download from the CQR website; however, GUs must follow the instructions from this guide for creating and submitting your CQR case (e.g., section **3.3.3** and **Chapter 4**, respectively), not those within the BAS respondent guide.

3.1.1 Using the 2021 Partnership Shapefiles

Within the BAS Respondent Guide (Digital or Tribal Digital), focus on Chapter 5, Appendix B (for those GUs using tools created by the Census Bureau to create their submission), and Appendix C (for those GUs using their own methods and tools to create their submission). The steps below provide only high-level guidance.

1. Review Chapter 5 of the BAS Respondent Guide to become familiar with the process of updating boundaries using the Census Bureau shapefiles.
2. For those using Census Bureau tools, navigate to Appendix B in the BAS Respondent Guide to review all the specialty tools the Census Bureau offers for preparing a boundary correction.
   a. Do not follow the renaming and submission instructions within the BAS materials; instead use the instructions within section **3.3.3** and **Chapter 4**, respectively.
3. For those using their own methods and tools, navigate to Appendix C in the BAS Respondent Guide for instructions.
   a. Do not follow the instructions for renaming and submission within the BAS materials; instead use the instructions within section **3.3.3** and **Chapter 4**, respectively**.**
4. Make the corrections for the boundary discrepancies identified during the review of the 2020 Census results.
5. Ensure use of the proper MAF/TIGER Feature Classification Code (MTFCC) as cited in **Appendix E** for newly inserted features coincident with the boundary correction.
6. Review Chapter 5.7 of the BAS Respondent Guide for an overview of files that may be necessary for processing boundary corrections. Use “cqr20” instead of “bas21” as the suggested naming convention.
7. Save the updated shapefiles to the local directory (e.g. CQR).
8. Prepare and assemble the supporting documentation.
   a. Refer to section **D** for details on appropriate supporting documentation.
9. Stage the saved shapefiles (all shapefile components, not just .shp) and supporting documentation for quality checks and submission creation as described in section **3.3.1**.
10. If the Census Bureau research concludes the boundary correction is valid and makes the update(s), they will prepare verification materials (e.g., 2020 Census CQR Block Maps and updated Partnership shapefiles) for the GU to use to confirm the work prior to finalizing the boundary and revising the counts. Refer to **Appendix F** for information on this material.

Note: Paper participants that find themselves here after reviewing instructions within **Chapter 5** should return to that chapter to continue preparing their paper case.

3.1.2 Using the 2020 Census Block Maps

Participants using the 2020 Census Block Maps to correct a boundary discrepancy refer to the Paper BAS Respondent Guide, specifically Part 3 (sections 3.4 and 3.5) and Part 4 (only for features updates that coincide with a boundary correction). The steps below provide only high-level guidance.

For those using Adobe Acrobat® to make corrections:

1. Locate and open the map(s) the CQR website.
   a. Ensure use of Adobe Reader or Acrobat Professional to preserve symbology within the PDFs.

2. Use the Adobe editing tools to mark the incorrect boundary feature(s) with "Xs" and insert or denote the correct boundary feature(s).
3. Label the new/correct boundary with the proper MAF/TIGER Feature Classification Code (MTFCC) as cited in **Appendix E**.
4. Use the Adobe editing tools to insert and label the map spots to correspond with the individual address records in the Address List Template.
   a. Ensure the map spot numbers on the map(s) match the map spot numbers in the Address List Template. Not performing this step will jeopardize the processing of your boundary correction and the CQR case submission.
5. Save (or print) the map(s) with the corrections to the local directory (e.g., CQR).
6. Prepare and assemble the supporting documentation.
   a. Refer to section **D** for details on appropriate supporting documentation.
7. Stage the updated PDF map files and/or printed maps with corrections and supporting documentation for quality checks and submission creation as described in section **3.3.1**.
   a. The Census Bureau only needs the maps affected by the boundary discrepancy, so only submit map files/hard copy maps with boundary corrections.
8. If the Census Bureau research concludes the boundary correction is valid and makes the update(s), they will prepare verification materials (e.g., 2020 Census CQR Block Maps and updated Partnership shapefiles) for the GU to use to confirm the work prior to finalizing the boundary and revising the counts. Refer to **Appendix F** for information on this material.

For those using hard copy maps to make corrections:

1. Locate, open, and print the map(s) from the CQR website.
   a. Ensure use of Adobe Reader or Acrobat Professional to preserve symbology within the PDFs.
   b. Contact the Census Bureau by phone at (888) 369-3617 or by email at <dcmd.2020.cqr.submissions@census.gov> to request printed map products if your GU is unable to print the necessary 2020 Census Block Maps from the CQR website.
2. Use a colored pencil, as described in the BAS Guide, to mark the incorrect boundary feature(s) with "Xs" and insert or denote the correct boundary feature.
   a. Colored pencils are not provided by the Census Bureau for 2020 Census CQR.
3. Label the new/correct boundary with the proper MAF/TIGER Feature Classification Code (MTFCC) as cited in **Appendix E**.
4. Draw and label the map spots on the maps to correspond with the individual address records in the Address List Template.
   a. Ensure the map spot numbers on the map(s) match the map spot numbers in the Address List Template. Not performing this step will jeopardize the processing of your boundary correction and the CQR case submission.
5. Prepare and assemble the supporting documentation.
   a. Refer to section **D** for details on appropriate supporting documentation.
6. Stage the printed maps with corrections and supporting documentation for quality checks and submission creation as described in section **3.3.1**.
   a. The Census Bureau only needs the maps affected by the boundary discrepancy, so only submit maps with boundary corrections.
7. If the Census Bureau research concludes the boundary correction is valid and makes the update(s), they will prepare verification materials (e.g., 2020 Census CQR Block Maps and updated Partnership shapefiles) for the GU to use to confirm the work prior to finalizing the boundary and revising the counts. Refer to **Appendix F** for information on this material.

3.1.3 Using the Address List Template File (Digital)

First introduced in section **1.5**, the Census Bureau created the Address List Template File for use with the three acceptable types of individual addresses (e.g., city style, non-city style, and group quarters). If your GU chooses to use their own file, ensure it contains the same fields of information as the Address List Template File and that it follows the same file format to preserve the fields as Text. Follow the steps below to accurately update the Address List Template File for your GU.

1. Download the Address List Template File from the CQR website.
   a. Select either the .csv format or .xls format depending on your GU's preference.
2. Open the file.
   a. If using the .csv file, it must be imported into Excel or used in a separate piece of software (e.g., Notepad or WordPad) that preserves the fields as text.
   b. If using the .xls file, it can be opened by using the mouse to double click the file name.
   c. Regardless of the file type chosen for use, GUs must ensure the fields remain as text. Doing so preserves the validity and accuracy of the data entered in the file (i.e., retaining leading/trailing zeros for STATE, COUNTY, 2020_TRACT, and MAILING_ZIP_CODE fields).
3. Type/Enter the individual address records into the file for all the residential addresses affected by the boundary correction that existed and were available for occupancy on April 1, 2020.
   a. Ensure inclusion of all required fields, noting that field requirements change based on the type of address. Refer to **Table 3** for details.
   b. Critical for processing is the inclusion of either the latitude and longitude coordinates (for participants using 2021 Partnership shapefiles) or map spot numbers (for participants using 2020 Census Block Maps). The map spot numbers used in the Address List Template should match the map spot numbers labeled by the GU on the 2020 Census Block Maps.
4. Save the file often to preserve your work.
   a. Recommended file naming convention is as follows: cqr20_<Entity name>_<EntityID>_UpdatedALT.csv (or .xls)
5. Prepare additional supporting documentation related to the addresses following guidance in section **D**.
6. Stage the completed file and address-related supporting documentation for quality checks described in section **3.3.1**.

3.2 Preparing a Digital Case with a Housing Count Discrepancy

As first introduced in the Case Types section, section **C**, for the Census Bureau to successfully review and process a digital case with a housing count discrepancy, it must include the following items:

- A file that includes the contested 2020 tabulation blocks in their GU, their current housing counts, and the corrected housing counts for both housing units and group quarters as of April 1, 2020.
- Supporting documentation, as detailed in section **D**.

Note: No maps are required to accompany a case with only a housing count discrepancy.

If housing count discrepancies were identified during the review of 2020 Census results, GUs use the same CQR Block Count List Files to correct their housing counts. If your GU chooses to use their own locally created file, ensure it contains the same fields of information as the CQR Block Count List Files and that it follows the same file format to preserve the fields as Text. Follow the steps below to accurately update the CQR Block Count List File(s) for your GU.

1. Open the CQR Block Count List File(s) your GU used during the review of the 2020 Census results.
   a. If using the .csv file, it must be imported into Excel or used in a separate piece of software (e.g., Notepad or WordPad) that preserves the fields as text.
   b. If using the .xlsx file, it can be opened by using the mouse to double click the file name.
   c. Regardless of the file type chosen for use, GUs must ensure the fields remain as text. Doing so preserves the validity and accuracy of the data entered in the file (i.e., retaining leading/trailing zeros for STATEFP, COUNTYFP, and TRACT fields).
2. Type/Enter the correct housing count tallies for housing units and/or group quarters for the blocks identified with discrepant counts into the respective fields (i.e., CQRHU and CQRGQ).
   a. Ensure that the corrected tallies represent the residential addresses that existed and were available for occupancy on April 1, 2020.
   b. Do not enter information for blocks that contain accurate counts.
   c. Do not repeat correct count information in the CQRHU or CQRGQ fields.
3. Save your CQR Block Count List File often to preserve your work.
4. Upon completion of all corrections, save only the records with values in the CQRHU and CQRGQ fields (i.e., CQRHU and/or CQRGQ not blank or CQRHU and/or CQRGQ not null) into a separate file to create a file that contains just the 2020 tabulation blocks with corrected housing counts.
   a. Recommended file naming convention of this subset file is as follows: cqr20_<Entity name>_<EntityID>_UpdatedBCL.csv (or .xlsx).
5. Prepare and assemble the supporting documentation according to guidance in section **D**.
6. Stage the completed file and supporting documentation for quality checks and submission creation as described in section **3.3.2**.
   a. The Census Bureau only needs the 2020 tabulation blocks with the corrected housing counts. Do not submit the entire CQR Block Count List File.

3.3 Conducting Quality Checks and Finalizing a Digital Submission

After completing the process of correcting the boundary and/or housing counts for errant blocks, perform quality checks on the file(s). The quality checks vary based upon the type of case. Navigate to the local directory where the digital case materials are saved (e.g., CQR) or locate the staged paper maps. Review the appropriate section below for your GU's case type.

3.3.1 Quality Checks for a Digital Case with a Boundary Discrepancy

If using shapefiles:

- Ensure the inclusion of files as presented in the BAS Respondent Guide to accurately process the boundary correction(s).
- Ensure the use of correct MTFCC for newly added/corrected boundary features.
- Ensure the inclusion of proper supporting documentation for boundaries as referenced in section **D**.

If using maps:

- Ensure the notation of the incorrect boundary and the corresponding correct boundary as well as the presence of individual address map spot numbers that match the corresponding number shown in the MAPSPOT field within the Address List Template. Inclusion of latitude and longitude coordinates (with a minimum of six-digits after the decimal point) in the Address List Template is also permitted.
- Ensure the use of correct MTFCC for newly added/corrected boundary features.
- Ensure only maps affected by the boundary discrepancy are included.
- Ensure the inclusion of proper supporting documentation for boundaries as referenced in section **D**.

For all submissions:

- Open the Address List Template File (e.g., cqr20_<Entity name>_<EntityID>_UpdatedALT.csv or .xls) to confirm presence of leading and trailing zeros, if applicable, in the STATE, COUNTY, 2020_TRACT, LATITUDE, LONGITUDE, and the two ZIP Code related fields.
  - Improperly formatted or corrupted data indicates the file was originally opened incorrectly, which means the data within it is inaccurate and likely cannot be processed. Recreate your file for submission.
- Ensure the Address List Template File only includes individual addresses affected by the boundary correction and not the complete address list for the GU.
- Ensure the individual addresses in the Address List Template represent only residential addresses that existed and were available for occupancy on April 1, 2020 and include all the required information for a valid address record (city style, non-city style, group quarters, and records for Puerto Rico) as outlined in **Table 3**.
- Confirm the individual addresses in the Address List Template include either latitude and longitude coordinates (in the LATITUDE and LONGITUDE fields for participants using 2021 Partnership shapefiles) or map spot numbers (in the MAPSPOT field for participants using 2020 Census Block Maps).
  - The map spot numbers used in the Address List Template must match the corresponding map spot numbers labeled by the GU on the 2020 Census Block Maps.
  - If latitude and longitude coordinates are provided, ensure the presence of six-digits after the decimal point.
- Recheck the submission for the inclusion of all supporting documentation as described in section **D**.

3.3.2 Quality Checks for a Digital Case with a Housing Count Discrepancy

- Open the CQR Block Count List File (e.g., cqr20_<Entity name>_<EntityID>_UpdatedBCL.csv or .xlsx) to confirm preservation of leading and trailing zeros, if applicable, on the STATEFP, COUNTYFP, TRACT, and BLOCK fields.
  - Improperly formatted or corrupted data indicates the file was originally opened incorrectly, which means the data within it is inaccurate and likely cannot be processed. Recreate your file for submission.
- Ensure the file only contains records of blocks with housing count corrections and not the entire CQR Block Count List File.
- Ensure the corrected housing counts only include qualifying residential addresses (i.e., existed and were available for occupancy on April 1, 2020).

- Ensure the corrected housing counts in the CQRHU and CQRGQ fields differ from the original housing counts in the CENSUSHU and CENSUSGQ fields.
- Ensure all the other content in the file remains consistent with the original CQR Block Count List File.
- Ensure the inclusion of all supporting documentation as described in section **D**.

3.3.3 Finalizing a Digital Submission

Once satisfied with the quality checks and content of the CQR case materials, GUs that intend to use the Secure Web Incoming Module (SWIM) to provide their CQR case submission must create a .zip file that includes all components of the case. The recommended naming convention of the .zip file is as follows: **cqr20_<Entity name>_<EntityID>_submission.zip**.

Note: If a digital participant chooses to make their submission using a CD/DVD rather than using SWIM, then creation of a .zip file is not required; however, the Census Bureau recommends all files that comprise the case be included on the CD/DVD.

For cases with only boundary discrepancy(s), include the following in the .zip file or on the CD/DVD:

- All relevant supporting documentation.
- cqr20_<Entity name>_<EntityID>_UpdatedALT.csv (or .xls).
- If using the 2021 Partnership shapefiles, the "cqr20" set of shapefiles generated in section **3.1.1**.
- If using 2020 Census Block Maps or locally created maps, the scanned/saved images (.png, .jpeg, or .pdf) of the edited 2020 Census Block Maps from section **3.1.2** may be included in the .zip file (to use with SWIM) or on the CD/DVD (to manually ship); otherwise, submit the hard copies separately using instructions in section **4.2**.

For cases with only housing count discrepancy(s), include the following in the .zip file or on the CD/DVD:

- All relevant supporting documentation.
- cqr20_<Entity name>_<EntityID>_UpdatedBCL.csv (or .xlsx).

For cases with both boundary and housing count discrepancies, include the following in the .zip file or on the CD/DVD:

- All relevant supporting documentation.
- cqr20_<Entity name>_<EntityID>_UpdatedALT.csv (or .xls).
- cqr20_<Entity name>_<EntityID>_UpdatedBCL.csv (or .xlsx).
- If using the 2021 Partnership shapefiles, the "cqr20" set of shapefiles generated in section **3.1.1**.
- If using 2020 Census Block Maps or locally created maps, the scanned/saved images (.png, .jpeg, or .pdf) of the edited 2020 Census Block Maps from section **3.1.2** may be included in the .zip file (to use with SWIM) or on the CD/DVD (to manually ship); otherwise, submit the hard copies separately using instructions in section **4.2**.

With the .zip file and/or CD/DVD created, proceed to **Chapter 4** for instructions on submitting a digital case. Retain a copy of the submission for your records and to facilitate communication with the Census Bureau if questions arise.

CHAPTER 4 SUBMITTING A DIGITAL CASE

Digital participants have two options for submitting their case to the Census Bureau. They may use the Secure Web Incoming Module (SWIM), or they may use a traceable shipping service. This chapter includes a section on each option. Review the section that aligns with your GU's preference for CQR case submission.

Note: GUs that printed 2020 Census Block Maps to accompany their address materials for their boundary correction may use a combination of the two options (e.g., SWIM for the .zip file and a traceable shipping service for the updated map materials).

4.1 Using the Secure Web Incoming Module (SWIM)

Use the information in this chapter to establish or access an existing SWIM account and to provide the exported .zip file(s) generated in Chapter 3. Some GUs may have staff with established SWIM accounts from other Census geography programs. If so, that person may submit the GU's CQR case submission using their existing account. For GUs without staff with an established account, contact the Census Bureau by email at <dcmd.2020.cqr.submissions@census.gov> or by phone at (888) 369-3617 to request a registration token.

To check for the existence of a SWIM account or to reset a password on an established account, choose "Forgot your password?" on the main SWIM page and enter the email address in question to check for the existence of an account. If SWIM locates an account, it asks the established security question for the account, for which the answer is not case-sensitive, and sends an email to reset the forgotten password. If SWIM does not locate an account associated with the email address, it returns the following message, "*No account registered for this email address. The email address associated with the account is case sensitive. Try again with the proper case or go to* Account Registration *to register for a SWIM account*." Choosing the Account Registration link opens another window to establish a SWIM account; however, the GU staff person must have a registration token to proceed.

Note: The components of both the email address and the password of SWIM accounts are case-sensitive. Make note of the format used when establishing the SWIM account (e.g., jane@anytown.org or Jane@anytown.org or JANE@ANYTOWN.ORG). The Census Bureau recommends use of lowercase letters and safe retention of this information for future reference.

SWIM allows four attempts to login before it temporarily locks the account for 15 minutes. After the lock expires, try to login again or reset the password using the aforementioned "Forgot your password?" link on the login page. Once reset and logged into SWIM, account holders may modify their password and security answer by selecting "Change Security" link along the top, right side of the window.

If login issues persist, confirm the vintage of internet browser version. SWIM runs on the two most recent versions of each of the major internet browsers, Microsoft Internet Explorer®, Microsoft Edge®, Google Chrome®, Mozilla Firefox®, and Apple Safari®. If the browser version is older, upgrade the version. If problems still occur with SWIM, contact the Census Bureau by phone at (888) 369-3617. It may be necessary to create a new SWIM account.

IMPORTANT: Do not use email to send the CQR case submission to the Census Bureau. Work to resolve SWIM issues or burn/copy the submission onto CD/DVD and ship it to the Census Bureau using guidance in section **4.2**.

SWIM file requirements include submission of .zip file format. The .zip file may not include another .zip file as a component and it must not be larger than 250 megabytes. Do not create separate .zip files for supporting documentation, the shapefile suite of files, or any other relevant case information. Include all those materials in one .zip file. Follow the steps below for instructions on using SWIM to submit your GU's CQR case submission.

1. Open a new browser window and enter the SWIM URL <respond.census.gov/swim>.
2. For persons with an existing SWIM account, enter the email address and password associated with the account and choose the Login button. Skip to step 3.
   a. For persons without an existing SWIM account, have the 12-digit registration token provided by the Census Bureau ready for account registration. Select the Register Account button to open the "Account Registration" screen. All fields within this screen are required.
      i. The password must be at least 8-characters in length and have at least one uppercase character, one lowercase character, one number, and one special character. (Valid special characters are limited to the #, !, $, *, &, ?, and ~.
      ii. Establish a security question associated with the account. Expand the choices arrow to the right of the Security Question field and select a question from the drop-down menu. Enter an answer in the Answer field. Select the Submit button. A "Success!" pop-up window appears confirming successful account registration.
      iii. Select Login from the "Success!" pop-up window to return to the SWIM Login screen to enter the newly established account login and password information.
3. With a valid login and password, the "Welcome" screen opens.
   a. If the account has uploaded other files for different geography programs administered by the Census Bureau, a list of files previously uploaded by the SWIM user displays. The list includes the creation date of the file upload, the name of the file, and the corresponding size of the .zip file.
4. To submit your GU's CQR submission .zip file, choose the Start New Upload button at the bottom of the "Welcome" screen.
5. From the "What Census program are you reporting data for?" screen, choose the Count Question Resolution (CQR) radio button and choose Next.
6. From the "What type of CQR entity are you reporting for" screen choose the entity choice that aligns with your GU's entity type. If uncertain of the correct choice, contact the Census Bureau by email at <dcmd.2020.cqr.submissions@census.gov> or by phone at (888) 369-3617.
7. Completing the subsequent windows associated with the GU's entity type opens the "Select a .ZIP file to upload" screen.
8. Select the +Add File button and the "Choose File to Upload" screen opens.

9. From the “Choose File to Upload” screen, navigate to the directory location of the CQR case .zip file (e.g., likely the “CQR” local directory).
10. Upon completion, the Status field shows Success, and the name of the file appears in the File(s) field. Add additional, pertinent information to the Comments section if possible. Select the Next button to proceed with the upload.
11. The “Thank You” screen appears and indicates a forthcoming email once the transfer completes. GUs can expect to receive the email within a business day of uploading the submission.
12. Choose either Upload Form or Log Out option from the “Thank You” screen message.

If GUs want to ship their CQR case submission rather than using SWIM, please continue to the next section; otherwise, skip to **Part 4** of this guide for the next steps in 2020 Census CQR.

4.2 Using Traceable Shipping Methods

GUs without internet access, those that do not wish to use SWIM, or those with a mixed-media submission (digital address-related materials and paper map-related materials or vice versa) should ship their CQR case submission to the Census Bureau’s National Processing Center.

IMPORTANT: Do not email any portion of the CQR case submission to the Census Bureau.

For cases with <u>only boundary discrepancy(s)</u>:

1. Locate the staged materials.
2. Double wrap the CD/DVD that contains individual address records (Address List Template File) and/or hard copy materials that contain maps with map spots using an inner and outer envelope (or container); one within the other.
3. Label both sides of the inner envelope/container with the notice, “**DISCLOSURE PROHIBITED BY TITLE 13 U.S.C.**”
4. Place the inner envelope/container into the outer envelope/container.
5. Include all relevant, hard copy supporting documentation, if this information was not included within the .zip file or on the CD/DVD, in the outer envelope/container.
6. Do not label the outer envelope/container with the disclosure notice.
7. Ship using a service that provides tracking information, such as the United States Postal Service (USPS) traceable delivery, FedEx, United Parcel Service (UPS), or similar service to the following address:

   U.S. Census Bureau
   National Processing Center
   ATTN: CQR Geography Bldg 63E
   1201 E 10th St
   Jeffersonville IN 47132

8. Retain the tracking information as proof of delivery and to facilitate communication with the Census Bureau if questions arise.

For cases with only housing count discrepancy(s):

1. Locate the staged materials.
2. Assemble the CD/DVD and/or hard copy materials in an envelope/container for shipping to the Census Bureau.
   a. There is no need to double wrap the materials because there is no Title 13 U.S.C. information included.
3. Include all relevant, hard copy supporting documentation, if this information was not included within the .zip file and/or on the CD/DVD.
4. Ship using a service that provides tracking information, such as the United States Postal Service (USPS) traceable delivery, FedEx, United Parcel Service (UPS), or similar service to the following address:

   U.S. Census Bureau
   National Processing Center
   ATTN: CQR Geography Bldg 63E
   1201 E 10th St
   Jeffersonville IN 47132

5. Retain the tracking information as proof of delivery and to facilitate communication with the Census Bureau if questions arise.

For cases with both boundary and housing count discrepancies:

1. Locate the staged materials.
2. Double wrap the CD/DVD that contains individual address records (Address List Template File) and/or hard copy materials that contain maps with map spots using an inner and outer envelope (or container); one within the other.
3. Label both sides of the inner envelope/container with the notice, "**DISCLOSURE PROHIBITED BY TITLE 13 U.S.C.**"
4. Place the inner envelope/container into the outer envelope/container.
5. Assemble the pages from the CQR Block Count List for shipment to the Census Bureau. There is no need to double wrap the materials because there is no Title 13 U.S.C. information included.
6. Include all relevant, hard copy supporting documentation, if this information was not included within the .zip file or on the CD/DVD.
7. Do not label the outer envelope/container with the disclosure notice.
8. Ship using a service that provides tracking information, such as the United States Postal Service (USPS) traceable delivery, FedEx, United Parcel Service (UPS), or similar service to the following address:

   U.S. Census Bureau
   National Processing Center
   ATTN: CQR Geography Bldg 63E
   1201 E 10th St
   Jeffersonville IN 47132

9. Retain the tracking information as proof of delivery and to facilitate communication with the Census Bureau if questions arise.

With the instructions for digital case submission complete, skip to **Part 4** of this guide to review the next steps for 2020 Census CQR.

PART 3 PAPER PARTICIPANTS

The Census Bureau understands paper participation may be the best option for certain GUs (i.e., smaller population and/or smaller geographic area). Once your GU determines a CQR case is necessary and wants to participate using paper rather than using the Geographic Update Partnership Software (GUPS) or digitally, use the guidance in this part of the guide to prepare and submit your CQR case to the Census Bureau.

Using paper to participate in CQR means a GU will supply paper (hard copy) address-related materials (i.e., an address list to support boundary case and/or block count list to support housing count case) with their CQR case submission. Using paper address materials does not prohibit a GU from using and submitting digital map materials to support a boundary correction; however, additional steps are required to prepare and submit digital map materials. For GUs choosing paper participation, the Census Bureau strongly encourages GUs to prepare an all-paper submission to simplify the process by not creating a mixed media submission (i.e., printed address/block count materials and a CD/DVD with shapefiles/edited PDFs). Also recall that maps are only required for boundary cases.

CHAPTER 5 PREPARING A PAPER CASE

The type of discrepancies uncovered while reviewing the 2020 Census results dictates the type of materials to use to prepare a paper case. The first two sections discuss preparing each type of paper case while the third section discusses conducting quality checks and assembling the materials.

IMPORTANT: A CQR case can be comprised of both boundary and housing count discrepancies. If your GU has both boundary and housing count discrepancies, review both sections for instructions on preparing your CQR case.

The Census Bureau recommends the use of the Address List Template File for cases with boundary discrepancies and the CQR Block Count List Files for cases with housing count discrepancies. Refer to **Table 2** for details on the CQR Block Count List Files and **Table 3** for specifics on the Address List Template File. If using locally created files, ensure they include the same information and field format as the files provided by the Census Bureau.

5.1 Preparing a Paper Case with a Boundary Discrepancy

IMPORTANT: Boundary cases request a Census Bureau review of legal boundaries in effect as of January 1, 2020. Cases submitted with a boundary correction that is effective after January 1, 2020 will be forwarded to the Boundary and Annexation Survey staff for research and potential update.

As first introduced in the Case Types section, section **C**, for the Census Bureau to successfully review and process a paper case with a boundary discrepancy, it must include the following items:

- A map (e.g., digital or hard copy) showing both the incorrect and correct boundary.
  - If not using maps provided by the Census Bureau, ensure the locally created maps include the 2020 tabulation blocks.
- A list of individual residential addresses affected by the boundary correction with individual map spot numbers that match to map spots on a map (or with latitude/longitude coordinates with a minimum of six-digits after the decimal point) for each record.
  - Do not create a complete address list for the GU. Only addresses affected by the boundary correction are eligible for submission and review during CQR.
- Supporting documentation, as detailed in section **D**.

To make the boundary correction(s) in the CQR map materials, paper participants use either the 2020 Census Block Maps or the 2021 Partnership shapefiles that were used to conduct your GU's review of the 2020 Census results described in **Chapter 2**. For the paper participants that used the 2021 Partnership shapefiles, but still wish to submit paper address materials, refer to section **3.1.1** for guidance on using shapefiles. After reviewing the shapefile guidance, return to this section for instructions on updating the other materials for a paper case.

IMPORTANT: This guide does not include detailed instructions for making boundary corrections. For specific instruction on making boundary corrections on paper, review the 2021 BAS Paper Respondent Guide available for download from the CQR website.

Though the BAS respondent guide contains all necessary information for making boundary corrections, your GU must follow the instructions for assembling and submitting your CQR case from this material, (e.g., section **5.3.3** and **Chapter 6**, respectively) not those in the BAS respondent guide. Review the applicable section below that describes making boundary corrections to the 2020 Census Block Maps at a high-level.

5.1.1 Using Adobe Acrobat to Correct Boundaries

1. Locate and open the map(s) from the CQR website.
   a. Ensure use of Adobe Reader or Acrobat Professional to preserve symbology within the PDFs.
2. Use the Adobe editing tools to mark the incorrect boundary feature(s) with "Xs" and insert or denote the correct boundary feature(s).
3. Label the new/correct boundary with the proper MAF/TIGER Feature Classification Code (MTFCC) as cited in **Appendix E**.
4. Use the Adobe editing tools to insert and label the map spots to correspond with the individual address records in the Address List Template.
   a. Ensure the map spot numbers on the map(s) match the map spot numbers in the Address List Template. Not performing this step will jeopardize the processing of your boundary correction and the CQR case submission.
5. Save and print the map(s) with the corrections.
6. Prepare and assemble the supporting documentation.
   a. Refer to section **D** for details on appropriate supporting documentation.
7. Stage the updated maps and supporting documentation for quality checks and assembly as described in section **5.3.1**.
   a. The Census Bureau only needs the maps affected by the boundary discrepancy, so only submit maps with boundary corrections.
8. If the Census Bureau research concludes the boundary correction is valid and makes the update(s), they will prepare verification materials (e.g., 2020 Census CQR Block Maps and updated Partnership shapefiles) for the GU to use to confirm the work prior to finalizing the boundary and revising the counts. Refer to **Appendix F** for information on this material.

5.1.2 Using Hard Copy Maps to Correct Boundaries

1. Locate, open, and print the map(s) from the CQR website.
   a. Ensure use of Adobe Reader or Acrobat Professional to preserve symbology within the PDFs.
   b. Contact the Census Bureau by phone at (888) 369-3617 or by email at <dcmd.2020.cqr.submissions@census.gov> to request printed map products if your GU is unable to print the necessary 2020 Census Block Maps from the CQR website.
2. Use a colored pencil, as described in the BAS Guide, to mark the incorrect boundary feature(s) with "Xs" and insert or denote the correct boundary feature.
   a. Colored pencils are not provided by the Census Bureau for 2020 Census CQR.
3. Label the new/correct boundary with the proper MAF/TIGER Feature Classification Code (MTFCC) as cited in **Appendix E**.

4. Draw and label the map spots on the maps to correspond with the individual address records in the Address List Template.
   a. Ensure the map spot numbers on the map(s) match the map spot numbers in the Address List Template. Not performing this step will jeopardize the processing of your boundary correction and the CQR case submission.
5. Prepare and assemble the supporting documentation.
   a. Refer to section **D** for details on appropriate supporting documentation.
6. Stage the updated maps and supporting documentation for quality checks and assembly as described in section **5.3.1**.
   a. The Census Bureau only needs the maps affected by the boundary discrepancy, so only submit maps with boundary corrections.
7. If the Census Bureau research concludes the boundary correction is valid and makes the update(s), they will prepare verification materials (e.g., 2020 Census CQR Block Maps and updated Partnership shapefiles) for the GU to use to confirm the work prior to finalizing the boundary and revising the counts. Refer to **Appendix F** for information on this material.

5.1.3 Using the Address List Template File (Paper)

First introduced in section **1.5**, the Census Bureau created the Address List Template File for use with the three acceptable types of individual addresses (e.g., city style, non-city style, and group quarters). If your GU chooses to use their own file, ensure it contains the same fields of information as the Address List Template File and that it follows the same file format to preserve the fields as Text. Follow the steps below to accurately update the Address List Template for your GU.

For those planning to type the individual address records into the Address List Template:

1. Download the Address List Template File from the CQR website.
   a. Select either the .csv format or .xls format depending on your GU's preference.
2. Open the file.
   a. If using the .csv file, it must be imported into Excel or used in a separate piece of software (e.g., Notepad or WordPad) that preserves the fields as text.
   b. If using the .xls file, it can be opened by using the mouse to double click the file name.
   c. Regardless of the file type chosen for use, GUs must ensure the fields remain as text. Doing so preserves the validity and accuracy of the data entered in the file (i.e., retaining leading/trailing zeros for STATE, COUNTY, 2020_TRACT, and MAILING_ZIP_CODE fields).
3. Type/Enter the individual address records into the file for all the residential addresses affected by the boundary correction that existed and were available for occupancy on April 1, 2020.
   a. Ensure inclusion of all required fields; noting that field requirements change based on the type of address. Refer to **Table 3** for details.
4. Save the file often to preserve your work.
   a. Recommended file naming convention is as follows: cqr20_<Entity name>_<EntityID>_UpdatedALT.csv (or .xls)
5. Once complete, print the file.
6. Prepare additional supporting documentation related to the addresses following guidance in section **D**.
7. Stage the printed pages and address-related supporting documentation for quality checks and assembly as described in section **5.3.1**.

For those planning to handwrite the individual address records into the Address List Template:

1. Download the Address List Template File from the CQR website.
   a. Select either the .csv format or .xls format depending on your GU's preference.
2. Open the file.
3. Create a page of blank rows in the Address List Template File and print it.
4. Make the necessary number of copies to complete your work.
   a. Save one blank page to make copies if additional pages are needed.
5. Handwrite the individual address records into the file for all the residential addresses affected by the boundary correction that existed and were available for occupancy on April 1, 2020.
   a. Ensure inclusion of all required fields; noting that field requirements change based on the type of address. Refer to **Table 3** for details.
6. Prepare additional supporting documentation related to the addresses following guidance in section **D**.
7. Stage the handwritten materials and address-related supporting documentation for quality checks and assembly as described in section **5.3.1.**

IMPORTANT: Critical for processing either a typed or handwritten Address List Template is the inclusion of either the latitude and longitude coordinates (for GUs using 2021 Partnership shapefiles) or map spot numbers (for GUs using 2020 Census Block Maps). The map spot numbers used in the Address List Template must match to the corresponding map spots labeled by the GU on the 2020 Census Block Maps.

5.2 Preparing a Paper Case with a Housing Count Discrepancy

As first introduced in the Case Types section, section **C**, for the Census Bureau to successfully review and process a paper case with a housing count discrepancy, it must include the following items:

- List that includes the contested 2020 tabulation blocks in their GU, their current housing counts, and the corrected housing counts for both housing units and group quarters as of April 1, 2020.
- Supporting documentation, as detailed in section **D**.

Note: No maps are required to accompany a case with only a housing count discrepancy.

If housing count discrepancies were identified during the review of 2020 Census results, use the CQR Block Count List File to make corrections. If your GU chooses to use their own locally created file, ensure it contains the same fields of information as the CQR Block Count List Files and that it follows the same file format to preserve the fields as Text. Follow the steps below to accurately update the CQR Block Count List File(s) for your GU.

For those planning to type the corrected housing count information:

1. Open the CQR Block Count List File(s) your GU used during the review of the 2020 Census results.
   a. Ensure all fields remain as Text to preserve leading/trailing zeros of data entered in the file.

2. Type/Enter the correct housing count tallies for housing units and/or group quarters for the blocks identified with discrepant counts into the respective fields (i.e., CQRHU and CQRGQ).
   a. Ensure that the corrected tallies represent the residential addresses that existed and were available for occupancy on April 1, 2020.
   b. Do not enter information for blocks that contain accurate counts.
   c. Do not repeat correct count information in the CQRHU or CQRGQ fields.
3. Save your CQR Block Count List File often to preserve your work.
4. Upon completion of all corrections, sort the file so that the records with values in the CQRHU and CQRGQ fields (i.e., CQRHU and/or CQRGQ not blank or CQRHU and/or CQRGQ not null) promote the blocks with corrections to the top of the file OR save only the records with values in the CQRHU and CQRGQ fields into a separate file that contains only the 2020 tabulation blocks with corrected housing counts.
   a. Recommended file naming convention of this subset file is as follows: cqr20_<Entity name>_<EntityID>_UpdatedBCL.csv (or .xlsx).
5. Print the pages with the corrected records OR, if you created a separate file, print the newly created file that includes just the corrected blocks.
6. Prepare and assemble the supporting documentation following guidance in section **D**.
7. Stage the printed and supporting documentation for quality checks and assembly as described in section **5.3.2**.

For those planning to handwrite the corrected count information:

1. Open the CQR Block Count List File your GU used during the review of the 2020 Census results.
   a. Ensure all fields remain as Text to preserve leading/trailing zeros of data entered in the file.
2. Print the pages that contain the blocks with discrepant counts identified during the review process.
3. Handwrite the correct housing count tallies for housing units and/or group quarters for the blocks identified with discrepant counts into the respective fields (i.e., CQRHU and CQRGQ).
   a. Ensure that the corrected tallies represent the residential addresses that existed and were available for occupancy on April 1, 2020.
   b. Do not enter information for blocks that contain accurate counts.
   c. Do not repeat correct information in the CQRHU or CQRGQ fields.
4. Prepare and assemble the supporting documentation following guidance in section **D**.
5. Stage the handwritten pages and supporting documentation for quality checks and assembly as described in section **5.3.2**.

5.3 Conducting Quality Checks and Finalizing a Paper Submission

After completing the process of correcting the boundary and/or housing counts for errant blocks, perform quality checks on the file(s). The quality checks vary based upon the type of case. Navigate to the local directory where the paper case materials are saved (e.g., CQR) or locate the staged paper maps. Review the appropriate section below for your GU's case type.

5.3.1 Quality Checks for a Paper Case with a Boundary Discrepancy

- On the maps, ensure the notation of the incorrect boundary and the corresponding correct boundary as well as the presence of individual address map spot numbers that match the corresponding number shown in the MAPSPOT field within the Address List Template. Inclusion of latitude and longitude coordinates (with a minimum of six-digits after the decimal point) in the Address List Template is also permitted.
  - Ensure the use of correct MTFCC on newly added/corrected boundary features.
  - Ensure only maps affected by the boundary discrepancy are included.
- Review the printed Address List Template, or locally created template, to ensure all required fields and information are included.
- In the Address List Template, confirm the presence of leading and trailing zeros, if applicable, in the STATE, COUNTY, 2020_TRACT, LATITUDE, LONGITUDE, and the two ZIP Code related fields.
  - Records that are improperly formatted or corrupted indicate the file was originally opened incorrectly, which means the records within it are inaccurate and likely cannot be processed. Handwritten records that do not include proper formatting likely cannot be processed. Recreate your GU's submission following requirements from **Table 3**.
- Ensure the Address List Template only includes individual addresses affected by the boundary correction and not the complete address list for the GU.
- Ensure the individual addresses in the Address List Template represent only residential addresses that existed and were available for occupancy on April 1, 2020 and include all the required information for a valid address record (city style, non-city style, group quarters, and records for Puerto Rico) as outlined in **Table 3**.
  - Confirm the individual addresses in the Address List Template include either latitude and longitude coordinates (in the LATITUDE and LONGITUDE fields for participants using 2021 Partnership shapefiles) or map spot numbers (in the MAPSPOT field for participants using 2020 Census Block Maps).
    - The map spot numbers used in the Address List Template must match the corresponding map spot numbers labeled by the GU on the 2020 Census Block Maps.
    - If latitude and longitude coordinates are provided, ensure the presence of six-digits after the decimal point.
- Ensure the inclusion of all supporting documentation as described in section **D**.

5.3.2 Quality Checks for a Paper Case with a Housing Count Discrepancy

- In the CQR Block Count List, confirm preservation of leading and trailing zeros, if applicable, on the STATEFP, COUNTYFP, TRACT, and BLOCK fields.
  - Records that are improperly formatted or corrupted indicate the file was originally opened incorrectly, which means the records within it are inaccurate and likely cannot be processed. Handwritten records that do not include proper formatting likely cannot be processed. Recreate your submission.
- Ensure inclusion of only the pages/records from the CQR Block Count List for blocks with corrections.
- Ensure the corrected housing counts only include qualifying residential addresses (i.e., existed and were available for occupancy on April 1, 2020).
- Ensure the corrected housing counts in CQRHU and CQRGQ differ from the original housing counts in CENSUSHU and CENSUSGQ.

- Ensure all the other content remains consistent with the original CQR Block Count List File as outlined in **Table 2**.
- Ensure the inclusion of all supporting documentation as described in section **D**.

5.3.3 Finalizing a Paper Submission

Once satisfied with the content and quality of the CQR case materials, proceed with assembly and packaging following the guidance below. Retain a copy for your records and to facilitate communication with the Census Bureau if questions arise.

For cases with only boundary discrepancy(s):

1. Locate the staged materials.
2. Double wrap the printed page(s) of individual address records from the Address List Template and maps with map spots for individual addresses using an inner and outer envelope (or container), one within the other.
3. Label both sides of the inner envelope/container with the notice, "**DISCLOSURE PROHIBITED BY TITLE 13 U.S.C.**"
4. Place the inner envelope/container into the outer envelope/container.
5. Include all relevant supporting documentation in the outer envelope/container. This information does not need to be in the inner envelope.
6. Do not label the outer envelope/container with the disclosure notice.
7. Proceed to **Chapter 6** for instructions on submitting these materials.

For cases with only housing count discrepancy(s):

1. Locate the staged materials.
2. Assemble the pages with corrected block records in an envelope/container for shipping to the Census Bureau.
   a. There is no need to double wrap the materials because there is no Title 13 U.S.C. information included.
3. Include all relevant supporting documentation.
4. Proceed to **Chapter 6** for instructions on submitting these materials.

For cases with both boundary and housing count discrepancies:

1. Locate the staged materials.
2. Double wrap the printed materials that include individual address information (e.g., individual address records from the Address List Template and maps with map spots for individual addresses) using an inner and outer envelope (or container), one within the other.
3. Label both sides of the inner envelope/container with the notice, "**DISCLOSURE PROHIBITED BY TITLE 13 U.S.C.**"
4. Place the inner envelope/container into the outer envelope/container.
5. Assemble the pages from the CQR Block Count List for shipment to the Census Bureau. There is no need to double wrap the materials because there is no Title 13 U.S.C. information included.
6. Include all relevant supporting documentation in the outer envelope/container. This information does not need to be in the inner envelope.
7. Do not label the outer envelope/container with the disclosure notice.
8. Proceed to **Chapter 6** to proceed with submitting these materials.

CHAPTER 6 SUBMITTING A PAPER CASE

After completing the assembly of materials, paper participants ship their CQR case to the Census Bureau's National Processing Center. The Census Bureau recommends using a service that provides tracking information, such as the United States Postal Service (USPS) traceable delivery, FedEx, United Parcel Service (UPS), or similar service. Retain the tracking information as proof of delivery.

Ship the CQR case submission to the following address:

U.S. Census Bureau
National Processing Center
ATTN: CQR Geography Bldg 63E
1201 E 10th St
Jeffersonville IN 47132

PART 4 NEXT STEPS FOR 2020 CENSUS CQR

This final part of the guide summarizes the next steps for 2020 Census CQR, which include 1) the issuance of the determination letters/emails to communicate with the GU the results of research and findings for their case and 2) the publication of revised data, or errata, online.

Note: The determination letters/emails vary based upon outcome of the case.

For cases resulting in revisions to the official 2020 Census counts, the Census Bureau issues new, official revised counts to the GU and any additional affected GUs. These new counts can be used by GUs for future programs or operations that require official 2020 Census data. The counts can also be used to calculate subsequent population estimates for the GU. The results are also prepared as revised counts, or errata. Errata is posted on the CQR website on a flow basis as they become available.

The revised counts are integrated into all population estimates released after the 2020 Census CQR case is closed. The ACS and PRCS use population totals from the Population Estimates Program at the incorporated place, minor civil division, and county levels to adjust the population totals published by the survey. Thus, to the extent that the population estimates incorporate the 2020 Census CQR results, the ACS and PRCS will also reflect those revisions. The Census Bureau will not incorporate CQR revisions into the 2020 Census data summary files and tables or re-tabulate any of the other 2020 Census data products.

APPENDICES

APPENDIX A OTHER MATERIALS AVAILABLE FOR 2020 CENSUS CQR

A1 2020 Census P.L. 94-171 Redistricting Data Files and Geographic Products

These materials, as directed by Public Law (P.L.) 94-171, were the first materials released by the Census Bureau, other than Apportionment, with the 2020 Census results. They include data files and geographic products (e.g., maps, block equivalency files, and shapefiles), that the 50 states, District of Columbia, and Puerto Rico use for legislative redistricting. Though not the preferred material to conduct a review for CQR purposes, GUs may use this material to determine if their boundary is incorrect and/or their housing counts and group quarters population are not as anticipated and determine whether to prepare a case requesting a review by the Census Bureau of specific blocks or boundaries.

The redistricting data files contain block level 2020 Census results that include people and housing characteristics for specific geographic areas. GUs may review Table P1 – Race to determine if their overall, total population aligns with their expectations. If not, GUs may review tables H1 – Occupancy Status and P5 – Group Quarters Population by Major Group Quarters Type in their state's data file with the corresponding shapefiles and/or maps to determine if their housing counts and group quarters population counts from the 2020 Census are as they expect. If the counts are not as expected, GUs should investigate further using the materials available for block level analysis (e.g., the CQR Block Count List and/or the 2020 Address Count Listing Files Viewer). Those materials are detailed in Chapter 1 of this guide.

The universe table for Table H1 – Occupancy Status is housing units. In other words, Table H1 specifically contains living quarters defined as housing units. This table does not contain unit counts for living quarters defined as group quarters.

The universe table for Table P5 – Group Quarters Population by Major Group Quarters Type is population in group quarters. Table P5 contains the total population living in group quarters. This count is further disaggregated into institutionalized and noninstitutionalized group quarters population counts. Table P5 does not contain demographic characteristics.

To learn more about all the redistricting materials, navigate to the main Redistricting Data Office website: <www.census.gov/programs-surveys/decennial-census/about/rdo/summary-files.2020.html>. The 2020 redistricting materials are located beneath the "2020" tab.

A2 Census Block-based Work Maps

There are some instances where the scale of the 2020 Census Block Maps prevents the clear visualization of a GU boundary or of certain densely clustered or geographically small 2020 tabulation blocks. To remedy that situation, the Census Bureau can create census block-based work maps for the GU; however, the GUs must contact the Census Bureau either by email at <dcmd.2020.cqr.submissions@census.gov> or by phone at (888) 369-3617 to discuss their specific situation and request these materials.

These maps are large-scale, small format (e.g., legal size – 8.5” x 14”) individual census block-based PDF maps. They do not contain any individual address or map spot information that would be protected under Title 13 U.S.C. These materials are only available upon request if the other available map materials prevent a review or update of a legal boundary or census block. The Census Bureau will provide this material on DVD along with other supporting files. The map related contents on the DVD include:

- About_the_maps.pdf
- Readme.txt
- DC20BLK_<entity_type><entity_code>.pdf (large format 2020 Census Block Maps)
- DC20BLK_<entity_type><entity_code>_BLK2MS.txt (Block-to-Map-Sheet relationship file for the large format maps)
- /2020Census_workmaps
  - BLOCKLEGEND_CQR20.pdf
  - BLOCKINFO_CQR20_<entity_type><entity_code.pdf (entity-based block map inventory file with a list of the blocks included and the number of sheets in each).
  - CQR20BLK_<ssccctttttbbbb>.pdf
  - CQR20BLK_<ssccctttttbbbb>.pdf
    - Where ss is the two-digit state FIPS code, ccc is the three-digit county FIPS code, tttttt is the six-digit census tract number, and bbbb is the four-digit census block number).

Figure 10 shows an example of an index sheet for a census block with five parent sheets while **Figure 11** shows parent sheet 1 for that same census block. Both map sheets are in landscape orientation; however, map sheets are generated using the best layout for the shape of the census block. As a result, a GU may receive maps in portrait and landscape orientation. Refer to **Figure 12** for an example of a legend. All three of these examples are of prototype maps and may not be identical to the final materials.

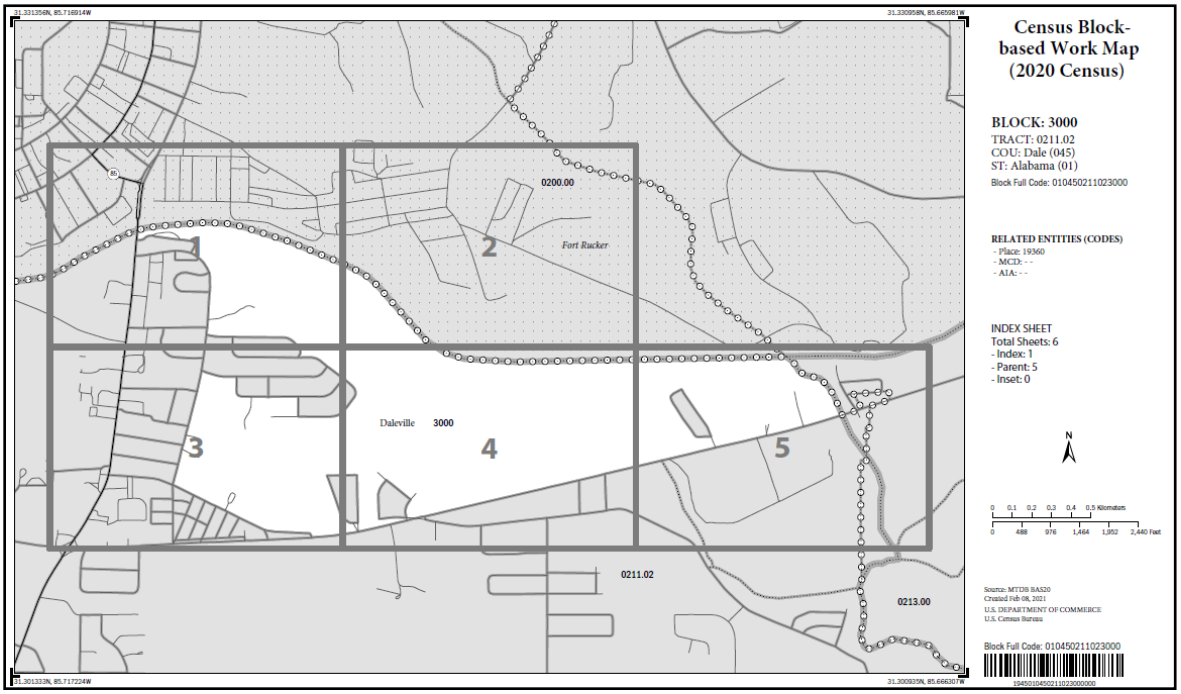


Figure 10: Example of a Census Block-based Work Map Index Sheet

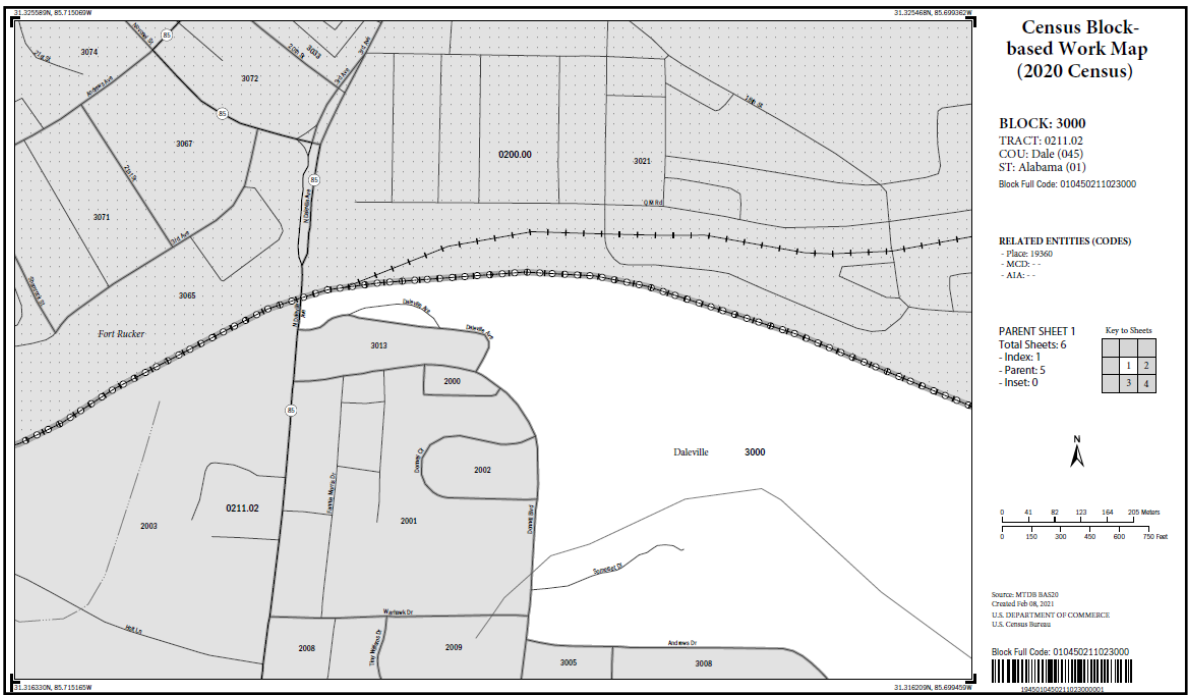
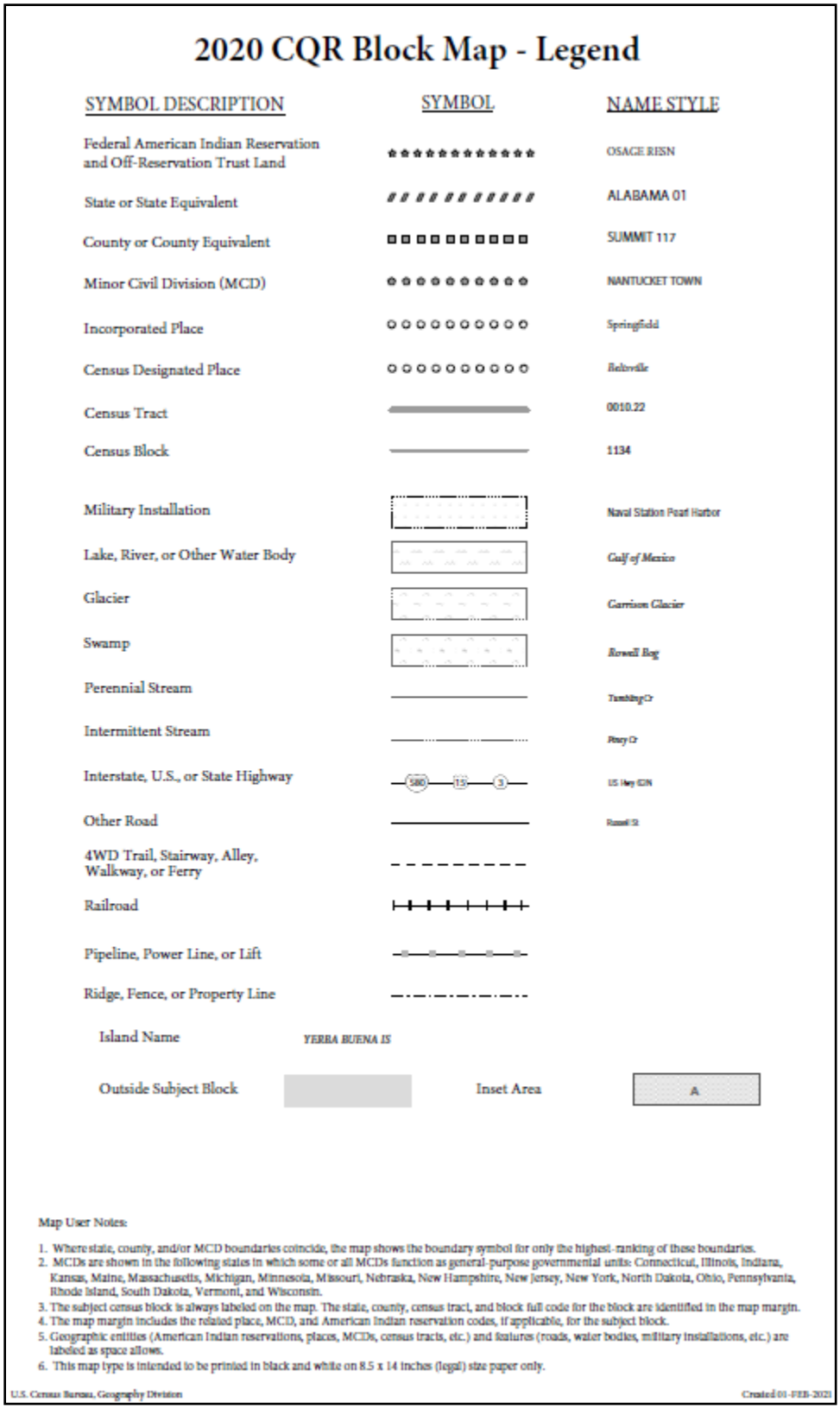


Figure 11: Example of a Census Block-based Work Map Parent Sheet



2020 CQR Block Map - Legend

SYMBOL DESCRIPTION	SYMBOL	NAME STYLE
Federal American Indian Reservation and Off-Reservation Trust Land		OSAGE RESN
State or State Equivalent		ALABAMA 01
County or County Equivalent		SUMMIT 117
Minor Civil Division (MCD)		NANTUCKET TOWN
Incorporated Place		Springfield
Census Designated Place		Belleville
Census Tract		0010.22
Census Block		1134
Military Installation		Naval Station Pearl Harbor
Lake, River, or Other Water Body		Gulf of Mexico
Glacier		Garrison Glacier
Swamp		Rowell Bog
Perennial Stream		Tumbling Cr
Intermittent Stream		Piney Cr
Interstate, U.S., or State Highway	580 13 3	US Hwy 62N
Other Road		Rural St
4WD Trail, Stairway, Alley, Walkway, or Ferry		
Railroad		
Pipeline, Power Line, or Lift		
Ridge, Fence, or Property Line		
Island Name	YERBA BUENA IS	
Outside Subject Block		Inset Area A

Map User Notes:

1. Where state, county, and/or MCD boundaries coincide, the map shows the boundary symbol for only the highest-ranking of these boundaries.
2. MCDs are shown in the following states in which some or all MCDs function as general-purpose governmental units: Connecticut, Illinois, Indiana, Kansas, Maine, Massachusetts, Michigan, Minnesota, Missouri, Nebraska, New Hampshire, New Jersey, New York, North Dakota, Ohio, Pennsylvania, Rhode Island, South Dakota, Vermont, and Wisconsin.
3. The subject census block is always labeled on the map. The state, county, census tract, and block full code for the block are identified in the map margin.
4. The map margin includes the related place, MCD, and American Indian reservation codes, if applicable, for the subject block.
5. Geographic entities (American Indian reservations, places, MCDs, census tracts, etc.) and features (roads, water bodies, military installations, etc.) are labeled as space allows.
6. This map type is intended to be printed in black and white on 8.5 x 14 inches (legal) size paper only.

U.S. Census Bureau, Geography Division

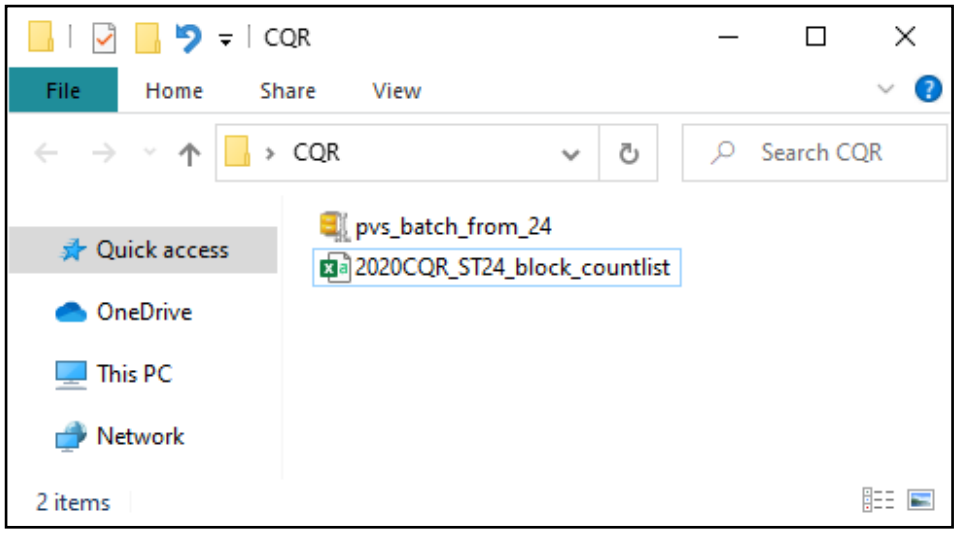
Created 01-FEB-2021

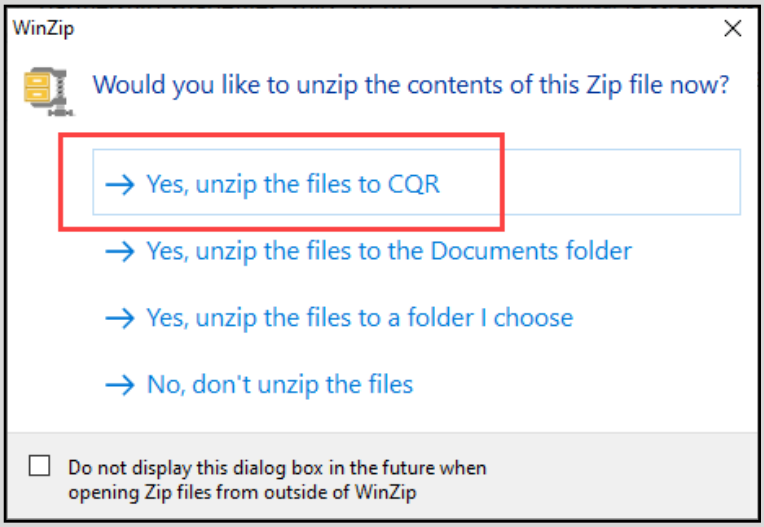
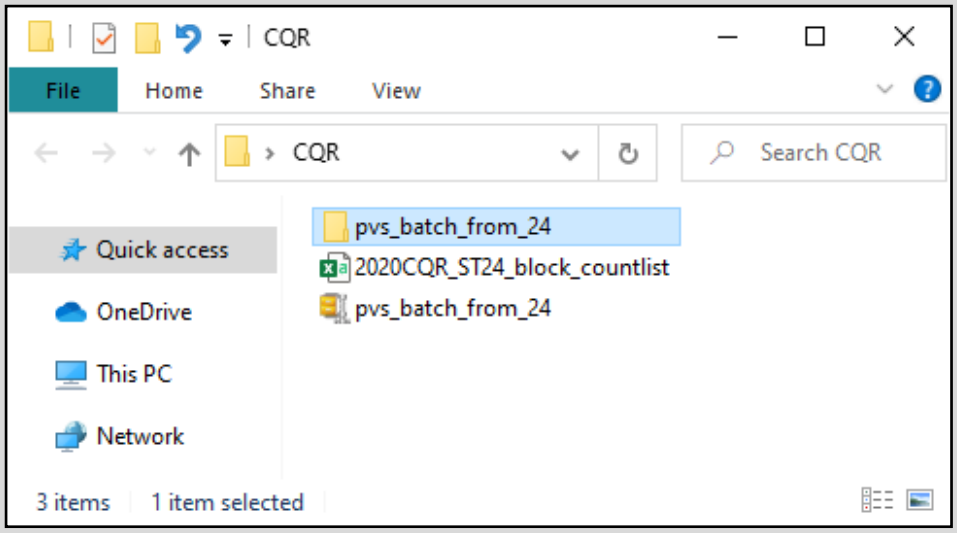
Figure 12: Example of a Census Block-based Work Map Legend

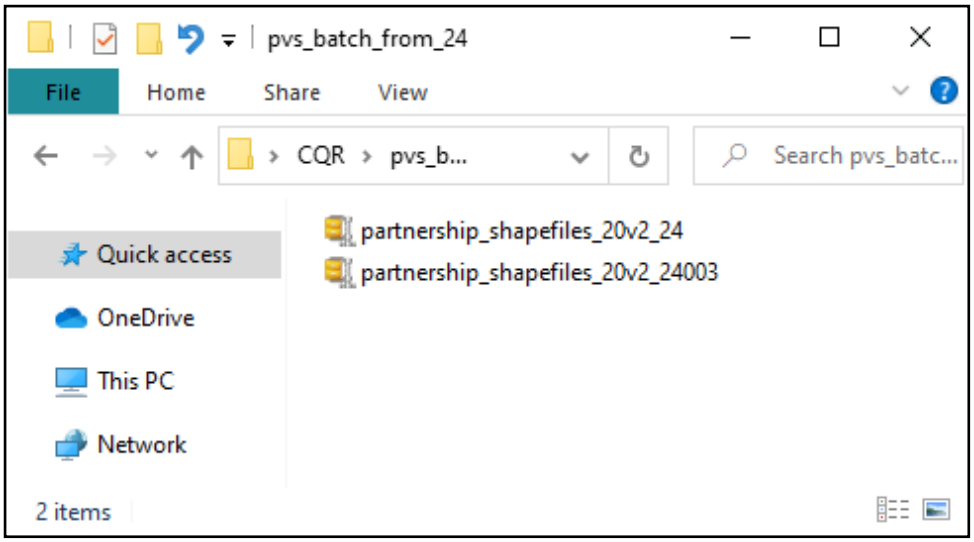
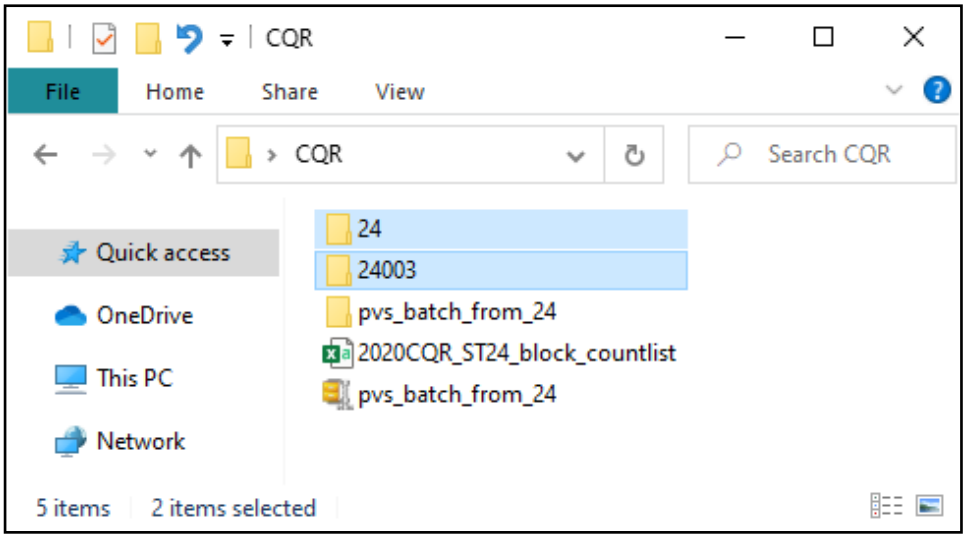
APPENDIX B PARTNERSHIP SHAPEFILE REFERENCE INFORMATION

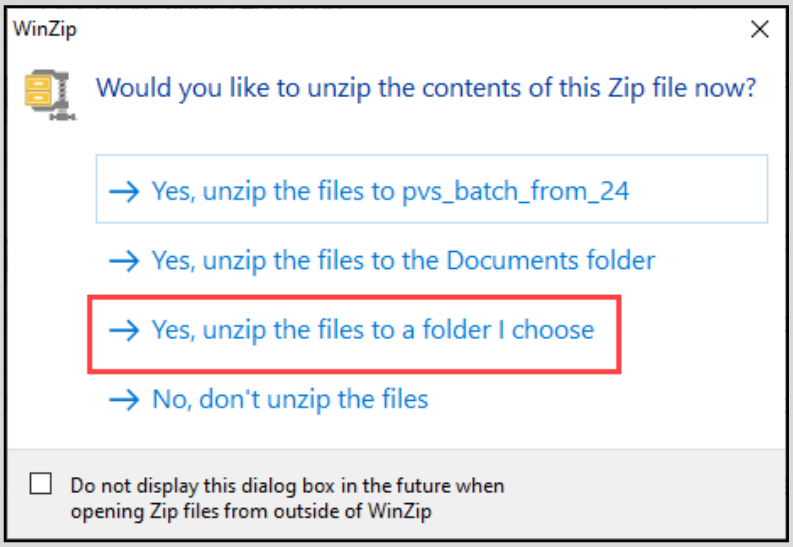
The information included in this appendix is a metadata resource. Use these shapefiles to conduct a detailed review of the 2020 Census results and, if necessary, to prepare a case. Before the shapefiles can be used, follow the steps outlined in **Table 4**.

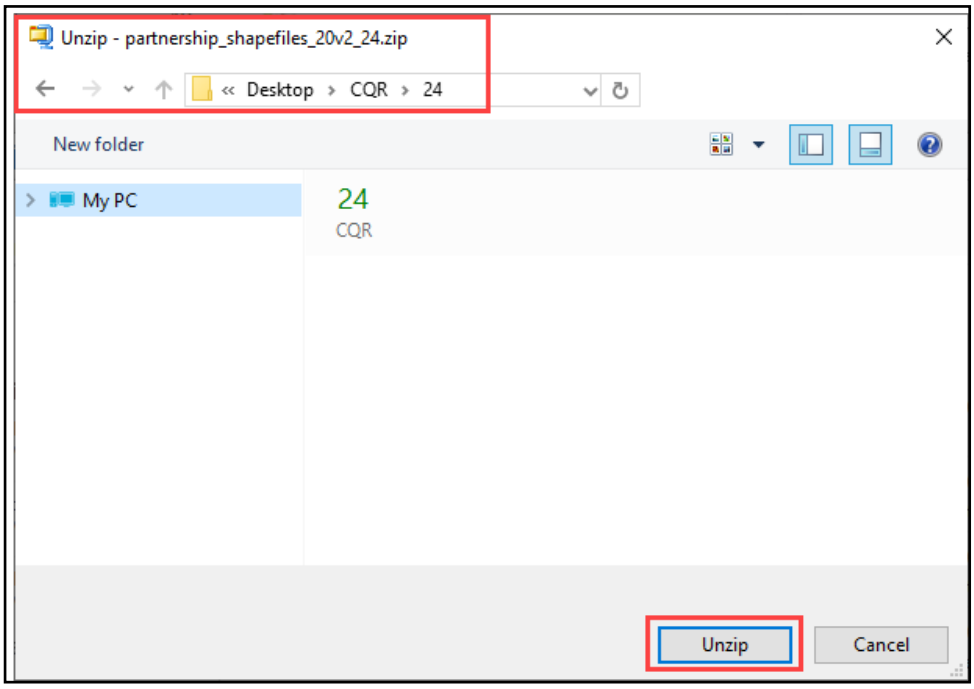
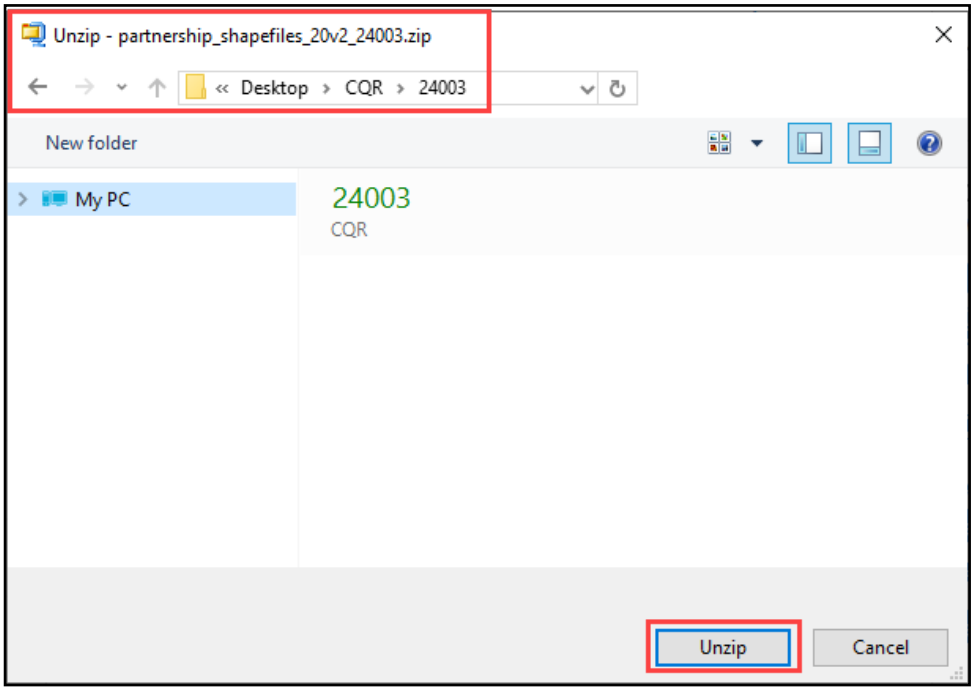
Table 4: Steps to Unzip and Stage the 2021 Partnership Shapefiles

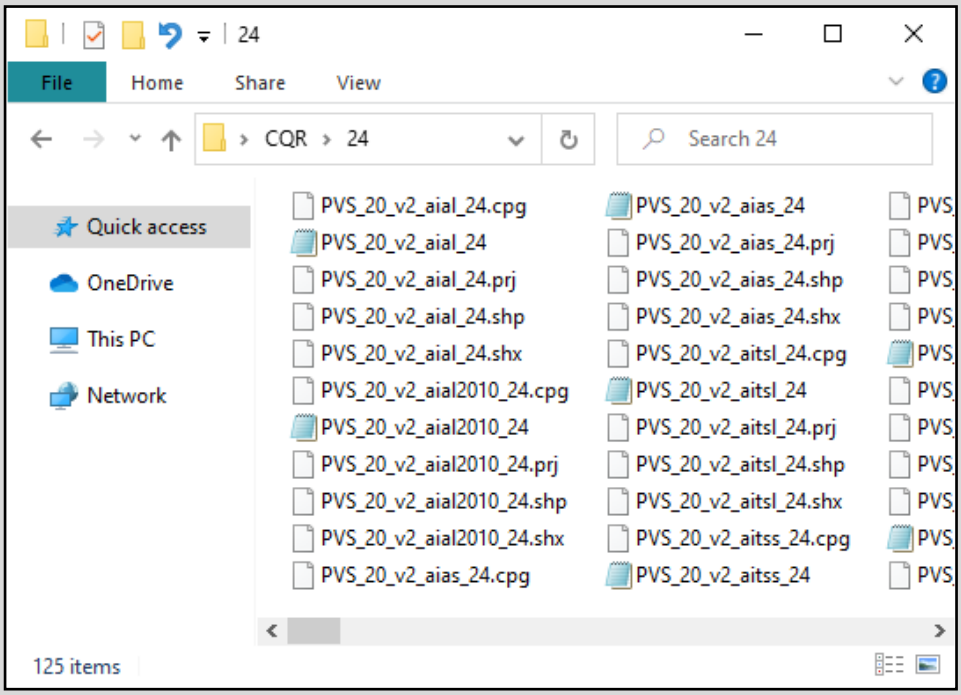
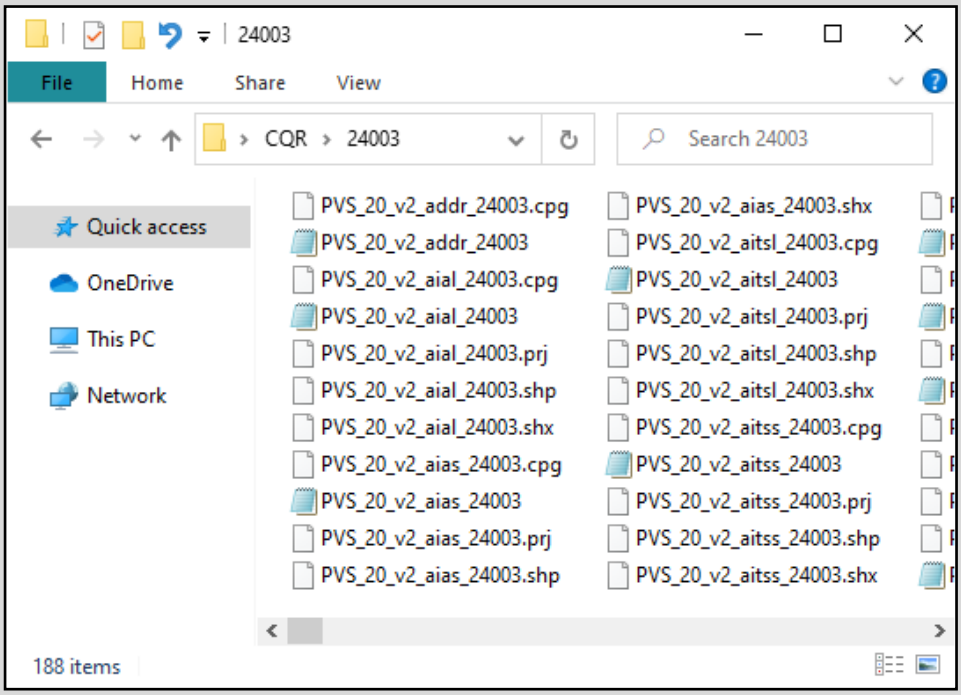
Step	Action and *Result(s)*
Step 1	From the locally created directory where the materials are saved, unzip the "shapefile" .zip file. For this example that is "CQR."  The example above shows the naming convention of a "shapefile" .zip file downloaded from the partnership shapefiles website. The naming convention may vary based on how the file was received (e.g., downloaded from CQR website or received in a different manner from the Census Bureau). The screen capture also shows the **CQR Block Count List File** for the state Maryland discussed in section **1.2**.

Step	Action and *Result(s)*
Step 2	*For this example, a WinZip confirmation window appears asking where to unzip the file*. Choose the first option to unzip to the locally created directory (e.g., CQR).  *An additional sub-directory, with the same name as the .zip file, appears within the CQR directory after the unzip action completes*. 

Step	Action and *Result(s)*
Step 3	Open the sub-directory, to reveal a minimum of two additional .zip files that must be unzipped. The first file, which ends with the two-digit state FIPS code, includes the state-level files for the GU and is automatically delivered with the county-level files requested by the GU. These files can be useful while conducting the review of 2020 Census results in the local GIS and are required by GUPS.  This example shows the state-level Maryland .zip file (24) and a county-level Anne Arundel County, Maryland, .zip file (24003).
	The unzip process on the initial .zip file could result in more than one county-level .zip file based on whether more than one county was selected during the download process For example, if a GU spans more than one county, they would download all the applicable county-based shapefiles to cover the entirety of the GU to conduct their review.
Step 4	Create the two additional sub-directories within the CQR directory. One for the state and one for the county-level .zip files. If the GU's initial .zip file includes more than one county-level .zip file, create individual county sub-directories for each. 

Step	Action and *Result(s)*
Step 5	Unzip the state-level .zip file to the state sub-directory and the county-level .zip file to the county sub-directory. For WinZip this occurs by selecting the third option, “Yes, unzip the files to a folder I choose.” 

Step	Action and *Result(s)*
Step 6	For each .zip file, navigate to the appropriate sub-directory and select **Unzip**.  

Step	Action and *Result(s)*
Step 7	*Once unzipped, each sub-directory contains the shapefile components.* Once complete, confirm both sub-directories contain shapefiles that begin with "PVS_20_v2." This is the version required by 2020 Census CQR.  

Step	Action and *Result(s)*
	Though this guide is for digital and paper participants, it is important to mention that GUPS requires one sub-directory with the state shapefiles (named by the state FIPS code), one sub-directory with the county shapefiles (named by the county FIPS code), and the CQR Block Count List (correctly named "2020CQR_STxx_block_countlist.csv"), where xx is the two-digit state FIPS code. The presence of additional files in the main directory (e.g., CQR) does not affect GUPS. These additional files could be local GIS files, local supporting documentation, the initial .zip file of shapefiles, etc. Should a GU decide to use GUPS, configuring the data in the manner described in this table will make that transition successful.

All shapefiles provided by the Census Bureau are in an unprojected, geographic-based coordinate system. They have the following associated metrics:

- Coordinate System: Geographic Coordinate System (GCS)
- Datum: North American Datum 1983 (NAD83).
- Spheroid: Geographic Reference System 1980 (GRS1980).
  - Semimajor Axis: 6378137.000000000000000.
  - Semiminor Axis: 6356752.314140356100000000.
  - Inverse Flattening: 298.257222101000020000.
- Prime Meridian: Greenwich (Longitude 0.000000000000000000).
- Angular Unit: Decimal Degree.
  - Radians per Unit (0.017453292519943295).

All shapefile coordinates are double precision (64-bit) floating point numbers. Double precision coordinate shapefiles are necessary to accurately represent geographic features, including geographic entity boundaries. All shapefiles are a collection of four files that include:

- .shp (main file).
- .shx (index file).
- .dbf (database table in dBase IV format).
- .prj (projection file in well-known text format (WKT)).

Table 5 contains the important 2021 Partnership shapefiles for 2020 Census CQR. Using this table with the information discussed in section **B** and in appendix **B1**, GUs can determine which files they need to complete their review of the 2020 Census results. GUs use these same layers if they choose to submit a case.

Note: Refer to detailed technical documentation on the TIGER/Line Shapefiles and TIGER/Line Files that provide supplementary information to the Partnership shapefiles. This documentation may prove helpful to tribal GUs to understand the coding with the shapefiles that identify their entity.

Table 5: Important 2021 Partnership Shapefiles for 2020 Census CQR

Shapefile Layer	Naming Convention	Availability (State/County)	Uses	Notes
Alaska Native Regional Corporation	PVS_20_v2_anrc_	State and County	Use for the boundaries of Alaska Native Regional Corporations.	Applicable only for Alaska.
All Lines	PVS_20_v2_edges_	County	Use for the depiction of roads, rails, hydrography lines, powerlines, etc.	Map by the MAF/TIGER Feature Classification Code field (MTFCC) to discern the type of line.
American Indian Areas – Legal	PVS_20_v2_aial_	State and County	Use for the boundaries of Federal reservations and off-reservation trust lands as well as State reservations.	
American Indian Areas – Statistical	PVS_20_v2_aias_	State and County	Use for the boundaries of tribal statistical geographies (e.g., Alaska Native village statistical areas, Oklahoma tribal statistical areas, Tribal designated statistical areas, and State designated tribal statistical areas.	
American Indian Tribal Subdivisions – Legal	PVS_20_v2_aitsl_	State and County	Use for the boundaries of tribal subdivisions located on federal reservations and/or off-reservation trust lands.	
American Indian Tribal Subdivisions – Statistical	PVS_20_v2_aitss_	State and County	Use for the boundaries of statistical tribal subdivisions.	Applicable only for Oklahoma (e.g., OTSA tribal subdivisions).
Area Landmarks	PVS_20_v2_arealm_	County	May be a useful reference layer.	

Shapefile Layer	Naming Convention	Availability (State/County)	Uses	Notes
Census Blocks – Current	PVS_20_v2_tabblock_	County	IMPORTANT: Use as the source of the 2020 tabulation blocks in conjunction with the PVS_20_v2_curtracts layer.	Regardless of the year (2021-2023) submitting a CQR case, use the PVS_20_v2 version of Partnership shapefiles as the source of official 2020 tabulation blocks.
Census Designated Places	PVS_20_v2_cdp_	State and County	Use for the boundaries of census designated places.	IMPORTANT: For 2020 Census CQR, this layer is applicable only for Hawaii and Puerto Rico.
Census Tracts – Current	PVS_20_v2_curtracts_	County	IMPORTANT: Use as the source of the 2020 census tracts in conjunction with the PVS_20_v2_tabblock layer.	Regardless of the year (2021-2023) submitting a CQR case, use the PVS_20_v2 version of Partnership shapefiles as the source of official 2020 census tracts.
Consolidated Cities	PVS_20_v2_concity_	County	Use for the boundaries of consolidated cities.	
Counties and Equivalent Areas	PVS_20_v2_county_	State and County	Use for the boundaries of counties and county equivalents.	
County Subdivisions – Legal	PVS_20_v2_mcd_	State and County	Use for the boundaries of legally defined county subdivisions (e.g., minor civil divisions).	
Geographic Offsets	PVS_20_v2_offset_	County	Use for the boundaries of corporate corridors and/or offsets to view those special type of legally recognized boundaries.	
Hawaiian Home Lands	PVS_20_v2_hhl_	State and County	Use for the boundaries of Hawaiian home lands.	Applicable only for Hawaii.
Hydrography – Area	PVS_20_v2_water_	County	May be a useful reference layer.	

Shapefile Layer	Naming Convention	Availability (State/County)	Uses	Notes
Incorporated Places	PVS_20_v2_place_	State and County	Use for the boundaries of incorporated places (e.g., cities, towns, villages, etc.).	
Point Landmarks	PVS_20_v2_pointlm_	County	May be a useful reference layer.	
Roads	PVS_20_v2_roads_	County	Use as resource for road features without having to thematically map the edges layer.	This a subset of the edges layer since it only contains road features (e.g. MTFCC with 'S').
States and Equivalent Areas	PVS_20_v2_state_	State	Use for the boundaries of states and state equivalents.	
Subbarrios	PVS_20_v2_submcd_	County	Use for the boundaries of subbarrio (e.g., subminor civil divisions).	Applicable only for Puerto Rico.
Address Ranges	PVS_20_v2_addr_	County	Relationship Table, not a shapefile, to use for source of address ranges associated with roads in the edges layer.	Match the TLID fields in this table with the same field in the edges layer. TLID is not included in roads layer, so ensure use of edges when joining.

For definitions of the legal and statistical area description codes (LSADs) used as an attribute within many of the shapefiles, refer to the list of legal status codes available online. These codes provide query capabilities to sort through the data and reference the proper records.

B1 Eligible Participants and Relevant Shapefile Layers

After reviewing **Table 5**, refer to the information below for suggestions on which Partnership shapefile layers are relevant for 2020 Census CQR based by type of eligible participant. Review the Data Dictionary tables included in appendix **B2** for specifics on the content of the layers mentioned below.

B1.1 Tribal Areas – Federally recognized American Indian Tribe

- American Indian Areas – Legal (for federally recognized American Indian reservations and off-reservation trust lands and state recognized American Indian reservations).
- American Indian Areas – Statistical (for tribal designated statistical areas and Oklahoma tribal statistical areas).

- American Indian Tribal Subdivisions – Legal (for tribal subdivisions).
- American Indian Tribal Subdivisions – Statistical (for tribal subdivisions within Oklahoma tribal statistical areas).
- Census Tracts.
- Tabulation Blocks.
- For reference only (as needed and if applicable):
  - Address Ranges.
  - All Lines.
  - Consolidated Cities.
  - Counties (and equivalents).
  - County Subdivisions – Legal.
  - Geographic Offsets.
  - Hydrography (Area).
  - Incorporated Places.
  - Landmarks (Area and Point).
  - Roads.
  - States (and equivalents).

B1.2 Tribal Areas – Alaska Native Regional Corporations

- Alaska Native Regional Corporation.
- American Indian Areas – Statistical (for the ANVSA geography).
- Census Tracts.
- Tabulation Blocks.
- For reference only (as needed and if applicable):
  - Address Ranges.
  - All Lines.
  - Consolidated Cities.
  - Counties (and equivalents).
  - County Subdivisions – Legal.
  - Geographic Offsets.
  - Hydrography (Area).
  - Incorporated Places.
  - Landmarks (Area and Point).
  - Roads.
  - States (and equivalents).

B1.3 Tribal Areas – Alaska Native Villages

- American Indian Areas – Statistical (for the ANVSA geography).
- Census Tracts.
- Tabulation Blocks.

- For reference only (as needed and if applicable):
  - Address Ranges.
  - Alaska Native Regional Corporation.
  - All Lines.
  - Consolidated Cities.
  - Counties (and equivalents).
  - County Subdivisions – Legal.
  - Geographic Offsets.
  - Hydrography (Area).
  - Incorporated Places.
  - Landmarks (Area and Point).
  - Roads.
  - States (and equivalents).

B1.4 State and Equivalents

- American Indian Areas – Legal (for state recognized American Indian reservations).
- American Indian Areas – Statistical (for state designated tribal statistical areas).
- Census Designated Places (applicable for Hawaii and Puerto Rico only).
- Census Tracts.
- Consolidated Cities.
- Counties (and equivalents).
- County Subdivisions – Legal.
- Geographic Offsets.
- Hawaiian Home Lands (for Hawaii only).
- Incorporated Places.
- States (and equivalents).
- Subbarrio (for Puerto Rico only).
- Tabulation Blocks.
- For reference only (as needed and if applicable):
  - Address Ranges.
  - All Lines.
  - Hydrography (Area).
  - Landmarks (Area and Point).
  - Roads.

B1.5 County and Equivalents

- Census Designated Places (applicable for Hawaii and Puerto Rico only)
- Census Tracts.
- Counties (and equivalents).
- County Subdivisions – Legal.
- Geographic Offsets.

- Incorporated Places.
- Subbarrio (for Puerto Rico only).
- Tabulation Blocks.
- For reference only (as needed and if applicable):
  - Address Ranges.
  - All Lines.
  - Census Designated Places.
  - Hydrography (Area).
  - Landmarks (Area and Point).
  - Roads.
  - States (and equivalents).

B1.6 Minor Civil Divisions

- Census Tracts.
- County Subdivisions – Legal.
- Geographic Offsets.
- Incorporated Places.
- Tabulation Blocks.
- For reference only (as needed and if applicable):
  - Address Ranges.
  - All Lines.
  - Census Designated Places.
  - Consolidated Cities.
  - Counties (and equivalents).
  - Hydrography (Area).
  - Landmarks (Area and Point).
  - Roads.
  - States (and equivalents).

B1.7 Consolidated Cities

- Census Tracts.
- Consolidated Cities.
- Tabulation Blocks.
- For reference only (as needed and if applicable):
  - Address Ranges.
  - All Lines.
  - Census Designated Places.
  - Hydrography (Area).
  - Incorporated Places.
  - Counties (and equivalents).
  - County Subdivisions – Legal.

- Geographic Offsets.
- Landmarks (Area and Point).
- Roads.
- States (and equivalents).

B1.8 Incorporated Places

- Census Tracts.
- Geographic Offsets.
- Incorporated Places.
- Tabulation Blocks.
- For reference only (as needed and if applicable):
  - Address Ranges.
  - All Lines.
  - Census Designated Places.
  - Consolidated Cities.
  - Counties (and equivalents).
  - County Subdivisions – Legal.
  - Hydrography (Area).
  - Landmarks (Area and Point).
  - Roads.
  - States (and equivalents).

B2 Data Dictionary Tables

The table information below, except for the State layer, is documented for the county-level files. For layers that exist at both the state and county levels, only the county-level information is provided. In addition, only the layers of interest for CQR that correspond to the layers mentioned in appendix **B1** are included in the tables below.

Table 6: Census Blocks - Current Layer (tabblock)

Attribute Name	Field Length	Field Type	Description
STATEFP	2	Char	FIPS State Code
COUNTYFP	3	Char	FIPS County Code
STATEFP20	2	Char	FIPS 2020 State Code
COUNTYFP20	3	Char	FIPS 2020 County Code
TRACTCE20	6	Char	2020 Census Tract Code
BLOCKCE	4	Char	Tabulation Block Number
SUFFIX1CE	2	Char	Census Block Suffix 1
SUFFIX2CE	2	Char	Census Block Suffix 2
NCELIGIBLE	1	Char	Field no longer used or accurate regarding New Construction Program eligibility
BLKSZIND	1	Char	Block Size Indicator Field
BLOCK	8	Char	Tabulation Block Number, Census Block Suffix 1, Census Block Suffix 2
PARTFLG	1	Char	Part flag indicator
BLOCKID	19	Char	FIPS State Code, FIPS County Code, Census Tract Code, Tabulation Block Number, Census Block Suffix 1, Census Block Suffix 2

Table 7: Census Tract - Current Layer (curtracts)

Attribute Name	Field Length	Field Type	Description
STATEFP	2	Char	FIPS State Code
COUNTYFP	3	Char	FIPS County Code
TRACTCE	6	Char	2020 Census Tract Code
NAME	100	Char	Base Name portion of the Standardized Name
TRACTID	11	Char	FIPS State Code, FIPS County Code, 2020 Census Tract Code
NEW_CODE	6	Char	New Tract Code
CHNG_TYPE	2	Char	Type of area update
EFF_DATE	8	Date	Effective date or vintage
TRACTTYP	1	Char	Tract Characteristic Flag
RELATE	120	Char	Relationship description
JUSTIFY	150	Char	Justification
TRACTLABEL	7	Char	Census tract number used for LUCA geocoding
VINTAGE	2	Char	Vintage

Table 8: All Lines Layer (edges)

Attribute Name	Field Length	Field Type	Description
STATEFP	2	Char	FIPS State Code
COUNTYFP	3	Char	FIPS County Code
TLID	10,0	Number	TIGER Line ID or the Permanent Edge ID
TFIDL	10,0	Number	TIGER Line ID or the Permanent Face ID, Left
TFIDR	10,0	Number	TIGER Line ID or the Permanent Face ID, Right
MTFCC	5	Char	MAF/TIGER Feature Classification Code
FIDELITY	1	Char	Indication to a participant when their entity boundary has changed through spatial enhancement
FULLNAME	40	Char	Decoded Feature Name with abbreviated qualifier, direction, and feature type
SMID	22,0	Number	Spatial Tmeta ID
SMIDTYPE	1	Varchar2	Source attribution for boundary edges. PLSS, Parcels, Surveyed, etc.
BBSPFLG	1	Char	Indicates the Redistricting Data Project participant's submitted request of an EDGE for selection for holding.
CBBFLG	1	Char	Indicates the status of an EDGE for a selection as tabulation block boundary
BBSP_2020	1	Char	New BBSP Flag
CHNG_TYPE	4	Char	Type of area update
JUSTIFY	150	Char	Justification
LTOADD	10	Char	Left to address
RTOADD	10	Char	Right to address
LFROMADD	10	Char	Left from address
RFROMADD	10	Char	Right from address
ZIPL	5	Char	USPS ZIP Code to left side of the edge
ZIPR	5	Char	USPS ZIP Code to right side of the edge
EXTTYP	1	Char	Extension type
MTUPDATE	10	Date	Date of last update to the edge

Table 9: Alaska Native Regional Corporations Layer (anrc)

Attribute Name	Field Length	Field Type	Description
STATEFP	2	Char	FIPS State Code
COUNTYFP	3	Char	FIPS County Code
ANRCFP	5	Char	FIPS ANRC Code (state based)
NAMELSAD	100	Char	Name with translated LSAD
LSAD	2	Char	Legal/Statistical Area Description
AIANNHNS	8	Char	ANSI numeric identifier for AIANNH Areas
FUNCSTAT	1	Char	Functional Status
CLASSFP	2	Char	FIPS 55 class code describing an entity
PARTFLG	1	Char	Part flag indicator
CHNG_TYPE	2	Char	Type of area update
EFF_DATE	8	Date	Effective date or vintage
AUTHTYPE	1	Char	Authorization type for legal area updates
DOCU	120	Char	Supporting documentation
FORM_ID	4	Char	Record ID for any boundary update
AREA	10,3	Number	Acreage of area update
RELATE	120	Char	Relationship description
JUSTIFY	150	Char	Justification
NAME	100	Char	Name
VINTAGE	2	Char	Vintage
AIANNHFSR	1	Char	Flag indicating level of recognition of an American Indian, Alaska Native, or Native Hawaiian tribe or group

Table 10: American Indian Areas – Legal Layer (aial)

Attribute Name	Field Length	Field Type	Description
STATEFP	2	Char	FIPS State Code
COUNTYFP	3	Char	FIPS County Code
AIANNHCE	4	Char	Census AIANNH code
COMPTYP	1	Char	Indicates if reservation (or equivalent) or off-reservation trust land is present, or both
AIANNHFSR	1	Char	Flag indicating level of recognition of an American Indian, Alaska Native, or Native Hawaiian tribe or group
NAMELSAD	100	Char	Name with translated LSAD
AIANNHNS	8	Char	ANSI numeric identifier for AIANNH Areas
LSAD	2	Char	Legal/Statistical Area Description
FUNCSTAT	1	Char	Functional Status
CLASSFP	2	Char	FIPS 55 class code describing an entity
PARTFLG	1	Char	Part flag indicator
CHNG_TYPE	2	Char	Type of area update
EFF_DATE	8	Date	Effective date or vintage
AUTHTYPE	1	Char	Authorization type for legal area updates
DOCU	120	Char	Supporting documentation
FORM_ID	4	Char	Record ID for any boundary update
AREA	10,3	Number	Acreage of area update
RELATE	120	Char	Relationship description
JUSTIFY	150	Char	Justification
NAME	100	Char	Name
VINTAGE	2	Char	Vintage

Table 11: American Indian Areas – Statistical Layer (aias)

Attribute Name	Field Length	Field Type	Description
STATEFP	2	Char	FIPS State Code
COUNTYFP	3	Char	FIPS County Code
AIANNHCE	4	Char	Census AIANNH code
COMPTYP	1	Char	Indicates if reservation (or equivalent) or off-reservation trust land is present, or both
AIANNHFSR	1	Char	Flag indicating level of recognition of an American Indian, Alaska Native, or Native Hawaiian tribe or group
NAMELSAD	100	Char	Name with translated LSAD
AIANNHNS	8	Char	ANSI numeric identifier for AIANNH Areas
LSAD	2	Char	Legal/Statistical Area Description
FUNCSTAT	1	Char	Functional Status
CLASSFP	2	Char	FIPS 55 class code describing an entity
PARTFLG	1	Char	Part flag indicator
CHNG_TYPE	2	Char	Type of area update
EFF_DATE	8	Date	Effective date or vintage
RELATE	120	Char	Relationship description
JUSTIFY	150	Char	Justification
NAME	100	Char	Name
VINTAGE	2	Char	Vintage

Table 12: American Indian Tribal Subdivisions - Legal Layer (aitsl)

Attribute Name	Field Length	Field Type	Description
STATEFP	2	Char	FIPS State Code
COUNTYFP	3	Char	FIPS County Code
AIANNHCE	4	Char	Census AIANNH code
TRIBSUBCE	3	Char	Census Tribal Subdivision Code
NAMELSAD	100	Char	Name with translated LSAD
TRIBSUBNS	8	Char	ANSI eight-digit feature code for the tribal subdivision
LSAD	2	Char	Legal/Statistical Area Description
FUNCSTAT	1	Char	Functional Status
CLASSFP	2	Char	FIPS 55 class code describing an entity
PARTFLG	1	Char	Part flag indicator
CHNG_TYPE	2	Char	Type of area update
EFF_DATE	8	Date	Effective date or vintage
AUTHTYPE	1	Char	Authorization type for legal area updates
DOCU	120	Char	Supporting documentation
FORM_ID	4	Char	Record ID for any boundary update
AREA	10,3	Number	Acreage of area update
RELATE	120	Char	Relationship description
JUSTIFY	150	Char	Justification
NAME	100	Char	Name
VINTAGE	2	Char	Vintage
AIANNHFSR	1	Char	Flag indicating level of recognition of an American Indian, Alaska Native, or Native Hawaiian tribe or group

Table 13: American Indian Tribal Subdivisions - Statistical Layer (aitss)

Attribute Name	Field Length	Field Type	Description
STATEFP	2	Char	FIPS State Code
COUNTYFP	3	Char	FIPS County Code
AIANNHCE	4	Char	Census AIANNH code
TRIBSUBCE	3	Char	Census Tribal Subdivision Code
NAMELSAD	100	Char	Name with translated LSAD
TRIBSUBNS	8	Char	ANSI eight-digit feature code for the tribal subdivision
LSAD	2	Char	Legal/Statistical Area Description
FUNCSTAT	1	Char	Functional Status
CLASSFP	2	Char	FIPS 55 class code describing an entity
PARTFLG	1	Char	Part flag indicator
CHNG_TYPE	2	Char	Type of area update
EFF_DATE	8	Date	Effective date or vintage
RELATE	120	Char	Relationship description
JUSTIFY	150	Char	Justification
NAME	100	Char	Name
VINTAGE	2	Char	Vintage
AIANNHFSR	1	Char	Flag indicating level of recognition of an American Indian, Alaska Native, or Native Hawaiian tribe or group

Table 14: Area Landmarks Layer (arealm)

Attribute Name	Field Length	Field Type	Description
STATEFP	2	Char	FIPS State Code
COUNTYFP	3	Char	FIPS County Code
MTFCC	5	Char	MAF/TIGER Feature Classification Code
FULLNAME	120	Char	Prefix Direction Code, Prefix Type code, Base Name, Suffix Type Code, Suffix Direction code
AREAID	22	Char	Object ID
ANSICODE	8	Char	Represents the official code for use by Federal agencies for data transfer and dissemination
PARTFLG	1	Char	Part flag indicator
CHNG_TYPE	2	Char	Type of area update
EFF_DATE	8	Date	Effective date or vintage
RELATE	120	Char	Relationship description
JUSTIFY	150	Char	Justification
BAG	3	Char	Block Area Grouping

Table 15: Census Designated Places Layer (cdp)

Attribute Name	Field Length	Field Type	Description
STATEFP	2	Char	FIPS State Code
COUNTYFP	3	Char	FIPS County Code
PLACEFP	5	Char	FIPS 55 Place Code
PLACENS	8	Char	ANSI feature code for the place
NAMELSAD	100	Char	Name with translated LSAD
LSAD	2	Char	Legal/Statistical Area Description
FUNCSTAT	1	Char	Functional Status
CLASSFP	2	Char	FIPS 55 class code describing an entity
PARTFLG	1	Char	Part flag indicator
CHNG_TYPE	2	Char	Type of area update
EFF_DATE	8	Date	Effective date or vintage
RELATE	120	Char	Relationship description
JUSTIFY	150	Char	Justification
NAME	100	Char	Name
VINTAGE	2	Char	Vintage

Table 16: Consolidated Cities Layer (concity)

Attribute Name	Field Length	Field Type	Description
STATEFP	2	Char	FIPS State Code
COUNTYFP	3	Char	FIPS County Code
CONCITYFP	5	Char	FIPS 55 Place Code
NAMELSAD	100	Char	Name with translated LSAD
PLACENS	8	Char	ANSI feature code for the place
LSAD	2	Char	Legal/Statistical Area Description
FUNCSTAT	1	Char	Functional Status
CLASSFP	2	Char	FIPS 55 class code describing an entity
CHNG_TYPE	2	Char	Type of area update
EFF_DATE	8	Date	Effective date or vintage
AUTHTYPE	1	Char	Authorization type for legal area updates
DOCU	120	Char	Supporting documentation
FORM_ID	4	Char	Record ID for any boundary update
AREA	10,3	Number	Acreage of area update
RELATE	120	Char	Relationship description
JUSTIFY	150	Char	Justification
NAME	100	Char	Name
VINTAGE	2	Char	Vintage

Table 17: Counties and Equivalent Areas Layer (county)

Attribute Name	Field Length	Field Type	Description
STATEFP	2	Char	FIPS State Code
COUNTYFP	3	Char	FIPS County Code
COUNTYNS	8	Char	ANSI feature code for county or equivalent feature
NAMELSAD	100	Char	Name with translated LSAD
LSAD	2	Char	Legal/Statistical Area Description
FUNCSTAT	1	Char	Functional Status
CLASSFP	2	Char	FIPS 55 class code describing an entity
CHNG_TYPE	2	Char	Type of area update
EFF_DATE	8	Date	Effective date or vintage
AUTHTYPE	1	Char	Authorization type for legal area updates
DOCU	120	Char	Supporting documentation
FORM_ID	4	Char	Record ID for any boundary update
AREA	10,3	Number	Acreage of area update
RELATE	120	Char	Relationship description
JUSTIFY	150	Char	Justification
NAME	100	Char	Name
VINTAGE	2	Char	Vintage

Table 18: County Subdivisions - Legal Layer (mcd)

Attribute Name	Field Length	Field Type	Description
STATEFP	2	Char	FIPS State Code
COUNTYFP	3	Char	FIPS County Code
COUSUBFP	5	Char	FIPS 55 County Subdivision code
NAMELSAD	100	Char	Name with translated LSAD
COUSUBNS	8	Char	ANSI feature code for the county subdivision
LSAD	2	Char	Legal/Statistical Area Description
FUNCSTAT	1	Char	Functional Status
CLASSFP	2	Char	FIPS 55 class code describing an entity
CHNG_TYPE	2	Char	Type of area update
EFF_DATE	8	Date	Effective date or vintage
AUTHTYPE	1	Char	Authorization type for legal area updates
DOCU	120	Char	Supporting documentation
FORM_ID	4	Char	Record ID for any boundary update
AREA	10,3	Number	Acreage of area update
RELATE	120	Char	Relationship description
JUSTIFY	150	Char	Justification
NAME	100	Char	Name
VINTAGE	2	Char	Vintage

Table 19: Geographic Offsets Layer (offset)

Attribute Name	Field Length	Field Type	Description
TFID	20	Number	Permanent Face ID
STATEFP	2	Char	FIPS State Code
COUNTYFP	3	Char	FIPS County Code
OFFSET	1	Char	Geographic Corridor/Offset Flag
ADDEXCLUDE	1	Char	Address Exclusion Indicator
CHNG_TYPE	2	Char	Type of area update
EFF_DATE	8	Date	Effective date or vintage
RELATE	120	Char	Relationship description
JUSTIFY	150	Char	Justification

Table 20: Hawaiian Home Lands Layer (hhl)

Attribute Name	Field Length	Field Type	Description
STATEFP	2	Char	FIPS State Code
COUNTYFP	3	Char	FIPS County Code
AIANNHCE	4	Char	Census AIANNH code
COMPTYP	1	Char	Indicates if reservation (or equivalent) or off-reservation trust land is present
NAMELSAD	100	Char	Name with translated LSAD
AIANNHNS	8	Char	ANSI numeric identifier for AIANNH Areas
LSAD	2	Char	Legal/Statistical Area Description
FUNCSTAT	1	Char	Functional Status
CLASSFP	2	Char	FIPS 55 class code describing an entity
PARTFLG	1	Char	Part flag indicator
CHNG_TYPE	2	Char	Type of area update
EFF_DATE	8	Date	Effective date or vintage
AUTHTYPE	1	Char	Authorization type for legal area updates
DOCU	120	Char	Supporting documentation
FORM_ID	4	Char	Record ID for any boundary update
AREA	10,3	Number	Acreage of area update
RELATE	120	Char	Relationship description
JUSTIFY	150	Char	Justification
NAME	100	Char	Name
VINTAGE	2	Char	Vintage
AIANNHFSR	1	Char	Flag indicating level of recognition of an American Indian, Alaska Native, or Native Hawaiian tribe or group

Table 21: Hydrography - Area Layer (water)

Attribute Name	Field Length	Field Type	Description
STATEFP	2	Char	FIPS State Code
COUNTYFP	3	Char	FIPS County Code
ANSICODE	8	Char	Represents the official code for use by Federal agencies for data transfer and dissemination
MTFCC	5	Char	MAF/TIGER Feature Classification Code
FULLNAME	120	Char	Prefix Direction Code, Prefix Type code, Base Name, Suffix Type Code, Suffix Direction code
CHNG_TYPE	2	Char	Type of area update
HYDROID	22	Char	Object ID
RELATE	120	Char	Relationship description
JUSTIFY	150	Char	Justification

Table 22: Incorporated Places Layer (place)

Attribute Name	Field Length	Field Type	Description
STATEFP	2	Char	FIPS State Code
COUNTYFP	3	Char	FIPS County Code
PLACEFP	5	Char	FIPS 55 Place Code
NAMELSAD	100	Char	Name with translated LSAD
PLACENS	8	Char	ANSI feature code for the place
LSAD	2	Char	Legal/Statistical Area Description
FUNCSTAT	1	Char	Functional Status
CLASSFP	2	Char	FIPS 55 class code describing an entity
PARTFLG	1	Char	Part flag indicator
CHNG_TYPE	2	Char	Type of area update
EFF_DATE	8	Date	Effective date or vintage
AUTHTYPE	1	Char	Authorization type for legal area updates
DOCU	120	Char	Supporting documentation
FORM_ID	4	Char	Record ID for any boundary update
AREA	10,3	Number	Acreage of area update
RELATE	120	Char	Relationship description
JUSTIFY	150	Char	Justification
NAME	100	Char	Name
VINTAGE	2	Char	Vintage

Table 23: Point Landmarks Layer (pointlm)

Attribute Name	Field Length	Field Type	Description
STATEFP	2	Char	FIPS State Code
COUNTYFP	3	Char	FIPS County Code
POINTID	22	Char	Object ID
ANSICODE	8	Char	Represents the official code for use by Federal agencies for data transfer and dissemination
MTFCC	5	Char	MAF/TIGER Feature Classification Code
FULLNAME	120	Char	Prefix Direction Code, Prefix Type code, Base Name, Suffix Type Code, Suffix Direction code
CHNG_TYPE	2	Char	Type of point update
JUSTIFY	150	Char	Justification

Table 24: Roads Layer (roads)

Attribute Name	Field Length	Field Type	Description
STATEFP	2	Char	FIPS State Code
COUNTYFP	3	Char	FIPS County Code
LINEARID	22	Char	Object ID
FULLNAME	120	Char	Prefix Direction Code, Prefix Type code, Base Name, Suffix Type Code, Suffix Direction code
RTTYP	1	Varchar2	Route type code
MTFCC	5	Char	MAF/TIGER Feature Classification Code

Table 25: States and Equivalent Areas Layer (state)

Attribute Name	Field Length	Field Type	Description
STATEFP	2	Char	FIPS State Code
STATEUSPS	2	Char	USPS State Abbreviation
NAME	100	Char	Base Name Portion of Standardized Name
KSAD	2	Char	Legal/Statistical Area Description Code
STATENS	8	Char	ANSI Feature Code for the State

Table 26: Subbarrios Layer (submcd)

Attribute Name	Field Length	Field Type	Description
STATEFP	2	Char	FIPS State Code
COUNTYFP	3	Char	FIPS County Code
COUSUBFP	5	Char	FIPS 55 County Subdivision Code
SUBMCDFP	5	Char	FIPS Sub-minor Civil Division Code
NAMELSAD	100	Char	Name with translated LSAD
SUBMCDNS	8	Char	ANSI feature code for the sub-minor civil division
LSAD	2	Char	Legal/Statistical Area Description
CHNG_TYPE	2	Char	Type of area update
EFF_DATE	8	Date	Effective date or vintage
AREA	10,3	Number	Acreage of area update
RELATE	120	Char	Relationship description
JUSTIFY	150	Char	Justification
FORM_ID	4	Char	Record ID for any boundary update
NAME	100	Char	Name
VINTAGE	2	Char	Vintage
FUNCSTAT	1	Char	Functional Status

Table 27: Address Ranges Relationship Table (addr)

Attribute Name	Field Length	Field Type	Description
TLID	10,0	Number	TIGER Line ID or the Permanent Edge ID
STATEFP	2	Char	FIPS State Code
COUNTYFP	3	Char	FIPS County Code
FROMHN	12	Char	From House Number
TOHN	12	Char	To House Number
SIDE	1	Char	Side Indicator Flag
ZIP	5	Char	USPS ZIP Code
PLUS4	4	Char	USPS ZIP +4 Code
LFROMADD	10	Char	Blank; outdated field no longer used
LTOADD	10	Char	Blank; outdated field no longer used
RFROMADD	10	Char	Blank; outdated field no longer used
RTOADD	10	Char	Blank; outdated field no longer used
ZIPL	5	Char	Blank; outdated field no longer used
ZIPR	5	Char	Blank; outdated field no longer used
ZIP4L	4	Char	Blank; outdated field no longer used
ZIP4R	4	Char	Blank; outdated field no longer used

APPENDIX C ACCEPTABLE ADDRESS TYPE EXAMPLES

IMPORTANT: The Address List Template File that includes individual address records is only necessary for boundary cases. Skip this appendix if your case only includes housing count.

The four figures in this appendix provide a visual of a completed Address List Template File that contains eight acceptable address type examples. None of the examples shown below or included in this appendix contain Title 13 U.S.C. information. All records are fictitious. **Figure 13** depicts all 25 fields of the Address List Template broken into three sections for readability. Part A, displayed in **Figure 14**, depicts the first 11 fields of information. Part B, displayed in **Figure 15**, depicts the fields specific to Puerto Rico records. Part C, displayed in **Figure 16**, depicts the last eight fields of information.

Part A Part B Part C

CITY_STYLE_FLAG	GQ_FLAG	ENTITY_ID	STATE	COUNTY	2020_TRACT	2020_BLOCK	COMPLETE_ADDRESS_NUMBER	COMPLETE_STREET_NAME	APTUNIT_NUMBER	MAILING_ZIP_CODE	URBANIZACION	CONDO_RES	COMPLEX_DESCRIPTOR	AREA1	AREA2	KMHM	GQ_NAME	FACILITY_NAME	LOCATION_DESCRIPTION	NONCITYSTYLE_ADDRESS	NONCITYSTYLE_ZIP_CODE	LATITUDE	LONGITUDE	MAPSPOT
Y		C08B009	88	009	003000	1000	20	N Main St		99998												42.425694	-87.586566	
Y		C08B009	88	009	001001	2013	1	Apple Ct	Apt 300	99997												42.465412	-87.591020	
Y		C08B009	88	009	001001	2013	1	Apple Ct	Apt 302	99997												42.465412	-87.591020	
Y		C08B009	88	009	001001	2013	1	Apple Ct	Apt 304	99997												42.465412	-87.591020	
Y		C08B009	88	009	001001	2013	1	Apple Ct	Apt 306	99997												42.465412	-87.591020	
Y	G	C08B009	88	009	003000	4008	120	N Elm Ave		99998							Bayside Nursing Home					42.525540	-87.586504	
N		C08B009	88	009	003000	2009													Apt above gas station on the SE corner of N Main St and N Elm Ave					1
N		C08B009	88	009	000100	3000													Garage apt behind red house hse near US Highway 1 and N Elm Ave	RR 2 Box 34	99997	42.526985	-87.586541	1

Figure 13: Acceptable Address Types in the Address List Template File

CITY_STYLE_FLAG	GQ_FLAG	ENTITY_ID	STATE	COUNTY	2020_TRACT	2020_BLOCK	COMPLETE_ADDRESS_NUMBER	COMPLETE_STREET_NAME	APTUNIT_NUMBER	MAILING_ZIP_CODE
Y		CO88009	88	009	003000	1000	20	N Main St		99998
Y		CO88009	88	009	001001	2013	1	Apple Ct	Apt 300	99997
Y		CO88009	88	009	001001	2013	1	Apple Ct	Apt 302	99997
Y		CO88009	88	009	001001	2013	1	Apple Ct	Apt 304	99997
Y		CO88009	88	009	001001	2013	1	Apple Ct	Apt 306	99997
Y	G	CO88009	88	009	003000	4008	120	N Elm Ave		99998
N		CO88009	88	009	003000	2009				
N		CO88009	88	009	000100	3000				

Figure 14: Address List Template File "Part A" (Zoomed View)

URBANIZACION	CONDO_RES	COMPLEX_DESCRIPTOR	AREA1	AREA2	KMHM

Figure 15: Address List Template File "Part B" (Zoomed View)

GQ_NAME	FACILITY_NAME	LOCATION_DESCRIPTION	NONCITYSTYLE_ADDRESS	NONCITYSTYLE_ZIP_CODE	LATITUDE	LONGITUDE	MAPSPOT
					42.425694	-87.586566	
					42.465412	-87.591020	
					42.465412	-87.591020	
					42.465412	-87.591020	
					42.465412	-87.591020	
Bayside Nursing Home					42.525540	-87.586504	
		Apt above gas station on the SE corner of N Main St and N Elm Ave					1
		Garage apt behind red house hse near US Highway 1 and N Elm Ave	RR 2 Box 34	99997	42.526985	-87.586541	1

Figure 16: Address List Template File "Part C" (Zoomed View)

APPENDIX D PUERTO RICO ACCEPTABLE ADDRESS TYPE EXAMPLES

IMPORTANT: The Address List Template File that includes individual address records is only necessary for boundary cases. Skip this appendix if your case only includes housing count.

The four figures in this appendix provide a visual of a completed Address List Template File that contains eight acceptable address type examples for Puerto Rico. None of the examples shown below or included in this appendix contain Title 13 U.S.C. information. All records are fictitious. **Figure 17** depicts all 25 fields of the Address List Template broken into three sections for readability. Part A, displayed in **Figure 18**, depicts the first 11 fields of information. Part B, displayed in **Figure 19**, depicts the fields specific to Puerto Rico records. Part C, displayed in **Figure 20**, depicts the last eight fields of information.

Part A - Puerto Rico | Part B - Puerto Rico | Part C - Puerto Rico

CITY_STYLE_FLAG	GQ_FLAG	ENTITY_ID	STATE	COUNTY	2020_TRACT	2020_BLOCK	COMPLETE_ADDRESS_NUMBER	COMPLETE_STREET_NAME	APTUNIT_NUMBER	MAILING_ZIP_CODE	URBANIZACION	CONDO_RES	COMPLEX_DESCRIPTOR	AREA1	AREA2	EMHM	GQ_NAME	FACILITY_NAME	LOCATION_DESCRIPTION	NONCITYSTYLE_ADDRESS	NONCITYSTYLE_ZIP_CODE	LATITUDE	LONGITUDE	MAPSPOT
Y		C072999	72	999	071800	1000	70	Av Principal		00698	URB Flora			SEC Cris	PARC Jaime							18.501813	-66.220208	
Y		C072999	72	999	073003	2013	87	Cll Sabanetas	Apto 1	00698		Cond Jardin de Rosas	Torre 2									17.895222	-66.363212	
Y		C072999	72	999	073003	2013	87	Cll Sabanetas	Apto 2	00698		Cond Jardin de Rosas	Torre 2									17.895222	-66.363212	
Y		C072999	72	999	073003	2013	87	Cll Sabanetas	Apto 3	00698		Cond Jardin de Rosas	Torre 2									17.895222	-66.363212	
Y		C072999	72	999	073003	2013	87	Cll Sabanetas	Apto 4	00698		Cond Jardin de Rosas	Torre 2									17.895222	-66.363212	
Y	G	C072999	72	999	070000	4008	198	Cll Vole		00698	URB Los Lobos			BO Rosa	PARC Santa Lucia	1-2	Salón Jiménez	Universidad de San Juan				18.043995	-65.702019	
N		C072999	72	999	957600	2009		Cll 5			URB Manzana								Casa de ladrillo c/ garaje a la derecha					1
N		C072999	72	999	957100	3005								BO Pedro	BDA San Luis					HC 1 Box 135	00699	18.212967	-67.334991	

Figure 17: Acceptable Address Types in the Address List Template File (Puerto Rico)

CITY_STYLE_FLAG	GQ_FLAG	ENTITY_ID	STATE	COUNTY	2020_TRACT	2020_BLOCK	COMPLETE_ADDRESS_NUMBER	COMPLETE_STREET_NAME	APTUNIT_NUMBER	MAILING_ZIP_CODE
Y		CO72999	72	999	071800	1000	70	Av Principal		00098
Y		CO72999	72	999	073003	2013	87	Cll Sabanetas	Apto 1	00098
Y		CO72999	72	999	073003	2013	87	Cll Sabanetas	Apto 2	00098
Y		CO72999	72	999	073003	2013	87	Cll Sabanetas	Apto 3	00098
Y		CO72999	72	999	073003	2013	87	Cll Sabanetas	Apto 4	00098
Y	G	CO72999	72	999	070000	4008	198	Cll Vole		00098
N		CO72999	72	999	957600	2009		Cll 5		
N		CO72999	72	999	957100	3005				

Figure 18: Address List Template File (Puerto Rico) "Part A" (Zoomed View)

URBANIZACION	CONDO_RES	COMPLEX_DESCRIPTOR	AREA1	AREA2	KMHM
URB Flora			SEC Cris	PARC Jaime	
	Cond Jardín de Rosas	Torre 2			
	Cond Jardín de Rosas	Torre 2			
	Cond Jardín de Rosas	Torre 2			
	Cond Jardín de Rosas	Torre 2			
URB Los Lobos			BO Rosa	PARC Santa Lucia	1.2
URB Manzana					
			BO Pedro	BDA San Luis	

Figure 19: Address List Template File (Puerto Rico) "Part B" (Zoomed View)

GQ_NAME	FACILITY_NAME	LOCATION_DESCRIPTION	NONCITYSTYLE_ADDRESS	NONCITYSTYLE_ZIP_CODE	LATITUDE	LONGITUDE	MAPSPOT
					18.501813	-66.220208	
					17.895222	-66.363212	
					17.895222	-66.363212	
					17.895222	-66.363212	
					17.895222	-66.363212	
Salón Jiménez	Universidad de San Juan				18.043995	-65.702019	
		Casa de ladrillo c/ garaje a la derecha					1
			HC 1 Box 135	00099	18.212967	-67.334991	

Figure 20: Address List Template File (Puerto Rico) "Part C" (Zoomed View)

APPENDIX E MAF/TIGER FEATURE CLASSIFICATION CODES

IMPORTANT: Only use the information within this appendix if the CQR case includes a new/corrected boundary feature to add to the shapefile/map. The Census Bureau will not process spatial updates submitted with the CQR case submission unless they involve the reported boundary discrepancy.

The MAF/TIGER Feature Classification Code (MTFCC) is a five-digit code assigned by the Census Bureau intended to classify and describe geographic objects or features. The 2021 Partnership shapefile products include these codes. GUs that add a new/missing feature(s) to show a boundary correction must assign a MTFCC to the added feature to ensure proper processing.

Map symbolization of these codes assist with distinguishing feature types, for instance symbolizing based on the MTFCC helps distinguish a road from a stream or a railroad from a pipeline in the All Lines (e.g. edges.zip file) layer. To learn more about MTFCCs refer to the online list of MTFCC codes.

Note: Use "P0001" for a non-visible linear feature that serves as a legal/statistical boundary when the boundary does not correspond to a shoreline or other visible feature on the ground represented by the other MTFCCs.

APPENDIX F BOUNDARY VERIFICATION MATERIALS

For GUs that submit a case with a boundary correction(s), if the Census Bureau research concludes the boundary correction is valid and makes the update(s), they will prepare verification materials for the GU to use to confirm the work prior to finalizing the boundary and revising the counts. These boundary verification materials are available to a GU as either large format 2020 Census CQR Block Maps or updated Partnership shapefiles. The Census Bureau will contact the GU when the materials are available for review. If the GU finds that the correction is not accurate in the verification materials, the Census Bureau will work with the GU to resolve the inaccuracy and will contact the GU to verify the correction again once updated materials are available. Approval of the boundary correction is necessary to finalize the case.

The large format map materials are Adobe PDFs. Other than their title and file name, these are identical in content and design to the 2020 Census Block Maps described earlier in this guide. Regardless of the method of participation (digital, paper, or GUPS), GUs may use the 2020 Census CQR Block Maps to confirm the boundary correction prior to finalization and closure of the CQR case.

The updated partnership shapefiles will have different attribute fields for the 2020 census tract and 2020 tabulation block from the 2021 Partnership shapefile version. If a GU has questions regarding the correct fields to use or how to use these files, the Census Bureau is available to assist by phone at (888) 369-3617 or by email at <dcmd.2020.cqr.submissions@census.gov>.