

**Boundary and Annexation Survey
Respondent Guide: MAF/TIGER
Partnership Software**

Issued January 2013

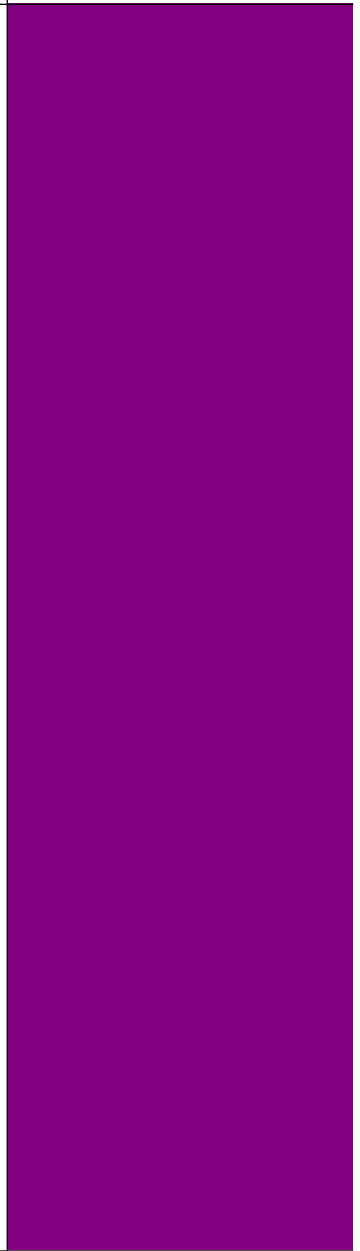


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1. Introduction to the Boundary and Annexation Survey (BAS)

1.1 Overview of the BAS

The U.S. Census Bureau conducts an annual survey called the Boundary and Annexation Survey (BAS) to collect information about selected legally defined geographic areas, such as counties (and equivalent areas), incorporated places, minor civil divisions (MCDs), and federally recognized American Indian reservations (including off-reservation trust lands and tribal subdivisions). The BAS also provides an opportunity for participants to review the names and geographic relationships for these areas. Title 13, U.S. Census Code authorizes this survey.

BAS information is used to provide a record for reporting the results of the decennial and economic censuses, and to support the Population Estimates Program and the American Community Survey. Maintaining correct boundaries and boundary-to-feature relationships through the BAS helps ensure that the appropriate population is assigned to each entity. In compliance with the Office of Management and Budget Circular A-16, the BAS supports the Census Bureau's spatial data steward responsibilities for the Federal Geographic Data Committee and the Geo.Data.gov website by updating the inventory of, and boundaries for, governmental units. In addition, the BAS is the source of up-to-date information on boundaries, codes, and names for the U.S. Geological Survey's (USGS) National Map and the Geographic Names Information System. The BAS is also the source for changes in the boundaries of incorporated places, minor civil divisions (MCDs), counties (and equivalent areas), and federally recognized American Indian Areas (AIAs), which include reservations and off-reservation trust lands.

1.2 Specific state arrangements and agreements

The Census Bureau has established a number of arrangements or agreements with states for reporting boundary changes. Please visit the BAS program website at <http://www.census.gov/geo/partnerships/bas.html> or call (800) 972-5651 for information regarding state agreements.

1.3 Legal disputes

If it comes to the Census Bureau's attention that an area of land is in dispute between two or more jurisdictions, annexations or boundary corrections will not be made until the parties come to a written agreement, or there is a documented final court decision regarding the matter/dispute. If you have questions concerning this, please contact the Census Bureau Legal Office at 301-763-9844. For disputes involving tribal areas, the Census Bureau must defer to the Office of the Solicitor at the Department of the Interior for a legal opinion. Often complicated land issues require an extended period of time for resolution, and in those cases, the Census

Bureau will retain the current boundary in the database until a legal opinion is issued by the Solicitor's office.

1.4 Key dates for BAS respondents

All changes received by **March 1** will be reflected in the Population Estimates Program and the American Community Survey. If the Census Bureau receives updates by **May 31**, they will be included in BAS materials next year.

To change the method of participation in BAS from MTPS to paper, the Census Bureau must be notified by **February 15** (for updates going into the ACS) or **April 15** (for updates to be reflected in the next year's BAS materials). Contact the Census Bureau by phone at 800-972-5651 or by email at geo.bas@census.gov. (To change from MTPS to Digital BAS, simply use the shapefiles provided with MTPS and follow the instructions found in the **Digital BAS Respondent Guide** located on the data disc or the BAS website: <http://www.census.gov/geo/www/bas/bashome.html>.)

2. Installing MTPS and Census Bureau Data

The MAF/TIGER Partnership Software (MTPS) was developed to allow participants to digitally update Census Bureau maps and local contact data without the need to purchase software.

The BAS package contains the MTPS program on a CD and one or more CDs or DVDs containing Census Bureau data. This section provides instructions for installing both the software and the data. If you have any problems installing or using the MTPS program or data, please contact the Census Bureau at 800-972-5651.

Warning: Installing the MAF/TIGER Partnership Software (MTPS) and the accompanying data will delete any previous MTPS data installations and any work already completed, regardless of Census program (BAS, LUCA, SDRP, RDP, etc.).

To prevent loss of data it is recommended that MTPS be installed on a separate computer from any previous MTPS installations, or that existing data folders be renamed prior to installation.

To rename existing MTPSData folders:

1. Before beginning the installation, navigate to the **C:\MTPSData** folder.
2. Rename the folder using the program initials so it can be easily identified later (e.g., **C:\MTPSData_PSAP** or **C:\MTPSData_RDP**).
3. Proceed with the installation; when the installation is complete, there will be a new folder titled **C:\MTPSData** which contains the BAS data.

2.1 Installing the MTPS program

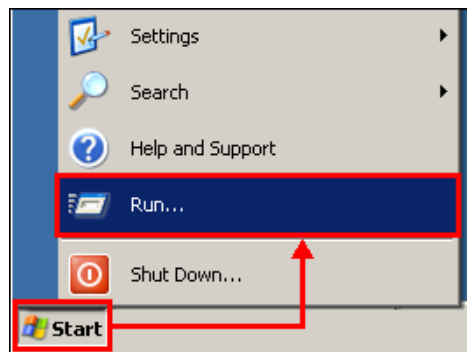
If MTPS was used for a previous BAS submission and the MTPS version is older than 5.7, the old version will need to be uninstalled (to use version 5.7 with the 2012 BAS data, please delete or move the old data and copy the 2012 data to the C:\MTPSData folder):

1. In Windows, click the **Start** button, select **Settings**, and then click **Control Panel**.
2. In the **Control Panel** window, double-click **Add or Remove Programs**.
3. In the Add or Remove Programs window, find and select the **MAF/TIGER Partnership Software**, and then click **Change/Remove**.
4. Follow the prompts, choosing to uninstall the software.

To install the current version of MTPS:

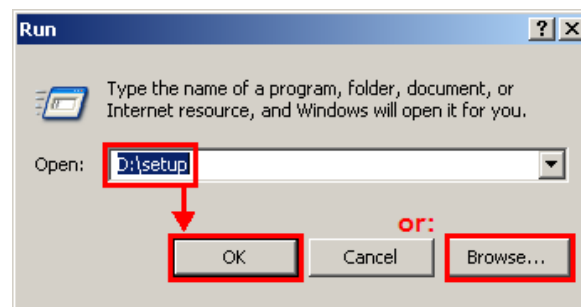
Note: In order to ensure that the program installs correctly, it should be installed under an account with administrator privileges.

1. Insert the MTPS program CD into the CD-ROM drive.
2. Click the **Start** button, and then click **Run**.



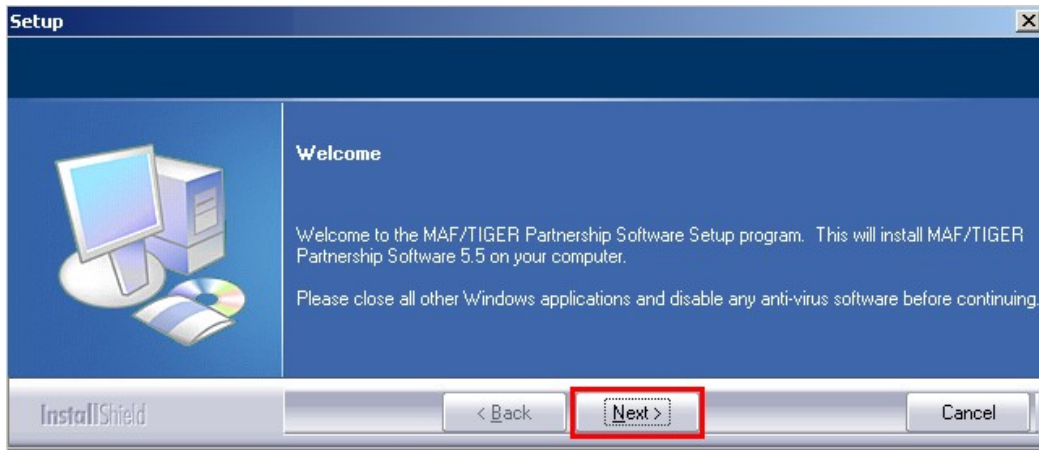
Example 2.1.1: Start, Run commands

3. In the **Run** window, type the location of the CD-ROM drive and the word setup (ex. D:\setup) and then click **OK**, or use the **Browse** button to locate and double-click the **SETUP.EXE** file on the program disc.



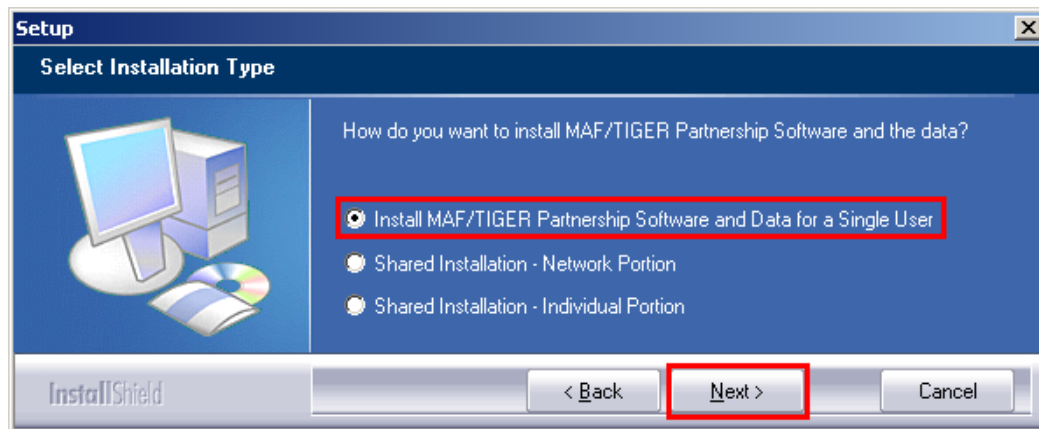
Example 2.1.2: Run window

4. In the **Setup: Welcome** window, click **Next**.



Example 2.1.3: Setup: Welcome window

5. In the **Setup: Select Installation Type** window, select **Install MAF/TIGER Partnership Software and Data for a Single User** and then click **Next**.



Example 2.1.4: Setup: Select Installation Type window

6. The setup program will continue through the installation process. It is recommended that the default settings be accepted in each step.

Note: If there is already data in the default directory, the setup program will ask if the files should be removed. If **Yes** is clicked, the files will be removed; if **No** is clicked, a different installation directory can be selected.

2.2 Loading the Census Bureau data

After the MTPS program has been installed, the installation software will ask that the first data disc be inserted into the CD-ROM drive, and will then load the data onto the computer.

Note: If more than one data disk was provided, the program will prompt for subsequent CDs until all of the data has been loaded.

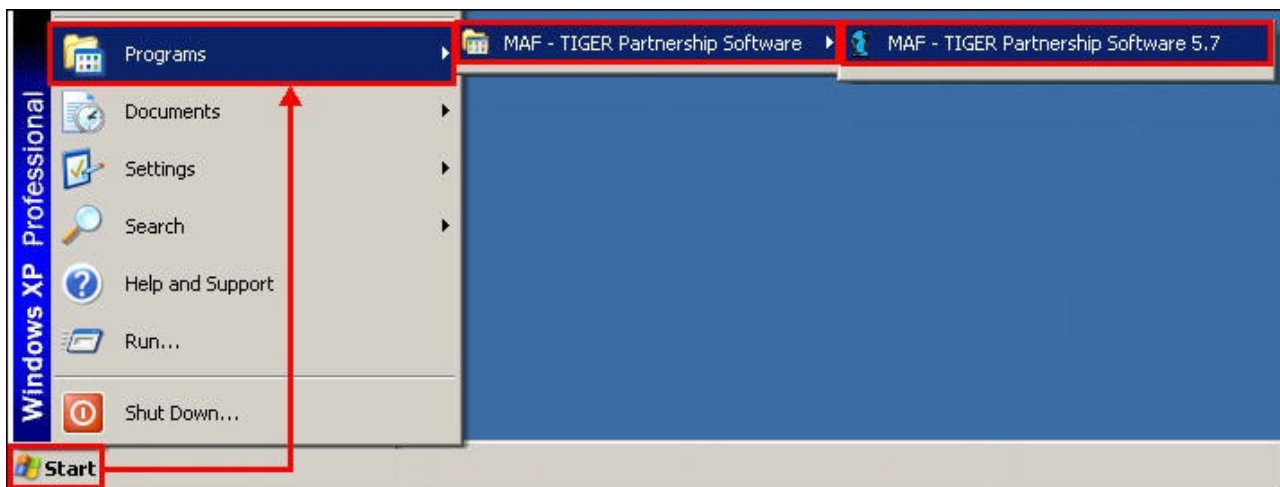
To switch back to a previous MTPS Census program:

1. Rename the **C:\MTPSData** folder to **C:\MTPSData_BAS** (or another memorable name).
2. Rename the program folder to be used to **C:\MTPSData**.
3. Launching MTPS will now open that dataset.

3. Viewing and Updating Boundary Data Using MTPS

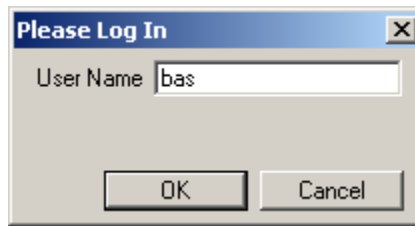
3.1 Logging into MTPS

1. After installation, **MTPS** can be opened by clicking **Start**, selecting **Programs**, selecting **MAF-TIGER Partnership Software**, and then clicking **MAF-TIGER Partnership Software 5.7**.



Example 3.1.1: Opening MTPS from the desktop

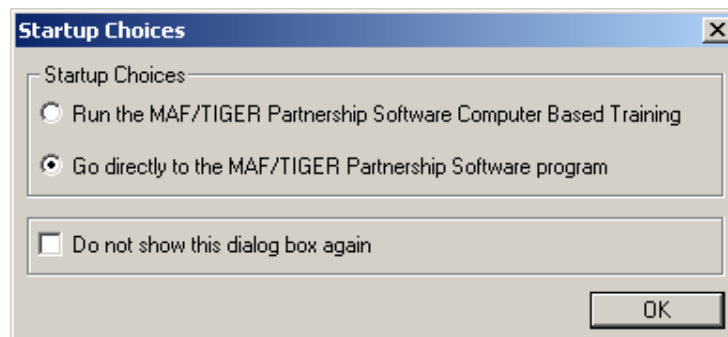
2. In the **Please Log In** window, in the **User Name** field, type **bas** (case-sensitive) and then click **OK**.



Example 3.1.2: MTPS BAS Log In window

Note: During the initial login, MTPS will load the BAS data files so that the program is able to read and edit them. For this step, any antivirus software should be turned off or temporarily disabled. The time required for the initial processing of files varies depending on the amount of data for the entity and the surrounding areas, and will only occur the first time MTPS is opened.

3. After login, the **Startup Choices** window will open:
 - Select **Run the MAF/TIGER Partnership Software Computer Based Training** and click **OK** to open the MTPS Computer Based Training (CBT).
 - Select **Go directly to the MAF/TIGER Partnership Software program** and click **OK** to begin using MTPS.



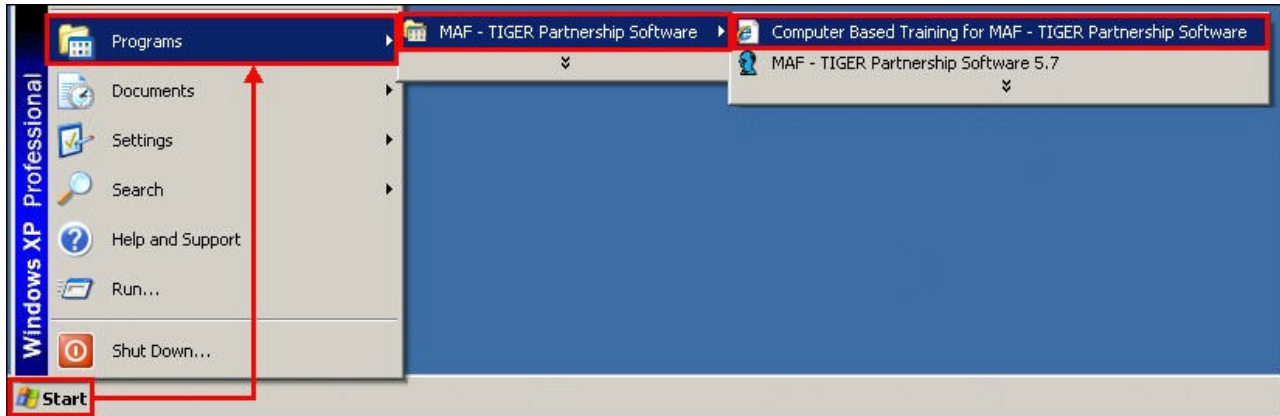
Example 3.1.3: MTPS Startup Choices

3.2 Computer Based Training (CBT)

From the **Startup Choices** window, select **Run the MAF/TIGER Partnership Software Computer Based Training (CBT)** and then click **OK** to open the training. The CBT modules demonstrate how to use the software to make different types of updates, such as adding a line or adding areas to an entity.

Note: The Computer Based Training opens in an internet browser window, and can be left open while using MTPS.

The CBT modules can also be opened at any time by clicking **Start**, then selecting **Programs**, then selecting **MAF-TIGER Partnership Software**, and then clicking **Computer Based Training for MAF-TIGER Partnership Software**.



Example 3.2.1: Accessing MTPS Computer Based Training from the desktop.

The following CBT tutorials are recommended for review before continuing:

- Creating additions/annexations, deletions/deannexations, and new entities
- Editing linear features
- Editing area features
- Reporting and viewing your BAS changes

MAF/TIGER Partnership Software

Licensed to US Census Bureau geographic program participants

Computer Based Training Tutorials

<p>Basic Skills</p> <ul style="list-style-type: none"> Starting the MTPS software Moving around the map Saving and using bookmarks Measuring distance and size Changing and customizing maps Using legends Displaying data <p>Additional Skills</p> <ul style="list-style-type: none"> Creating maps Selecting features and records Using images in a map <p>Editing Linear Features, Area Features, and Landmarks</p> <ul style="list-style-type: none"> → Editing linear features → Editing area features Editing landmark points 	<p>New Construction</p> <ul style="list-style-type: none"> Updating the address records for a block Working with the address list Updating structure points Reporting new addresses <p>BAS</p> <ul style="list-style-type: none"> Updating the BAS form (County participants) Updating the BAS form (American Indian Area participants) → Creating additions/annexations, deletions/deannexations, and new entities → Reporting and viewing your BAS changes <p>PSAP</p> <ul style="list-style-type: none"> Getting started Changing PSAP areas and attributes Verifying your PSAP work Reporting and viewing your PSAP changes 	<p>LUCA Feedback</p> <ul style="list-style-type: none"> Updating the Detailed Feedback Address List Working with the address lists Reporting your feedback appeals <p>VTD/BBSP</p> <ul style="list-style-type: none"> Getting started Creating and editing districts Making block boundary suggestions Reporting and viewing your VTD/BBSP changes <p>SDRP</p> <ul style="list-style-type: none"> Getting started Changing attributes Consolidating districts Correcting district boundaries Performing complex dissolution Statewide comparison Verifying your SDRP work Reporting and viewing your SDRP changes
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Example 3.2.2: Computer Based Training menu with recommended tutorials

3.3 Updating Participant Information

The first time MTPS is opened, the **Participant Information** window will display. Verify and/or correct the contact information for the person responding to the BAS.

Participant Information

Please verify and correct your participant information.

First Name

Last Name

Title

Department Name Position

Mailing Address

City State

ZIP Code +4

Phone Area Code Exchange Last 4 Extension

Fax Area Code Exchange Last 4

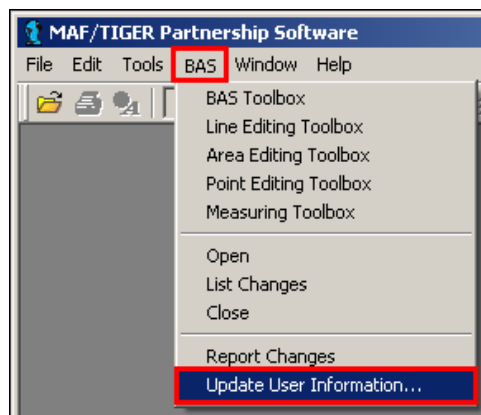
Email Address

OK Cancel

Example 3.3.1: Participant Information window

If the current participant contact information is wrong or missing, type over the incorrect data and update any empty fields. Once all changes are made, or if everything is correct, click **OK**.


The **Participant Information** window can also be viewed in MTPS from the menu bar by clicking **BAS** and then clicking **Update User Information**.



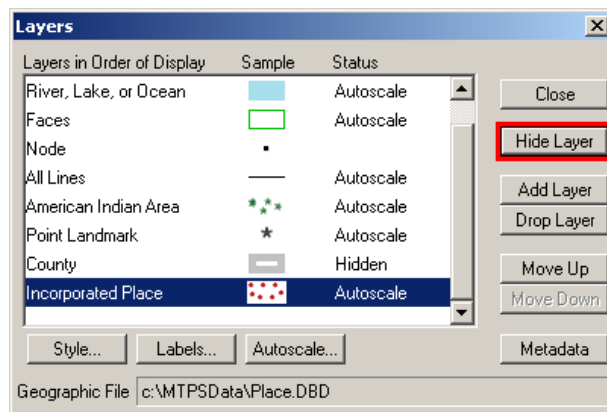
Example 3.3.2: Opening the Participant Information window in MTPS

3.4 Customizing the map view

In MTPS, the various map layers can be rearranged or hidden as needed for the BAS review.

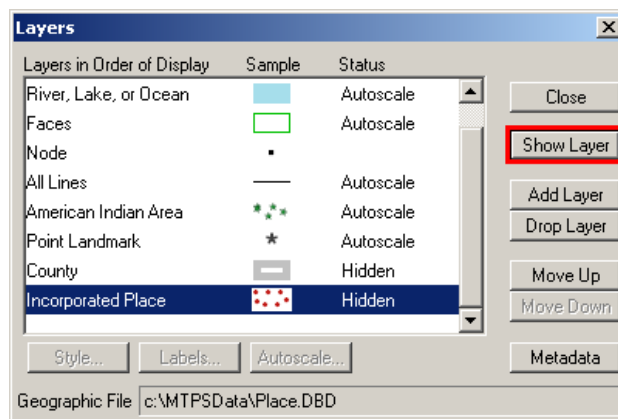
1. In the main toolbar, click the **Map Layers** tool  to access the **Layers** window.
2. In the **Layers** window, select any layers that are not needed for the BAS review, and then click **Hide Layer**.

Note: Duplicate layers of the same data type(s) may exist in jurisdictions that receive multiple counties. It is recommended that any **Census Tract** and **Census Block** layers be hidden from the start of the project to prevent confusion.



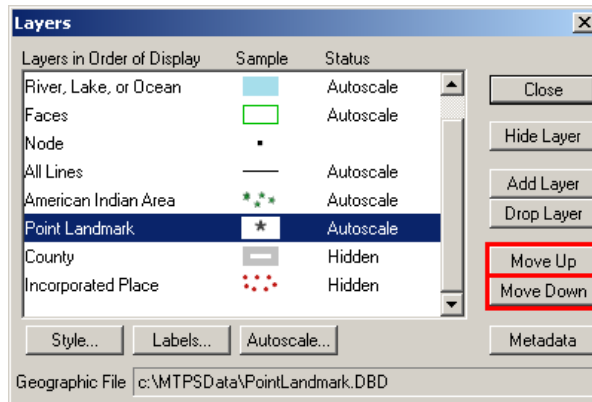
Example 3.4.1: Hiding a visible layer

3. In the **Layers** window, select a **Hidden** layer, and click **Show Layer** to make it visible.



Example 3.4.2: Showing a previously hidden layer

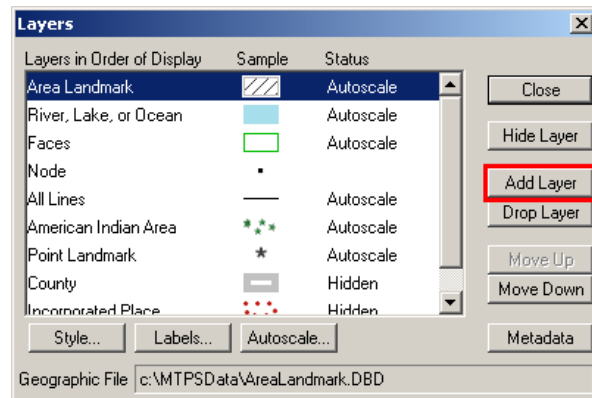
4. In the **Layer** window, the **Move Up** and **Move Down** buttons may be used to rearrange the display order (top to bottom) of the layers.



Example 3.4.3: Move Up/ Move Down buttons

Note: Be aware that in MTPS, the lower down a layer is in the **Layers** window, the higher up it will display on the map.

5. In the **Layers** window, the **Add Layer** button can be used to import additional shapefiles as reference layers.



Example 3.4.4: Add Layer button

Note: See the MTPS help topic **To Add Layers from ESRI Shapefiles to an Existing Map** for instructions on importing shapefiles into MTPS. The help topic **Changing and Customizing Maps** contains more information on changing the symbolization, labels, etc. for any layers in the map.

3.5 Editing BAS data

MTPS allows many types of updates to the map. The following subsections describe how to use the software to make map changes and detail the documentation needed for each type of change.

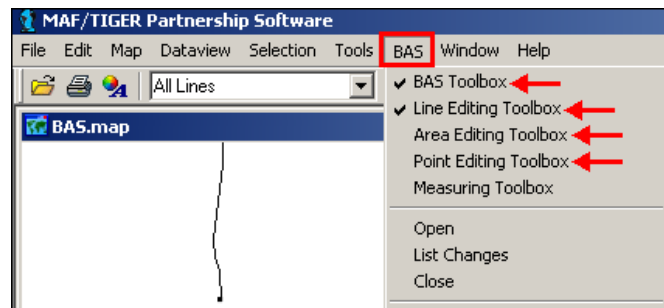
3.5.1 Map editing toolboxes

There are four map editing toolboxes: the **BAS Toolbox**, the **Line Editing** toolbox, the **Area Editing** toolbox, and the **Point Editing** toolbox. Table 3.5.1.1 describes the data that can be edited using the different toolboxes.

Toolbox	Data Edited
BAS Toolbox	Boundaries of legally defined areas <ul style="list-style-type: none">- American Indian Areas- Tribal Subdivisions- Counties- Minor Civil Divisions- Incorporated Places
Line Editing toolbox	Linear features <ul style="list-style-type: none">- Roads, streams, railroads, address ranges, etc.
Area Editing toolbox	Boundaries of area landmarks <ul style="list-style-type: none">- Airports, parks, bodies of water, cemeteries, etc.
Point Editing toolbox	Point landmarks <ul style="list-style-type: none">- Schools, police stations, museums, etc.

Table 3.5.1.1: Data that can be edited using the map editing toolboxes

In the main menu, click **BAS** to display a list of the toolboxes. The individual toolboxes can be turned on and off by clicking their names.



Example 3.5.1.1: Accessing BAS toolboxes

Note: Some sets of toolboxes cannot be open at the same time. When this happens, MTPS will display a note naming the toolbox that is causing the issue. Close the conflicting toolbox and try again.

- Descriptions of all of necessary steps to complete each type of change are given in the following sections.
- **Appendix 4** contains tables explaining the tools contained within each toolbox.
- See the CBT modules for visual demonstrations of how to complete map updates.

3.5.2 Using the BAS toolbox to make boundary changes

Changes to the boundaries of legal areas are made using the **BAS Toolbox**.



Example 3.5.2.1: BAS Toolbox

- An explanation of these tools is given in **Appendix 4, Table 2**.
- **Section 3.5.2.1** describes the steps used to complete a boundary change using the **BAS Toolbox** (and if necessary, the **Line Editing Toolbox**).
- **Section 3.5.2.2** provides a series of tables describing the required documentation for each of the types of boundary changes.

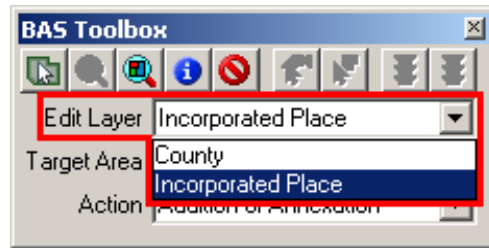
Note: Although the software lists all of the change types for each data type, only specific types of changes will be processed for particular entities. See **Appendix 5** for a list of allowable change types by entity type.

3.5.2.1 *Creating boundary change polygons*

To create a boundary change polygon:

1. In the **BAS Toolbox**, from the **Edit Layer** dropdown, select the level of geography to be changed.

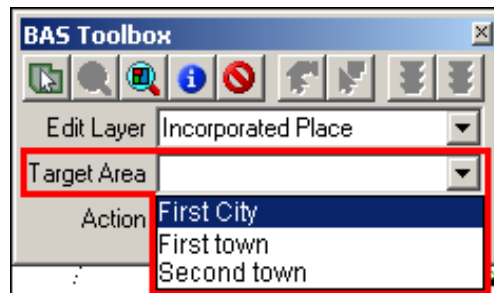
Note: This step only applies to County or American Indian Area participants. All other participants will have a default selection already made.



Example 3.5.2.1.1: Edit Layer dropdown

2. From the **Target Area** dropdown, select the entity to be edited.

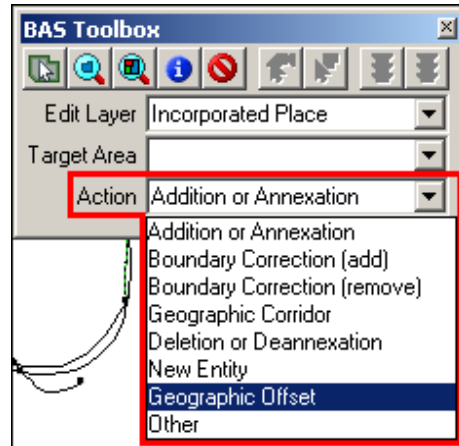
Note: This step only applies to County or American Indian Area participants. All other participants will have a default selection already made.



Example 3.5.2.1.2: Target Area dropdown

3. From the **Action** dropdown, select the appropriate change type.

Note: See **Appendix 5** to determine the appropriate change type by entity.





Example 3.5.2.1.3: Action dropdown

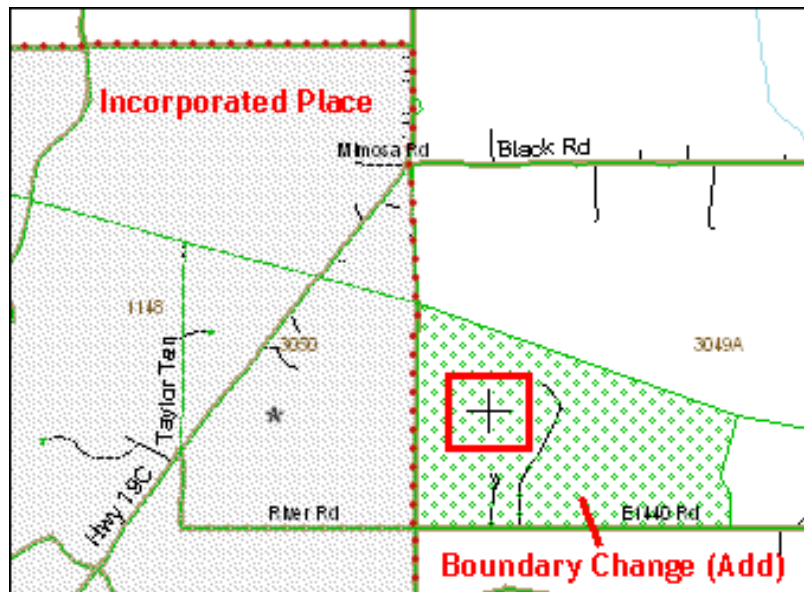
The available change types are:

- Addition or Annexation
- Boundary Correction (add)
- Boundary Correction (remove)
- Geographic Corridor
- Deletion or Deannexation
- New Entity
- Geographic Offset
- Other

Note: Boundary Corrections are minor fixes of entity boundaries due to drafting or plotting errors. See **Appendix 6** for explanations of **Geographic Corridors** and **Geographic Offsets**.

4. Zoom to the area where the change occurs by using the **Zoom In** tool  on the **Tools** toolbox or the **Zoom to Target Area** tool  on the **BAS Toolbox**.

5. Select the faces that make up the area to be changed. The **Select by pointing**  and **Select by shape**  tools on the **BAS** toolbox can be used to identify faces to be changed.
- When using the **Select by pointing** tool, click inside each of the faces being selected.
 - When using the **Select by shape** tool, draw a box surrounding all of the faces to be selected. Only faces completely within the box will be selected. If a face is accidentally highlighted, it can be unselected by using the **Select by pointing** or the **Select by shape** tools while holding down the **Ctrl** key.

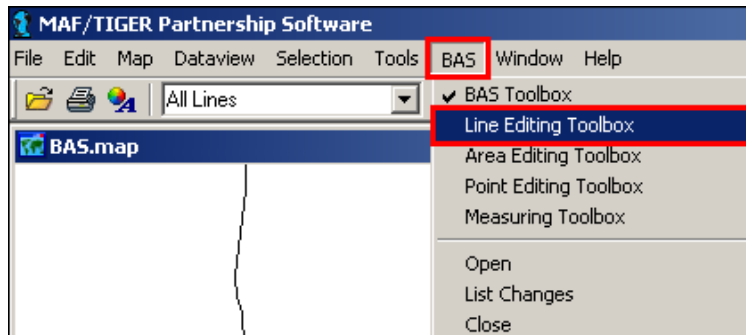


Example 3.5.2.1.4: Selecting a face to add to an incorporated place using the **Select by pointing** tool.

To select a portion of a current face, a line will need to be added to divide the face.

Note: See the **Editing Linear Features** CBT for a demonstration of this process.

- In the **BAS** menu click **Line Editing Toolbox**.



Example 3.5.2.1.5: Accessing the Line Editing Toolbox from the BAS menu

- In the **Line Editing** toolbox click the **Add line** tool.



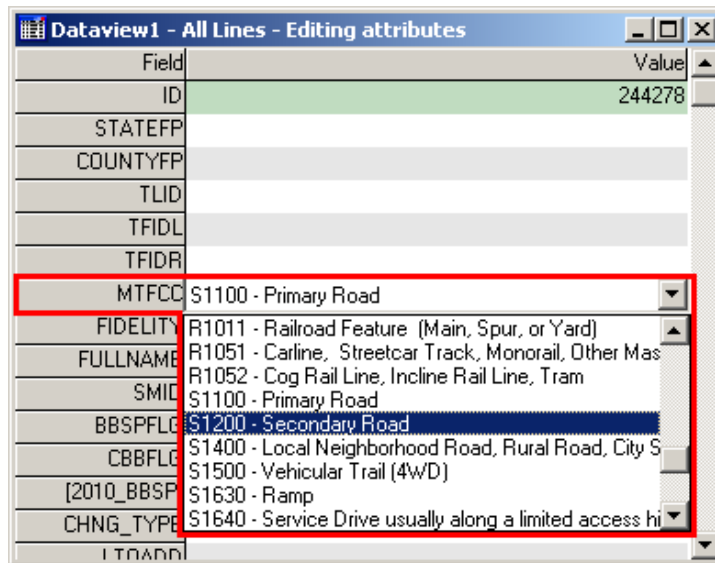
Example 3.5.2.1.6: Add line tool

- Use the mouse to draw a line and double-click when finished.






Example 3.5.2.1.7: Drawing a line in MTPS

- In the **Dataview** window, from the **MTFCC** dropdown, select the type of feature added. In the **FULLNAME** field, add the name of the feature if possible (road, river, etc.). If the line is being added solely as a boundary and does not follow a visible feature, assign the line an MTFCC value of **P0001-Nonvisible Legal/Statistical Boundary**.



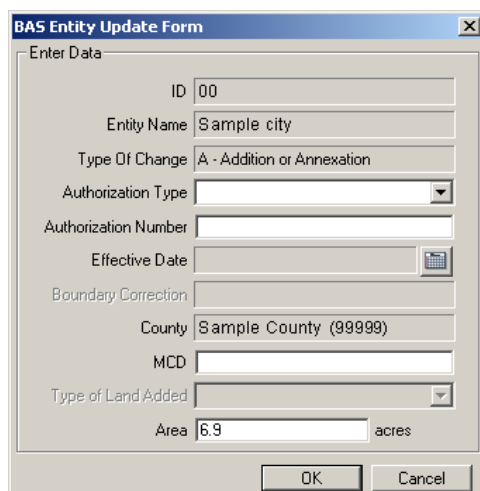
Example 3.5.2.1.8: Updating the MTFCC field

- In the **Line Editing** toolbar, click the **Save edits** button  to finish adding the new line. Once the added line has been saved, MTPS will split the face(s) and the desired area can now be selected.
- Check to ensure that the correct faces were selected. Very small faces may exist in congested areas, so it is important to use the **Zoom In** tool  to view areas in detail and make sure that all of the intended faces have been selected.
- Click the **Save edits** tool  on the **BAS Toolbox**.

3.5.2.2 Populating the BAS Entity Update form

The **BAS Entity Update Form** will open for entry of attribute information for the change.

Note: Boundary corrections (whether adding or removing area) and geographic offsets do not require any attribute information.



Example: 3.5.2.2.1: BAS Entity Update form

The **BAS Entity Update Form** includes the following updateable fields:

- From the **Authorization Type** dropdown, select the type of legal action that was taken to change the boundary.
- In the **Authorization Number** field, enter the record number (e.g. ordinance number, resolution number, etc.) associated with the legal action that changed the boundary.
- In the **Effective Date** field, click the calendar icon, and choose the date the legal boundary change went into effect.
- In the **MCD** field, enter the MCD the area was located in prior to the boundary update (for states with active MCDs).
- From the **Type of Land Added** dropdown, select whether the land added is part of the reservation or off-reservation trust land (American Indian Areas only).
- The **Area** field can be left as is, unless it is incorrect.

The information that is required for each type of change, excluding boundary corrections and geographic offsets, is displayed by entity type in Tables 3.5.2.2.1 – 3.5.2.2.3. Each field indicates whether the information is mandatory, as follows:

- Y - the information is required
- A - the information is optional
- N - the field is not editable

Attribute Information Required for Additions or Annexations and Deletions or Deannexations					
	Authorization Type	Authorization Number	Effective Date	MCD	Type of Land Added
American Indian Areas	Y	Y	Y	N	Y
Tribal Subdivisions	Y	Y	Y	N	Y
Counties	Y (except GA*)	Y (except GA*)	Y	N	N
Minor Civil Divisions (MCD)	Y	Y	Y	N	N
Incorporated Places	Y (except GA*)	Y (except GA*)	Y	A**	N

Table 3.5.2.2.1

* Georgia state law does not require entities to report an **Authorization Type** or **Authorization Number** but it requires participants to submit the acreage of annexations. MTPS automatically calculates the acreage of the area and includes this information on the form, but the **Area** field can be changed if the legal description does not agree exactly.

The **MCD field is only required when a change is made to an incorporated place in a state that has active MCDs. If such a change is made, please enter the MCD in which the area was located prior to the annexation or deannexation.

Attribute Information Required For Geographic Corridors					
	Authorization Type	Authorization Number	Effective Date	MCD	Type of Land Added
American Indian Areas	A*	A*	A*	A	Y
Minor Civil Divisions (MCD)	A*	A*	A*	A	N
Incorporated Places	A*	A*	A*	A	N

Table 3.5.2.2.2

* If the offset or corridor is a legal change (i.e. new annexation or deannexation), the **Authorization Type**, **Authorization Number**, and **Effective Date** fields are required.

Attribute Information Required for a New Entity			
	Entity Name	Status	Effective Date
Tribal Subdivisions	Y	Y	Y
Incorporated Places	Y	N	Y


Table 3.5.2.2.3

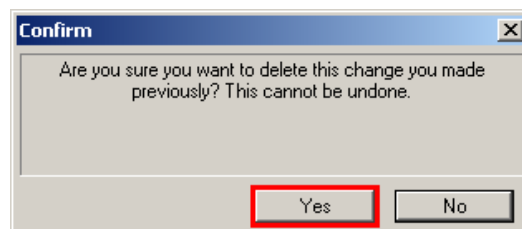
Note: Legal documentation **must** be provided for each new entity added. If there are any questions about the required documentation, contact the Census Bureau by phone at 800-972-5651 or by email at geo.bas@census.gov.

The update cannot be saved until each required field is completed. Type **Unknown** in the field if information is not known for a required entry. The Census Bureau will review each record with an **Unknown** value to determine whether the update can be integrated into the MAF/TIGER database. If an issue arises, the Census Bureau will contact the person listed on the Participant Information form.

3.5.2.3 *Deleting a change polygon after it has been finalized*

If it is determined that a change polygon was created in error, complete the following steps to delete the change:

1. From the **BAS Toolbox**, select the **Delete a change**  tool.
2. Select the change polygon to be deleted.
3. In the **Confirm** window, click **Yes**.



Example 3.5.2.3.1: Delete a change tool confirmation window

3.5.3 *Linear feature updates*






The **Line Editing** toolbox is used for the editing of linear features. An explanation of the tools in this toolbox is given in Appendix 4, Table 3.



Example 3.5.3.1: Line Editing Toolbox

Refer to the **Editing linear features** CBT module for instruction on how to add, delete, and modify features. This training will provide information on the steps necessary to create a feature and enter the required information. The **Help** menu in MTPS also provides a list of classification codes that can be selected when creating a line.

Street Update Guidelines

- If a road, subdivision, etc. is missing from the Census Bureau's linear feature network, add the feature(s) and provide the name and MTFCC.
- If a feature that does not exist appears on the map, delete the feature.
- If features are mislabeled, from the **Line Editing** toolbox, select the **Edit Line Attributes**  button, and then click the line to be updated. In the **Dataview** window, make the corrections, and then click the **Save edits**  button.
- If features are incorrectly located or distorted, from the **Line Editing** toolbox, select the **Copy and Delete line**  button, click the line to be moved or corrected, and then click the **Replace Copied line**  button. In the **BAS** map, draw the feature as it should appear, and then click the **Save edits**  button. Only do this if the feature is very far off or in the wrong position relative to boundaries or other features.

Note: The original feature should appear as a red dotted line (deleted). The corrected line should appear where it was drawn and should have the same attributes as the original feature.

3.5.4 Area landmark updates

The **Area Editing** toolbox is used to make changes to the boundaries of area landmarks. The tools in this toolbox are explained in Appendix 4, Table 2.



Example 3.5.4.1: Area Editing toolbox

Note: Due to heavy workloads for boundary changes to legal areas, changes to area landmarks and hydrographic areas may not be added to the database until after the next year's BAS materials are created. It may take two BAS cycles in order to see these changes reflected in the materials.

3.5.4.1 Boundary corrections to area landmarks

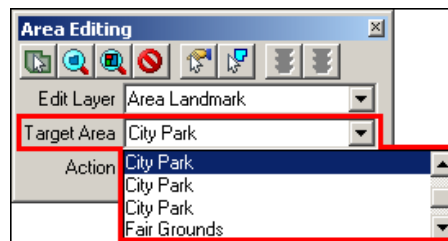
Since area landmarks and water features are not legal entities, the only boundary changes that can be made to an existing landmark are **Boundary Correction (add area)** and **Boundary Correction (remove area)**. To create boundary correction polygons complete the following steps:

1. In the **Area Editing** toolbox, from the **Edit Layer** dropdown, select **Area Landmark** or **River, Lake, or Ocean**.



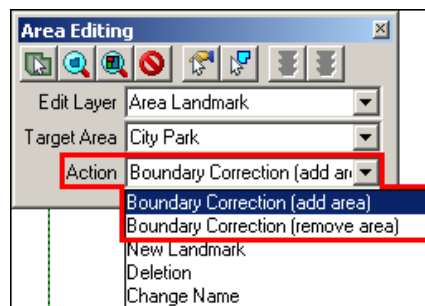
Example 3.5.4.1.1: Edit Layer dropdown

2. From the **Target Area** dropdown, select the area to be edited.







Example 3.5.4.1.2: Target Area dropdown

3. From the **Action** dropdown, select the type of change to be made: **Boundary Correction (add area)** or **Boundary Correction (remove area)**.



Example 3.5.4.1.3: Action Dropdown

4. Zoom to the area where the change occurs by using the **Zoom In**  tool on the **Tools** toolbox or the **Zoom to Target Area**  tool on the **BAS** toolbox.

5. Select the faces that make up the area to be changed. The **Select by pointing**  and **Select by shape**  tools on the **Area Editing** toolbox can be used to identify faces to be changed.
 - When using the **Select by pointing** tool, click inside of the faces being selected.
 - When using the **Select by shape** tool, draw a box surrounding all of the faces to be selected. If a face is accidentally highlighted, it can be unselected by using the **Select by pointing** tool.
 - To select a portion of a current face, a line will need to be added to divide the face. See section 3.5.2.1 for details on splitting faces.
6. Check to ensure that the correct faces were selected. Very small faces may exist in congested areas, so it is important to use the **Zoom In**  tool to view areas in detail and make sure that all of the intended faces have been selected.
7. Click the **Save edits**  tool on the **Area Editing** toolbox.

3.5.4.2 Adding new Area Landmarks or water features

To create a new area landmark or water feature, complete the following steps:

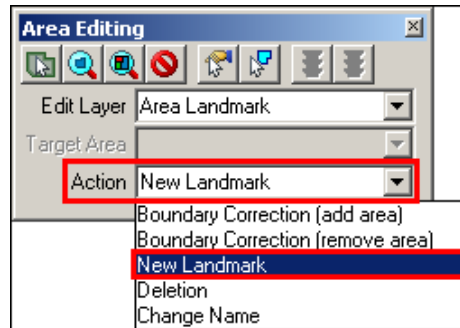
Note: When adding new area landmarks or hydro areas, only add the following types of areas: water bodies, glaciers, airports, cemeteries, golf courses, and parks. Census cannot add other types of areas at this time (although some may already exist in our database).

1. In the **Area Editing** toolbox, from the **Edit Layer** dropdown, select **Area Landmark** or **River, Lake, or Ocean**, depending on which type of landmark is to be added.









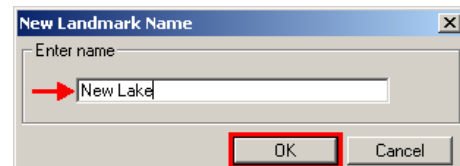
Example 3.5.4.2.1: Edit Layer dropdown

- From the **Action** dropdown, select **New Landmark**.



Example 3.5.4.2.2: Action dropdown

- Zoom to the area in which the new landmark is located by using the **Zoom In**  tool on the **Tools** toolbox or the **Zoom to Target Area**  tool on the **Area Editing** toolbox.
- Select the faces that make up the area to be changed. The **Select by pointing**  and **Select by shape**  tools on the **Area Editing** toolbox can be used to identify faces to be changed.
 - When using the **Select by pointing** tool, click inside of the faces being selected.
 - When using the **Select by shape** tool, draw a box surrounding all of the faces to be selected. If a face is accidentally highlighted, it can be unselected by using the **Select by pointing** tool.
 - To select a portion of a current face, a line will need to be added to divide the face. See section 3.5.2.1 for details on splitting faces.
- Check to ensure that the correct faces were selected. Very small faces may exist in congested areas, so it is important to use the **Zoom In**  tool to view areas in detail and make sure that all of the intended faces have been selected.
- Click the **Save edits**  tool on the **Area Editing** toolbox.
- In the **New Landmark Name** window, enter the name of the landmark or water body, and then click **OK**.



Example 3.5.4.2.3: Enter name field

3.5.4.3 Removing Area Landmarks or water features

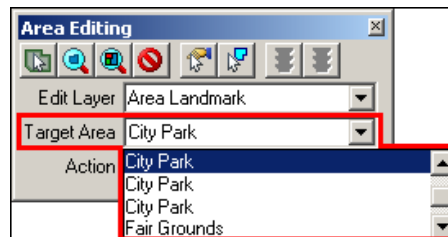
To remove an area landmark or water feature, complete the following steps:

1. In the **Area Editing** toolbox, from the **Edit Layer** dropdown, select **Area Landmark** or **River, Lake, or Ocean**, depending on the type of area to be removed.



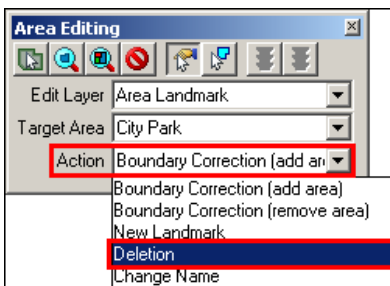
Example 3.5.4.3.1: Edit Layer dropdown

2. From the **Target Area** dropdown, select the landmark or water feature to be deleted.



Example 3.5.4.3.2: Target Area dropdown

3. From the **Action** dropdown, select **Deletion**.



Example 3.5.4.3.3: Action dropdown

4. On the **Area Editing** toolbox, click the **Save Edits**  tool.

3.5.4.4 Changing the names of Area Landmarks or water features

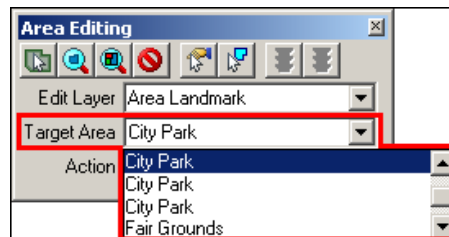
To change the name of an area landmark or water feature, complete the following steps:

1. In the **Area Editing** toolbox, from the **Edit Layer** dropdown, select **Area Landmark** or **River, Lake, or Ocean**, depending on the type of area to be renamed.



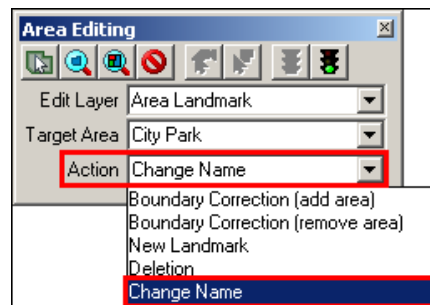
Example 3.5.4.4.1: Edit Layer dropdown

2. From the **Target Area** dropdown, select the landmark or water feature to be renamed.




Example 3.5.4.4.2: Target Area dropdown

3. From the **Action** dropdown, select **Change Name**.



Example 3.5.4.4.3: Action dropdown

4. On the **Area Editing** toolbox, click the **Save Edits**  tool.
5. In the **Change Landmark Name** window, enter the new name of the feature, and then click **OK**.



Example 3.5.4.4.4: Enter new name field

3.5.5 Point landmark updates


The **Point Editing** toolbox is used to make changes to point landmarks. An explanation of the tools in this toolbox is given in Appendix 4, Table 4.

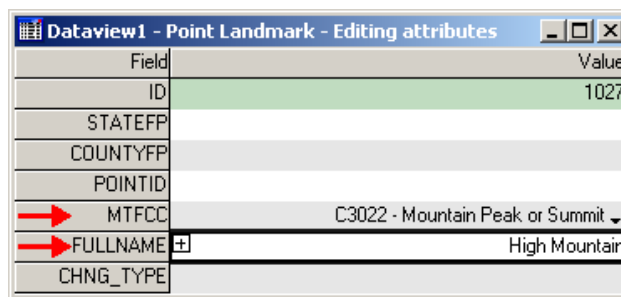


Example 3.5.5.1: Point Editing toolbox

3.5.5.1 Adding a point landmark

To create a new point landmark, complete the following steps:

1. In the **Point Editing** toolbox, select the **Add point**  tool.
2. On the **BAS** map, click on the location where the point landmark is located.
3. In the **Dataview** window, from the **MTFCC** dropdown, select the appropriate landmark type. In the **FULLNAME** field, enter the name of the landmark, if applicable.



Example 3.5.5.1.1: MTFCC and FULLNAME fields

4. In the **Point Editing** toolbox, click the **Save Edits**  tool.



Note: Any point landmark with the following MTFCCs cannot be added to the MAF/TIGER database as a point landmark due to Title 13 privacy concerns. These are locations that could identify a residence or private business.

MTFCC	Description
K1100	Housing Unit Location
K1121	Apartment Building or Complex
K1122	Rooming or Boarding House
K1223	Trailer Court or Mobile Home Park
K1226	Housing Facility/Dormitory for Workers
K1227	Hotel, Motel, Resort, Spa, Hostel, YMCA, or YWCA
K1228	Campground
K1229	Shelter or Mission
K1232	Halfway House/Group Home
K1233	Nursing Home, Retirement Home, or Home for the Aged
K1234	County Home or Poor Farm
K1235	Juvenile Institution
K1241	Sorority, Fraternity, or College Dormitory
K1251	Military Group Quarters
K1299	Other Group Quarters Location
K2100	Governmental
K2197	Mixed Use/Other Non-residential
K2300	Commercial Workplace
K2361	Shopping Center or Major Retail Center
K2362	Industrial Building or Industrial Park
K2363	Office Building or Office Park
K2364	Farm/Vineyard/Winery/Orchard
K2366	Other Employment Center
K2464	Marina
K2500	Other Workplace
K2564	Amusement Center

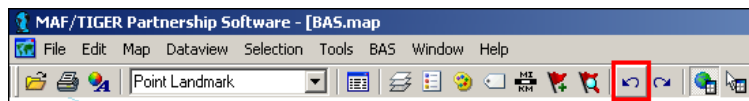
Table 3.5.5.1.1: Restricted point landmark MTFCCs

3.5.5.2 Deleting a point landmark

To delete a point landmark, complete the following steps:

1. In the **Point Editing** toolbox, select the **Delete point**  tool.
2. On the **BAS** map, click on the existing point landmark to be deleted.
3. On the **Point Editing** toolbox, click the **Save Edits**  tool.

Note: If a point landmark is erroneously deleted, select the **Undo geographic editing** button near the top of the MTPS window.




Example 3.5.5.2.1: Undo geographic editing button

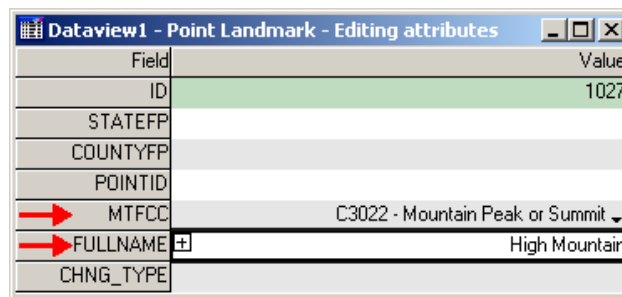
Census cannot delete or modify any point landmarks that were imported from the USGS GNIS database. Changes submitted for the following types of landmarks may be left unchanged:

- K2451 (Airport)
- K2582 (Cemetery)
- C3022 (Summit or Pillar)
- C3081 (Locale or Populated Place)
- C3061 (Cul-de-sacs)

3.5.5.3 Recoding or renaming a point landmark

To recode or rename a point landmark, complete the following steps:

1. On the **Point Editing** toolbox, select the **Edit Point Attributes**  tool.
2. On the **BAS** map, click on the existing point landmark to be edited.
3. In the **Dataview** window, change the **MTFCC** code and/or **FULLNAME** fields as needed.



Example 3.5.5.3.1: MTFCC and FULLNAME fields

4. On the **Point Editing** toolbox, click the **Save Edits**  tool.


3.5.6 Adding address ranges

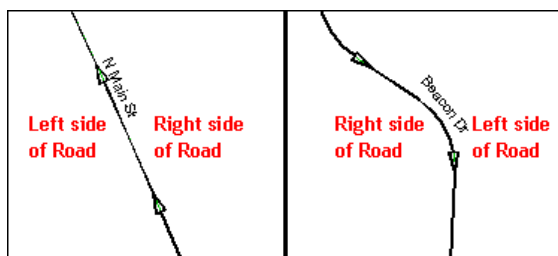
Address ranges can be added using the **Line Editing** toolbox. Explanations of the tools in this toolbox are given in Appendix 4, Table 3.




Example 3.5.6.1: Line Editing toolbox

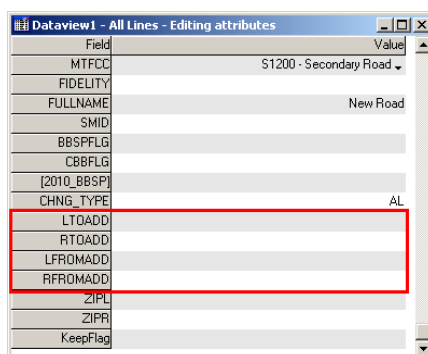
Complete the following steps to add an address range to a street:

1. In the **Line Editing** toolbar, select the **Show right/left direction arrows**  tool. Use the arrows on the line to determine the left and right side of the road.




Example 3.5.6.2: Sides of roads for address ranges

2. From the **Line Editing** toolbar, select the **Edit Line Attributes**  tool.
3. In the **BAS** map, select the line that the address range should be assigned to.
4. In the **Dataview** window, scroll down to the **LTOADD**, **RTOADD**, **LFROMADD**, and **RFROMADD** fields.



Example 3.5.6.3: Address range fields

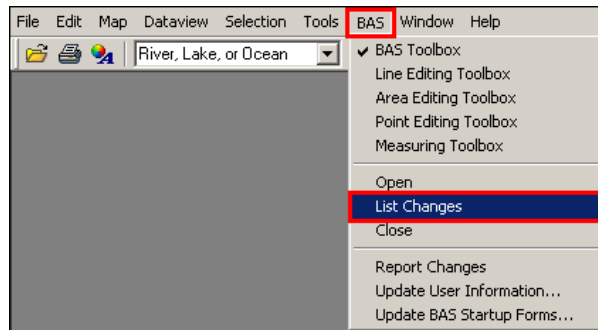
In MAF/TIGER, each segment of road has four address range numbers: the start of the address ranges on the right and left sides of the road, (**RFROMADD** and **LFROMADD**) and the end of the address range on the right and left sides of the road segment (**RTOADD** and **LTOADD**). When a road intersects a BAS boundary, it is important that the address ranges be assigned to the correct sides of the boundary to insure the houses are assigned to correct jurisdictions.

5. In the **LTOADD**, **RTOADD**, **LFROMADD**, and **RFROMADD** fields, add or update the address ranges that are affected by boundary changes.
6. From the **Line Editing** toolbox, click the **Save Edits**  tool.

4. Reviewing Updates

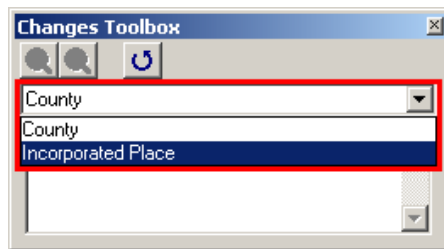
It is important that boundary updates to legal entities be reviewed before being submitted to the Census. The changes will be processed for inclusion in the MAF/TIGER database and will move the legal boundaries of the entities. The **List Changes** tool can be used to review changes made in MTPS.

1. In the main menu, select **BAS** and then click **List Changes**.



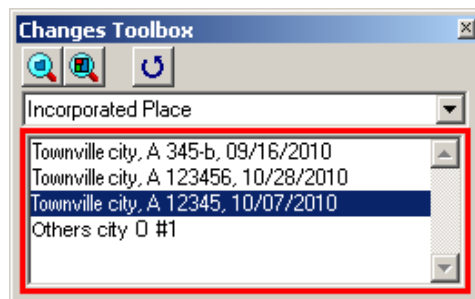
Example 4.1: Opening the List Changes tool

2. In the **Changes Toolbox**, from the dropdown menu, select an entity type to review (counties and AIAs only).






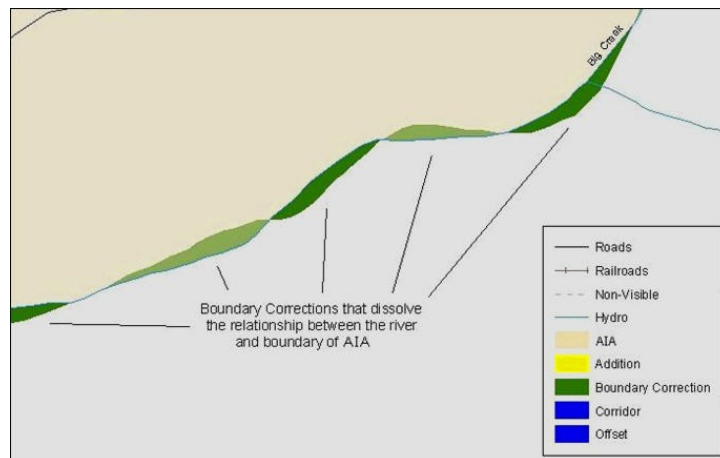
Example 4.2: Selecting an entity type

3. In the **Changes Toolbox**, from the list, select an update to begin the review.

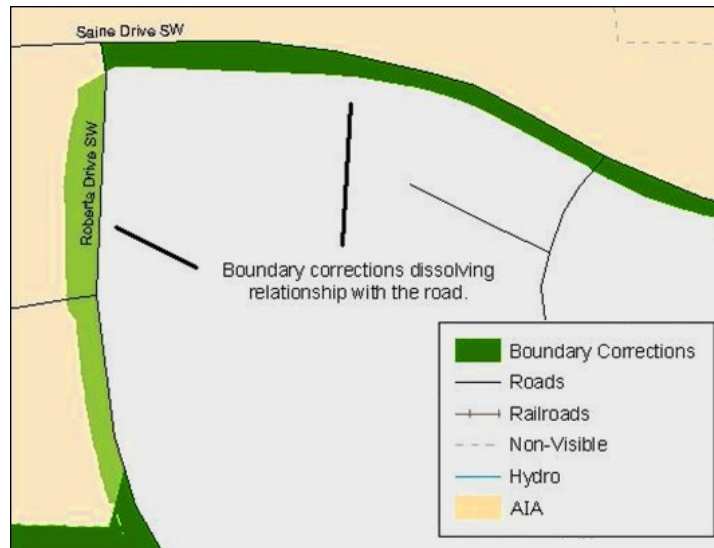


Example 4.3: Selecting an update

4. In the **Changes Toolbox**, select the **Zoom to Changes**  tool.
5. Zoom into the area of change and make sure all of the appropriate faces have been selected.
 - If faces are missing, or incorrect faces have been added, delete the change polygon using the **Delete a Change**  tool in the **BAS** toolbox and recreate the change polygon.
 - While zoomed into an area of change, ensure that any needed geographic offsets and corridors have been created (see Appendix 6 for more information on offsets and corridors). If they have not been created, use the **BAS** toolbox to create them.
 - Review the attribute information by selecting the **Display BAS Form record**  tool and clicking on the change polygon. The popup window will appear and the attribute data can be corrected, if necessary.
 - Ensure that boundary corrections do not dissolve relationships between features and boundaries. See below for illustrations of changes that would not be accepted.



Example 4.4: Small spatial boundary corrections that dissolve the relationship with the river have been created. These boundary corrections will not be incorporated into the MAF/TIGER database.



Example 4.5: Small spatial boundary corrections that dissolve the boundary-to-feature relationship with multiple streets have been created. Incorporating these changes would affect the population counts for the area. Therefore, the Census Bureau will not accept these small boundary corrections.

5. Printing Update Maps

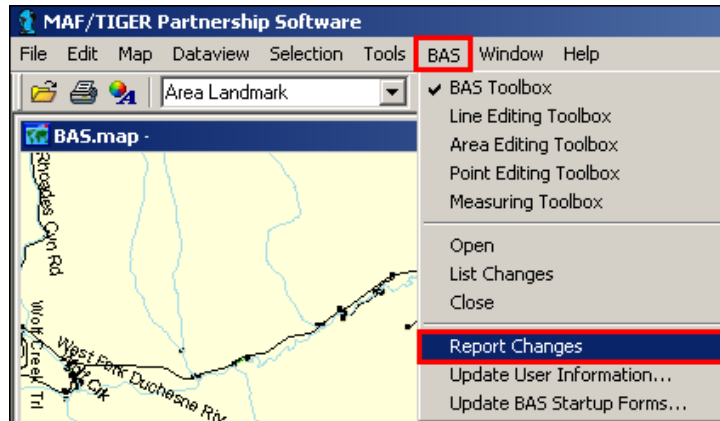
For assistance with printing BAS maps, review the **Printing a Map** section of the MTPS Help menu.

6. Submitting BAS Updates to the Census Bureau

Once all BAS changes have been made and reviewed, a zip file of the changes needs to be created and sent to the Census Bureau.

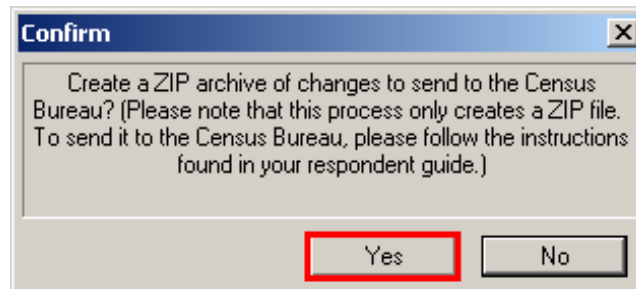
6.1 Creating the return zip file

1. From the main menu, select **BAS**, and then click **Report Changes**.



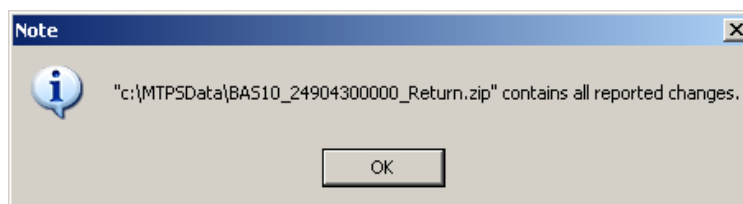
Example 6.1.1: Report Changes

2. In the **Confirm** window, click **Yes**.



Example 6.1.2: Report Changes confirmation window

3. The **Note** window will display with the location of the file. Note the location and name of the file so it can be returned to the Census Bureau.



Example 6.1.3: Location of zip file

Note: If errors occur while creating the zip file, call the Census Bureau at 800-972-5651.

6.2 Returning BAS updates to the Census Bureau

It is requested that MTPS BAS zip files be submitted using the Census Bureau's **Send a File Utility** site. Submit only the zip file created by the MTPS program. The **Send a File Utility** is located at: <https://secure.census.gov/cgi-bin/sendfile>

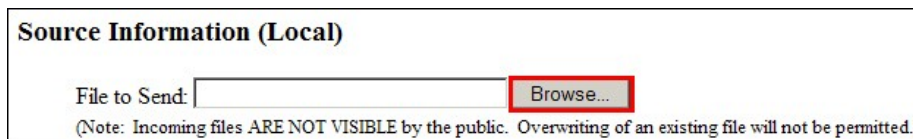
1. In a web browser, navigate to <https://secure.census.gov/cgi-bin/sendfile>.
2. In the password window:
 - In the **User name** field, enter: **geobas**
 - In the **Password** field, enter: **GEO1upload2010!**
 - Click **OK**



Example 6.2.1: Password window

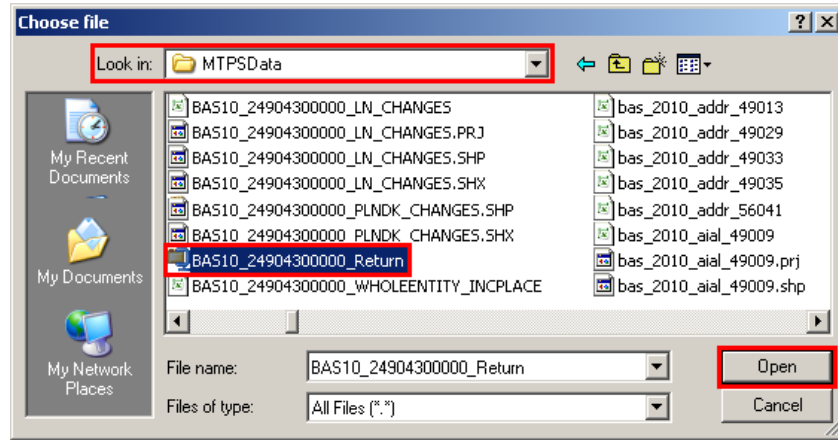
Note: The login/password window may appear different from the example depending on the browser, but the User name and Password are always the same. Make sure to type them exactly as they appear in step 2 above.

3. In the **Send a File Utility** window, in the **Source Information** section; next to the **File to Send** field, click **Browse**.



Example 6.2.2: Source Information section Browse button.

4. In the **Choose File** window, navigate to the **MTPSData** folder, select the **BAS12_<entity id>_Return** zip file, and then click **Open**.



Example 6.2.3: Choose file window

5. In the **Notify by E-mail** section:
 - In the **Sender's Email Address** field, enter your email address
 - In the **Census Bureau Employee's E-Mail Address** field, enter 'geo.bas@census.gov' or 'geo.aiana@census.gov' (for tribal entities)
 - Click **Upload**

Notify by E-mail (Optional)

Please note that an automated email notice will be sent to the project staff. Unless you need to send a separate notice to a specific individual, you do not need to fill out this section.

Sender's Email Address:

Census Bureau Employee's E-Mail Address:

Example 6.2.4: Filling out the Notify by E-mail section

Note: Filling out the **Notify by E-mail** section will allow Census to send notice that the return zip file has been received. If there are any questions contact the Census Bureau at 800-972-5651 or email geo.bas@census.gov.

Appendix 1: Paperwork Reduction Project

The U.S. Census Bureau estimates that the BAS review will take most respondents from 1 to 8 hours to complete. This includes the time needed to read the instructions, assemble materials, organize and review the information, and report any needed changes. This estimate is based on 80 percent of all areas having few or no changes. However, for areas with many changes, it may take 20 hours or longer to complete the survey. Please send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to:

Paperwork Project 0607-0151
U.S. Census Bureau
4600 Silver Hill Road
Room 3K138
Washington, DC 20233

Or you may e-mail comments to:

paperwork@census.gov








Note: Use **Paperwork Project 0607-0151** as the subject.

Please include a copy of your message addressed to:

geo.bas@census.gov.

Appendix 2: Tool Explanations by Toolbox

This appendix describes each tool that may be important for a BAS submission. The descriptions of the tools are organized by toolbox to ensure that participants are able to easily locate them when necessary. Refer back to the main portion of the Respondent Guide for detailed explanations of how to use these tools together to complete different types of changes.

Tool	Function	Instructions
	Zooming in to a specific area.	<ul style="list-style-type: none"> - Select the Zoom In tool from the toolbox. - Click on the area to be zoomed in to on the map, or drag a box around the area to be zoomed in to.
	Viewing a larger area of the map.	<ul style="list-style-type: none"> - Select the Zoom Out tool. - Click or click and drag a box on the map.
	Viewing a different portion of the map while keeping it at the same scale.	<ul style="list-style-type: none"> - Select the Pan tool. - Click on the map. - While holding the left mouse button down, drag the cursor to move the map.
	Returning to the previous zoom or map scale level.	<ul style="list-style-type: none"> - Select the Previous Scale tool.
	Returning to the extent of the map that was visible when the current session began.	<ul style="list-style-type: none"> - Select the Initial Scale tool. - The tool will display the map extent as it appeared when the current session began. This tool will not show the map that was initially displayed when the program was installed.
	Obtaining attribute information for features or geographies.	<ul style="list-style-type: none"> - Select the Info tool. - Click on the item in the map window. - A popup box will provide attribute information.
	Measuring line distances on the map.	<ul style="list-style-type: none"> - Select the Measure Distance tool. - Click along the feature to be measured. - A popup box will appear listing the distance; units can be selected from the dropdown menu.




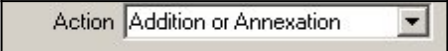

	Measuring areas on the map.	<ul style="list-style-type: none"> - Select the Measure Size tool. - Click multiple locations to draw a polygon - Double click to complete the polygon. - A popup box will appear listing area and perimeter measurements.
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Table 2
BAS and Area Editing toolboxes

Tool	Function	Instructions
	Specifying the geography to be edited.	<ul style="list-style-type: none"> - Select the geography from the dropdown menu. - County and American Indian Area participants may be able to choose between multiple levels of geography. Place and MCD participants will have a default level of geography already selected.
	Specifying the governmental entity to be edited.	<ul style="list-style-type: none"> - Select the entity to be edited from the dropdown menu. - County and American Indian Area participants may be able to choose between multiple target areas. Place and MCD participants will have a default target area already selected.
	Specifying the type of change to make to an entity.	<ul style="list-style-type: none"> - Select the Action from the dropdown menu.
	Changing the selected target area by clicking an entity in the map.	<ul style="list-style-type: none"> - Select the level of geography from the Edit Layer dropdown. - Click the Target Area Pointer tool. - Click on an entity of interest. - The target area will change to the clicked entity.

**Table 2 (Cont.)
BAS and Area Editing toolboxes**
















Tool	Function	Instructions
	Zooming to the area specified in the Target Area dropdown.	<ul style="list-style-type: none"> - Choose the geography from the Edit Layer dropdown. - Choose the entity from the Target Area dropdown. - Click the Zoom to Target Area tool. - The program will zoom to the specified entity.
	Displaying the entire map.	<ul style="list-style-type: none"> - Click the Show Entire Map tool. - The map will display the entire coverage area.
	Displaying BAS Form records. (BAS toolbox only)	<ul style="list-style-type: none"> - Click the Display BAS Form record tool. - Select a BAS face. - The attributes of the selected face will display.
	Deleting changes after they have been saved.	<ul style="list-style-type: none"> - Click on the Delete a change tool. - Select the change to be deleted. - Verify the deletion.
	Selecting faces as part (or all) of a change by clicking faces on the map.	<ul style="list-style-type: none"> - Click the Select by pointing tool. - Select each face that is part of the area to be changed.
	Selecting faces as part (or all) of a change by drawing shapes around them.	<ul style="list-style-type: none"> - Click the Select by shape tool. - Draw a polygon around the faces to be selected. - Double click to close the polygon. - This tool will select only entire faces within the drawn polygon. If faces need to be split, see section 3.6.2.1.
	Canceling changes.	<ul style="list-style-type: none"> - Click the Cancel edits tool.
	Saving changes.	<ul style="list-style-type: none"> - Click the Save edits tool. - An update form will appear asking for any required information for the type of change that is being made.

Table 3
Line Editing toolbox

Tools	Function	Instructions
	Adding linear features.	<ul style="list-style-type: none"> - Click the Add line tool. - Click in the map to draw a line, click again to change direction/ add nodes and double click to finish drawi - A window will appear listing the editable attributes; an MTFCC code must be entered. - Double click the MTFCC field to display a list of possible MTFCCs and choose one. - If the feature has a name, enter it in the FULLNAME field.
	Deleting linear features.	<ul style="list-style-type: none"> - Click the Delete line tool. - Select the linear feature to delete.
	Splitting lines.	<ul style="list-style-type: none"> - Click the Split line tool. - Click on the line where it should be split.
	Deleting lines while saving their attributes.	<ul style="list-style-type: none"> - Click the Copy and delete line tool. - Click on the line to be deleted. The tool will save the attributes for use with the Replace copied line tool.
	Adding lines with attributes saved by the Copy and delete line tool.	<ul style="list-style-type: none"> - Click the Replace copied line tool. - Draw the line on the map. The attributes from the line deleted using the Copy and delete line tool will be copied to the newly drawn line.
	Editing line attributes.	<ul style="list-style-type: none"> - Click the Edit Line Attributes tool. - Click the line. - A window will appear listing the editable attributes.
	Displaying alternate line names.	<ul style="list-style-type: none"> - Click the Display Alternate Names tool. - Click the line. - A window will appear listing the primary name of the line as well as the secondary name (if it exists).

**Table 3 (Cont.)
Line Editing toolbox**










Tool	Function	Instructions
	Displaying alternate addresses	<ul style="list-style-type: none"> - Click the Display Alternate Addresses tool. - Click a line. - A window will appear listing the alternate addresses of the line (if they exist). -
	Displaying directions of lines.	<ul style="list-style-type: none"> - Click the Show right/left direction arrows tool. - Direction arrows will appear for all lines.
	Canceling changes (before they are saved).	<ul style="list-style-type: none"> - Click the Cancel edits tool.
	Saving changes.	<ul style="list-style-type: none"> - Click the Save edits tool. - An update form will appear asking for any required information for the type of change that is being made.

Table 4
Point Editing toolbox

Tool	Function	Instructions
	Adding point landmarks.	<ul style="list-style-type: none"> - Click the Add point tool. - Click the location of the landmark on the map. - A window will appear listing the editable attributes; an MTFCC code and name must be entered. - Double click the MTFCC field to display a list of possible MTFCCs and choose one. - Enter the name of the landmark in the FULLNAME field.
	Deleting point landmarks.	<ul style="list-style-type: none"> - Click the Delete point tool. - Click the point landmark to be deleted on the map.
	Editing the attributes of point landmarks.	<ul style="list-style-type: none"> - Click the Edit Point Attributes tool. - Select the point landmark to be edited. - Update the attribute window.
	Canceling changes (before they are saved).	<ul style="list-style-type: none"> - Click the Cancel edits tool.
	Saving changes.	<ul style="list-style-type: none"> - Click the Save edits tool. - An update form will appear asking for any required information for the type of change that is being made.

Appendix 3: Available Change Types by Entity Type

Geography	Available Change Types
Incorporated Place	Addition or Annexation Boundary Correction (add) Boundary Correction (remove) Geographic Corridor Deletion or Deannexation New Entity Geographic Offset Other
County Subdivision	Addition or Annexation Boundary Correction (add) Boundary Correction (remove) Deletion or Deannexation New Entity Geographic Offset
County	Addition or Annexation Boundary Correction (add) Boundary Correction (remove) Deletion or Deannexation
Tribal Subdivision	Addition or Annexation Boundary Correction (add) Boundary Correction (remove) Deletion or Deannexation New Entity Geographic Offset Other
American Indian Area	Addition or Annexation Boundary Correction (add) Boundary Correction (remove) Geographic Corridor Deletion or Deannexation New Entity Geographic Offset Other

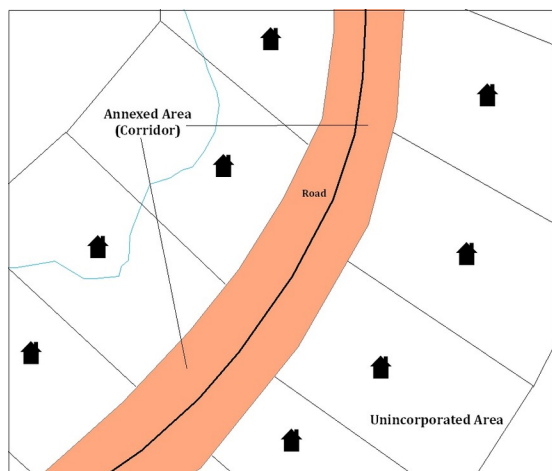
Appendix 4: Geographic Corridors and Geographic Offsets

Geographic Corridors

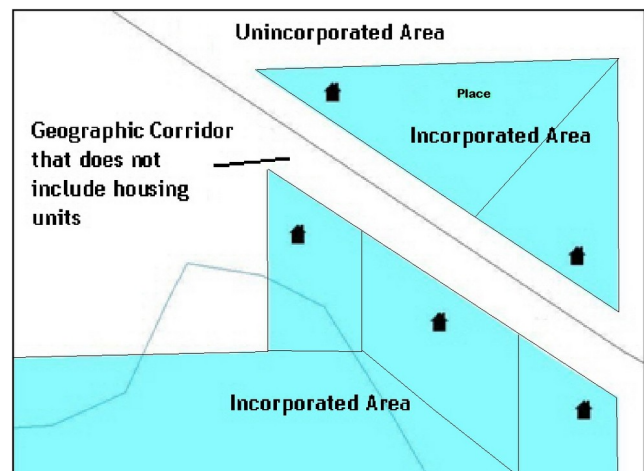
A **geographic corridor** is an area that includes only a road (or other feature) right-of-way and does not contain any structures addressed to either side of the street. Example A6.1 shows a corridor that has been created where the incorporated place or AIA owns the right-of-way, and wishes for that ownership to be displayed on the Census Bureau's maps, but the housing units are not included in the incorporated place or AIA (shown in color). If it is important to the place or AIA that its ownership and/or maintenance of the road and/or its right-of-way be displayed on Census' maps, a geographic corridor should be created. However, the Census does not require places and AIAs to report rights-of-way: maintaining geographic corridors in a nationwide database is difficult and impractical, and the right-of-way should only be included if it is crucial to the place or AIA, or if state or local laws require it. The Census Bureau would actually prefer that the area simply not be assigned to the place at all.

Example A6.2 shows that the right-of-way belongs in the unincorporated area, while the housing units are included in the incorporated place (shown in color). While depicting this corridor may be important for local purposes, it is not relevant for Census Bureau tabulations and is not easy to depict in the Census nationwide database. This type of corridor should not be included in a BAS response.

Please note that the Census Bureau does not require places or AIAs to display rights-of-way or road maintenance corridors that do not contain or potentially contain housing or population. If local or state law does not require depiction of these geographic features, the Census Bureau prefers that they be left off BAS submissions. However, if it is necessary for the place or AIA to depict them, then they must be submitted as a geographic corridor.



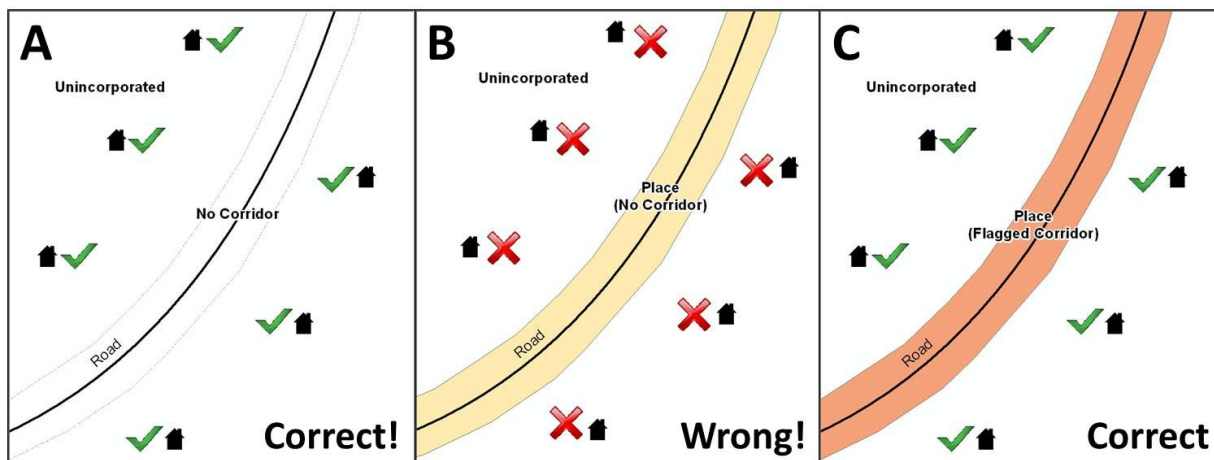
ExampleA6.1



Example A6.2

To recap, when a participant has a case where a road right of way is legally included in the boundary, but the adjacent parcels/houses are not, there are two options. You should either not

include the area in the place at all (Scenario A in example A6.3 below), or include it in the place and flag it as a corridor (Scenario C below). What you should never do is include such areas within the place boundary without flagging them as corridors (Scenario B).



Example A6.3: (A): The respondent did not include place ownership of the road or the right-of-way, allowing houses along the road to be geocoded correctly. (B): The respondent chose to show place ownership of the road, but did not flag it as a corridor, causing houses along the road to be incorrectly geocoded. (C): The respondent chose to show place ownership of the road, and flagged that ownership as a corridor, allowing the houses to be geocoded correctly. Both A and C are acceptable.

If geographic corridors are created, then individual change polygons for each geographic corridor must also be created. Each change polygon must have the required attributes and corresponding change type populated, as seen in Table A6.4. In the NAME field, enter the name of the jurisdiction. In the RELATE field, indicate whether the change is adding IN or taking OUT (removing) the corridor.

	NAME	CHNG_TYPE	EFF_DATE	DOCU	AREA	RELATE
Geographic Corridor	X	X('C')				X('IN', 'OUT')

Table A6.4 Geographic Corridors (Note: 'X' = Required field)

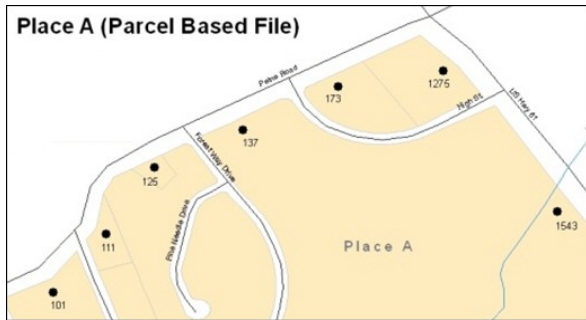
Geographic Offsets

A **geographic offset** is an area (either within or outside of a geographic entity) that is *only on one side of a road* (unlike corridors, which involve both sides of the road) and does not include structures addressed to that side of the road. Much of the same guidelines regarding corridors also holds true for offsets.

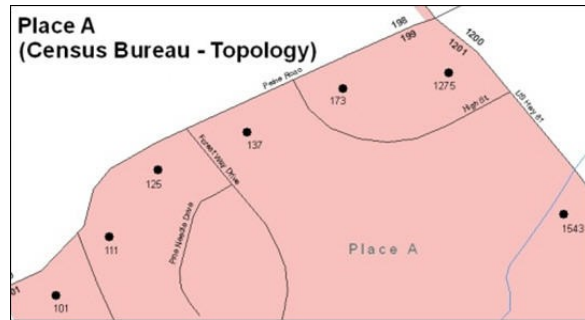
The Census Bureau is aware that many governments base their legal boundaries on cadastral (parcel-based) right-of-way mapping. Census maps are based on spatial data that is topologically integrated which makes maintenance of geographic offsets inefficient. Using the road centerline wherever possible will help to establish more accurate population counts. If a boundary follows

a front lot line, Census strongly prefers that the road centerline be used as the boundary. If a boundary is at the rear of a lot, then it should be depicted as such. If it is unclear whether a particular line is a front lot line or something else, please contact the BAS team for assistance. As a general rule, if a house or building could not conceivably be built in the area between the potential line and the centerline of the road, then the line can be considered to be a front lot line.

Example A6.5 depicts a cadastral (parcel-based) boundary map and Example A6.6 shows how the boundary should be represented when it is sent to the Census Bureau.

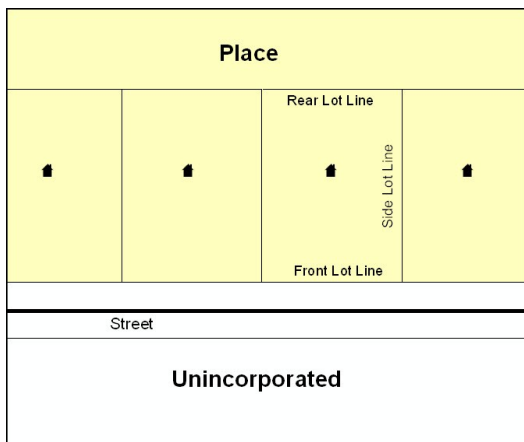


Example A6.5

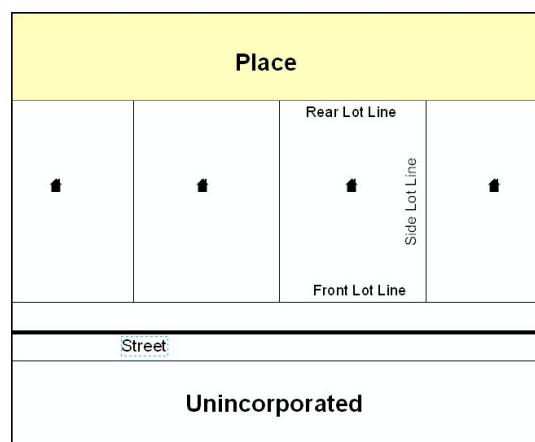


Example A6.6

Example A6.7 below shows a situation in which the place boundary is along the **front lot line**. In this example, the respondent must either use the road centerline as the boundary (preferred), or create an offset. In Example A6.8, the place boundary is on the **rear lot line**, so the respondent should of course not use the road centerline or create an offset, but should rather digitize in a new boundary following the rear lot line.



Example A6.7



Example A6.8

If geographic offsets are created, then individual change polygons for each geographic offset must also be created. Each change polygon must have the required attributes and corresponding change type populated, as seen in Table A6.9. In the **NAME** field, enter the name of the jurisdiction. In the **RELATE** field, indicate whether the change is adding IN or taking OUT (removing) the area represented as an offset.

	NAME	CHNG_TYPE	EFF_DATE	DOCU	AREA	RELATE
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Geographic Offset	X	X('F')				X('IN', 'OUT')
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Table A6.9 Geographic Offsets (Note: 'X' = required field)

The Census Bureau has included an “offset” shapefile in the BAS materials (bas_2013_offset_<ssccc>.shp), so that your jurisdiction can be checked for any existing corridors or offsets. While Census prefers that new offsets are not created, (see above), this information can be helpful in determining if current boundaries are correct.