U.S. Census Bureau

Optimal Address Data Submission Guidelines – 50 States and D.C.

As a part of the U.S. Census Bureau's Geographic Support System Initiative (GSS-I), the Census Bureau is committed to accepting address and structure point data from our partners beginning in the second quarter of fiscal year 2013. This document outlines the address data elements and metadata that the Census Bureau identifies as optimal components in address and structure datasets.

Table 1 - Address Elements: City Style[1] Addresses

Address Element	DESCRIPTION	FGDC Address Data Standard Reference[3]
Complete Address Number	An 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 example, the “123” in 123 Main Street Anytown, NC 28999.	2.2.1
Complete Street Name	Official name of a thoroughfare as assigned by a governing authority, or an alternate (alias) name that is used and recognized. For example, the “Main Street” in 123 Main Street Anytown, NC 28999.	2.2.2
Complete Alternate Street Name	A commonly used and recognized alternate name for a street	
Complete Subaddress	Also known as the ‘within structure identifier’, it is the portion of an address that identifies the specific apartment, unit, suite, floor, trailer, or pad represented by the address record. It should include both descriptor (e.g. APT, SUITE) and unit identifier (e.g. 1 ,A, BACK), where applicable include names assigned to a structure, i.e. "Homestead Highrise" or "Uptown Condominiums" and Identifiers assigned to a structure, i.e "Tower B" or "Building 1".	2.2.4
ZIP Code	Should contain five numeric characters (stored as text). A system of 5-digit codes that identifies the individual Post Office or metropolitan area delivery station associated with an address.	2.2.8.2
City	1) Incorporated municipality or other general purpose local governmental unit OR 2) United States Postal Service (USPS) Post Office name from which mail is delivered to the address (preferred).	
State Name	Spelled out in full or represented by the two-letter USPS abbreviation	
Tract/Block[4]	2010 Census Tabulation Tract (6-digit) and Block (4-digit)	

Table 2 - Address Elements: Non-City Style[2] Addresses (provided only if City Style address not available)

Address Element	DESCRIPTION	FGDC Address Data Standard Reference[3]
Complete Street Name	Official name of a street as assigned by a governing authority	2.2.2
Complete Alternate Street Name	A commonly used and recognized alternate name for a street	
USPS Postal Address (RR and HC)	Rural Route Descriptor, RR ID, Box Number (e.g. RR 4 Box 693-C)	2.2.7
Complete Subaddress	Should include both descriptor (e.g. APT, SUITE) and unit identifier (e.g. 1 ,A, BACK), where applicable include names assigned to a structure, i.e. "Homestead Highrise" or "Uptown Condominiums" and Identifiers assigned to a structure, i.e "Tower B" or "Building 1".	2.2.4
ZIP Code	Should contain five numeric characters	2.2.8.2

City	1) Incorporated municipality or other general purpose local governmental unit OR 2) United States Postal Service (USPS) Post Office name from which mail is delivered to the address (preferred).	2.2.6.1
State Name	Spelled out in full or represented by the two-letter USPS abbreviation	2.2.6.3
Tract/Block[4]	2010 Census Tabulation Tract (6-digit) and Block (4-digit)	
Address Coordinates[5]	(Latitude/Longitude, X/Y) Coordinates representing the address location	2.3.2
Mile Marker	Mile marker value if used in lieu of a house number, where no official house number exists	2.2.1.1

Table 3 - Additional Data Elements (provided with either City Style or Non-City Style address)

Data Element	DESCRIPTION	FGDC Address Data Standard Reference[3]
Last Updated	Indicate the most recent date on which the address data was updated.	2.3.8
Address Use	A value indicating if the address is used for: • mailing purposes or is known to be an address recognized by the USPS for mailing purposes • location purposes including emergency services such as police, fire, and rescue (E-911 addresses) • both mailing and location purposes	2.3.6.9
Address Type	A value indicating the real world phenomenon represented by the address. This field differentiates between residential, commercial, and other uses. Examples may include: Single family residential, Multi-family residential, Mobile home, Commercial, Industrial, Campground, Cemetery.	
Parcel Identifier	Parcel Identifier, Assessor's Parcel Number	2.3.3
*New Construction	Indicate if a permit has been issued but the physical structure does not yet exist	2.3.6.3
*New Construction Date	Date Building Permit was issued	
*Multiunit	Indicate if the living quarter is part of a multi unit (for example, an apartment building) where each unit shares the same Basic Street Address (BSA) and is uniquely identified by building, floor, and/or unit information	
*Multiunit Count	For multi units, if the exact ('real') unit identifiers are not known, do not create individual records for each unit. Instead, provide only a single record of the Basic Street Address and use the MULTIUNIT COUNT element to indicate the number of units at the address.	
*Facility Name[6]	i.e. University of Maryland, Shady Acres Retirement Village, Pelican Bay State Prison	
*Group Quarter Type[7]	College Dormitory, Nursing Home, Prison, etc.	
*Group Quarter Name	i.e. Reed Dormitory, Hospice Care Wing, Prison Block 18	
*Group Quarter Contact Name	If available, this data will help census Group Quarters Enumerators schedule interview times	
*Group Quarter Contact Title	i.e. Residential Advisor, Head Nurse, Warden	
*Group Quarter Telephone Number	If available, this data will help census Group Quarters Enumerators schedule interview times	
*Group Quarter Expected Population	i.e. the number of beds or rooms	
Reference System	Coordinate Reference System, Datum, etc. used to define (X,Y) coordinates (file level)	2.3.2
*Anomalous Indicator	Indicate if the jurisdiction for which the respective address is located contains addressing conventions anomalous to the country as a whole	

*Where applicable

U.S. Census Bureau

Minimum Address Data Submission Guidelines – 50 States and D.C.

If you wish to partner with the U.S. Census Bureau and provide address data, including the information identified above - in the ***Optimal*** *Address Data Submission Guidelines* - will ensure the Census Bureau can effectively process and use your data. However, the Census Bureau acknowledges that address data stewards, whether working at a local, state or regional level, may have data they can share with the Census Bureau but that data may not contain all the information the Census Bureau has identified as optimal. That should not preclude a partner from engaging with the Census Bureau to share address data and feedback. The ***Minimum*** *Address Data Submission Guidelines* identified below are intended to inform Census Bureau partners of how the Census Bureau processes and uses address data – even for situations where the optimal amount of information is unavailable.

At the highest level, in order to perform an update to the Census Bureau's Master Address File (MAF), we must first be able to perform a match between addresses in the partner file and addresses already existing in the MAF – otherwise, we risk adding duplicate records to the MAF. Therefore:

A) In order to perform a match to existing MAF addresses the submitted record must include:

- Complete Address Number
- Complete Street Name

and AT LEAST ONE OF THE FOLLOWING:

- Address Coordinate
- ZIP Code
- Postal City and State
- Census 2010 Tabulation State, County, Tract and Block Code

At a minimum, this information will allow us to update the source data for an existing address record, adding to our confidence that the address is valid.

B) In order to update the location (geocode) for an existing MAF address, the submitted record must meet the requirements of "A" above, but this action requires either:

- Address Coordinate or
- Census 2010 Tabulation State, County, Tract and Block Code

This information will allow us to assign a location to previously ungeocoded addresses, to compare source geocodes to existing MAF geocodes, and to correct geocodes on MAF records where necessary.

C) In order to ADD new records to the MAF, the submitted record must meet the requirements of "A" above, and additionally must include an Address Feature Type indicator identifying the address as residential, commercial, utility, etc.

D) In addition to the above, it is highly desirable that, where applicable, every address must have a unique Within Structure Identifier (Subaddress Element, for example Apt 3 or Unit A) to distinguish it from other addresses on the list. In the event that the specific unit designations are unknown, partners should supply:

- The number of units at the basic street address (i.e. "123 Main Street" "25 Units"). A basic street address (BSA) is a city style address[1] without the unit identifier.
- A flag indicating which addresses are multi-unit structures (i.e. apartment or condominium buildings)

E) For Group Quarters, source data should specify the NAME (i.e. Shady Acres Retirement Home) of the Group Quarters, and the TYPE (i.e. Hospital, Prison, College Dormitory) of Group Quarters represented by the address record.

F) The Census Bureau currently does not attempt to match or add to the MAF any address records that contain only Non-City-Style Addresses, such as:

- Rural Route Addresses (i.e. RR 3 Box 725 Anytown, NC 28999)
- Post Office Box Addresses (i.e. P.O. Box 12374 Anytown, NC 28999)
- Highway Contract Addresses (i.e. HC 3 Box 330 Anytown, NC 28999)
- General Delivery (i.e. General Delivery Anytown, NC 28999)
- Location Descriptions (i.e. Brick House at intersection of 1st and Main Streets)
- Address Coordinates ONLY

If the Census Bureau receives an address that contains non-city style address information, in addition to a city-style address (as defined in A, B, C, and D above), the non-city style address information may be added to the MAF along with the city-style address information.

If these types of address records are submitted with Address Coordinates or Census 2010 Tract and Block codes, we may be able to perform coverage analysis in order to ascertain lack of coverage in a given Census Block.

Notes and Definitions
1) The Census Bureau classifies housing unit and group quarters addresses that have an address number and street name address, for example, 212 Elm Street or 137 Clark Ct., Apt. 316, as city-style addresses. These addresses are used for mailing or to provide location for emergency services, such as police, fire, and rescue (E-911 addresses).
2) The Census Bureau classifies addresses that do not include a house number and/or a street name as noncity-style addresses. Frequently used noncity-style mailing addresses include General Delivery, Rural Route and Box Number, Highway contract route and Box Number, and Post Office Box addresses. These types of addresses are generally not used to update the Census Master Address File, as they are less likely to match existing records (and therefore cause potential duplication) and are not typically geocodable.
3) This column refers to the applicable section of the Federal Geographic Data Committee's "United States Thoroughfare, Landmark, and Postal Address Standard."
4) TRACT/BLOCK: A Tract Number must contain six digits even if there are zeros in front or behind a number (Examples: 0832.01 or 0092.00). BLOCK Must be a four digit Block number (Example: 1001). Note that if the dataset covers addresses in more than one county, then STATE and COUNTY codes must accompany the TRACT/BLOCK number. It is also important that the Census Bureau understand how the Tract/Block codes were derived or assigned to the address records.
5) ADDRESS COORDINATES: The Census Bureau prefers that the coordinates represent the structure associated with the address. If the coordinates are derived using a variety of methods (i.e. building footprints, GPS collection at front door, parcel centroid, etc.) additional data should be included specifying the means of derivation. Otherwise, if all coordinate pairs are derived in the same way, metadata at the file level will suffice.
6) FACILITY NAME: Facility name is the broader name for entities such as "University of Maryland" or "St. Anthony Hospital" that contain multiple residential buildings, such as dormitories.
7) The Census Bureau defines GROUP QUARTERS as a place where people live or stay, in a group living arrangement, that is 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 are the individual buildings located within a Facility. Example: “Reed Dormitory” would be a GQ name. There are instances where the GQ Name and Facility Name are potentially the same. Example: Shady Acres (Facility Name) may have only one housing building (GQ), which would make the Facility name and GQ names the same.
General Notes
1) Please note that this document is not intended to serve as a template or file layout for submitting address data to the Census Bureau, rather it is a general guide to the nature of the address data the Census Bureau would prefer to receive.
2) Address examples provided in this document are fictitious, not covered by Title 13, and are intended for illustrative purposes only.
Similar guidelines for Puerto Rico are posted separately. Guidelines for the Island Areas are forthcoming.

For an electronic version of this document, as well as more detailed information, please visit the GSS-Initiative Web Page using the following URL:
http://www.census.gov/geo/www/gss/index.html