

## Instructions for Schedule I Supplement 1 - Location Data

This Supplement must be completed only when a location (transmitter, receiver, or passive repeater) is to be added, modified, or deleted. Each Supplement 1 describes one location. If you have more than one location, submit an additional Supplement 1 for each. If you are adding a new location, complete a Supplement 1 for each location to be added. If you are modifying an existing location, in addition to Items 1, 2, 6 (FCC Antenna Structure Registration), and 22 (NEPA), complete only the items that have changed for each location. If you are deleting a location, complete only Items 1 and 2. Locations that are currently licensed under this call sign by the FCC will continue to be shown on the Authorization as is, unless a specific action is requested in this Supplement.

**Note:** Supplement 1 describes one location only. To add, modify, or delete technical data associated with a location, you must file Supplement 2 (Path Data), Supplement 3 (Passive Repeaters), and/or Supplement 4 (Frequency Data) along with Supplement 1.

For purposes of these instructions and the use of this Supplement 1, permanent fixed point-to-point stations, Multiple Address System (MAS) stations that are not mobile-only or auctioned, and Digital Electronic Message Service (DEMS) stations, are considered to have fixed transmit locations. Mobile-only Multiple Address System (MAS) (non-auctioned) stations, temporary fixed, 18 GHz Low Power stations, and 31.0-31.3 GHz and 38.6-40.0 GHz (non-auction, area operation) stations are considered to have area transmit locations.

A summary of Types of Operation Codes/Station Classes/Transmit Location Types/Path Codes is provided in Table 1, located on page 16 of these instructions.

**IMPORTANT INFORMATION REGARDING LOCATIONS:** Receiver and Passive Repeater location information may only be specified for Permanent Fixed Point-to-Point systems. For all other types of operation, you may only specify location information for the transmitter. Additionally, you must check Table 1 on page 16 of these instructions to determine if the station for which you are applying should be associated with a fixed location (station class = FXO in Item 4 of Schedule I) or an area location; enter data accordingly.

**Note:** For MAS and DEMS stations associated with a fixed location, the area in which you may locate remote and user stations is defined in the FCC rules (see 47 CFR § 101.105) and is not collected on this form. Additionally, for these stations, the transmitter location information entered in Items 7-12 should correspond to the center of the station's operating area, the site elevation entered in Item 13 should correspond to the elevation at the coordinates entered in Items 7-8, and the antenna structure height data entered in Items 14-15 must be equal to or greater than the value entered for antenna height in Item 7 of Supplement 2.

**Note:** For Receiver locations, you must complete Items 1, 2, 3, 5, 7, 8, and 13.

**Note:** For Passive Repeater locations, you must complete Items 1, 2, 3, 5, 6-8, 13-16, and 22.

Item 1 Enter the code indicating the action requested.

To add a new location, enter 'A'. If the new location you are adding is a fixed transmit location, also complete Items 2, 3, 5 through 16, 22, and 23. If the new location you are adding is an area location, also complete Items 2 through 5, 7, 8, 10 through 12, and 17 through 23.

**Note:** Part 101 Microwave Services and Part 74 Broadcast Auxiliary Microwave Services only authorize one transmit location per license. Therefore, a transmit location may only be added if the purpose of FCC 601 Main Form is 'New'.

To modify existing location data, enter 'M'. If the existing transmit location is a fixed transmit location, complete Items 2 (Location Number), 6 (FCC Antenna Structure Registration), 22 (NEPA), 23 (Quiet Zone - if required), and only those of Items 7 through 16 that are being modified (enter the new data only). If the existing transmit location is an area location, complete Item 2 and only those Items 7, 8, 10 through 12, and 17 through 23 that are being modified (enter the new data only).

To delete an existing location, enter 'D' and complete Item 2.

**Note:** Deleting a receiver location will also delete all paths associated with that location.

## Item 2

This item must be completed. If the station location has been previously licensed under this call sign by the FCC, enter its FCC-assigned location number (see Important Information Regarding Location and Path Numbers on page 1 of these instructions). For a new location, assign a temporary code to represent the station location. The assigned code should begin with 'L' to indicate it is a location and end with a number to uniquely identify it (e.g., L1, L2, L3, etc.). The FCC will assign an official number to the new station, which will appear on the Authorization.

**Note:** The transmitter location must always be assigned location 1 (L1).

## Item 3

Enter the appropriate location description for the specified location. Valid location descriptions are listed below:

Transmit  
Receiver  
Passive Repeater

## Item 4

For area transmit locations only, enter the appropriate area of operation code using the table below. Additional mobile location fields must be completed according to the area of operation code chosen. Refer to the table to determine which additional fields are required for the chosen area of operation code.

**Note:** If area operation will cover multiple counties, use area of operation code 'O' and specify all applicable counties in Item 21.

### Area of Operation Codes and Required Data Values

Code	Description	Additional Supplement 1 Data Elements Required for each Area of Operation Code	Item Numbers
P	KMRA around a centerpoint (circular area of operation)	Temporary Fixed or Mobile Radius, Latitude, Longitude, City*, State**, County/Borough/Parish**, Canadian Coordination area, NEPA, Quiet Zone	7, 8, 10, 11, 12, 17, 20, 22, 23
R	Rectangular Area of Operation	Latitude, Longitude, Maximum Latitude, Maximum Longitude, Canadian Coordination area, NEPA, Quiet Zone	7, 8, 18, 19, 20, 22, 23
N	Nationwide including Hawaii Alaska & US Territories	Canadian Coordination, NEPA, Quiet Zone	20, 22, 23
U	Continental US	Canadian Coordination, NEPA, Quiet Zone	20, 22, 23
C	County/Borough/Parish Wide Area of Operation	State, County/Borough/Parish, Canadian Coordination, NEPA, Quiet Zone	11, 12, 20, 22, 23
S	Statewide Area of Operation	State, Canadian Coordination, NEPA, Quiet Zone	11, 20, 22, 23
O	Other - Narrative	Description, Canadian Coordination, NEPA, Quiet Zone	20, 21, 22, 23

\*Kilometers Radius

\*\* Complete as applicable - refer to instructions for applicability

## Item 5

This item is required. Enter the location or station name. If a new station is proposed, give it a name that relates to its location (up to 20 characters). For example, the name of a city, statistical area, town, or prominent geographical feature may be used. If necessary, abbreviate the name, without punctuation (e.g., Bald Mtn).

## Item 6

This item is required for fixed transmit and passive repeater locations if the action requested in Item 1 is 'A' or 'M'. If antenna structure registration is required, enter the seven digit FCC Antenna Structure Registration Number (shown on the structure's registration, FCC Form 854R). Otherwise, enter 'N/A' to indicate that FAA notification is not required.

**Note:** Effective 7/1/96 the Commission requires owners to register certain structures. When required, antenna structures must be registered using FCC Form 854. The use of this FCC Form 601 to supply antenna structure information does not replace the requirement to register antenna structures on the FCC Form 854. For more information, see our web site at <http://wireless.fcc.gov/antenna/>, call Consumer and Governmental Affairs Bureau at 888-CALLFCC (888-225-5322), or e-mail questions to FCCDMD@fcc.gov.

**Note:** If, in accordance with 47 CFR § 17.14, Antenna Structure Registration is not required because the structure is

shielded by existing structures or because it is fixed by its functional purpose, submit supporting documentation as a "Tower attachment" to your application.

**Note:** For a Multiple MAS Master or DEMS Nodal station, if the only fixed sub-type of operation codes (see Table 1 at the end of this schedule) to be used at the station are MAS Multiple Two-Way Master-Remote, MAS Multiple One-Way Outbound Master, or DEMS Multiple Two-Way Nodal-User, because there is no antenna structure at the coordinates specified in Items 7 and 8, no antenna registration is required. In item 6, enter 'N/A'.

#### Items 7 and 8

These items are required for all receiver locations, and are required for all transmit and passive repeater locations if 'N/A' was entered in Item 6. Enter the geographic coordinates (latitude and longitude) of the location. If you provided an Antenna Structure Registration Number in Item 6 for a transmit or passive repeater location, then these items are optional (see Important Antenna Structure Registration Information on Page 1 of Schedule I Instructions). For area locations, enter the geographic coordinates as specified in the table in the instructions for Item 4:

If 'P' was entered in Item 4, enter the geographic coordinates of the center point;

If 'R' was entered in Item 4, enter the geographic coordinates of the southeast corner of the rectangular area or box. (See also Items 18 and 19 for the Northwest corner)

Enter the latitude using the format *DD-MM-SS.S*, where the degrees (*DD*) term can have a value in the range of 0 to 90, minutes (*MM*) can range from 0 to 59, and seconds (*SS.S*) can range from 0 to 59.9. In the lower right corner, specify the direction as either N for North or S for South.

Enter the longitude using the format *DDD-MM-SS.S*, where the degrees (*DDD*) term can have a value in the range of 0 to 180, minutes (*MM*) can range from 0 to 59, and seconds (*SS.S*) can range from 0 to 59.9. In the lower right corner, specify the direction as either E for East or W for West.

All coordinates must be referenced to the North American Datum of 1983 (NAD83). This information can be determined in many ways, including a GPS receiver, a 7.5 minute topographical quadrangle map of the area, or you may consult the city or county/borough/parish surveyor in your area. Topographical maps may be purchased from the U.S. Geological Survey, Washington, DC 20242 or from its office in Denver, Colorado 80225.

**Note:** Location coordinates (latitude and longitude) for sites in the Continental United States, Puerto Rico, the U.S. Virgin Islands, Alaska, Hawaii, American Samoa, and Guam must be referenced to the North American Datum of 1983 (NAD83). Coordinates for sites in the Northern Mariana Islands, Wake Island, and Midway Island should be referenced to the applicable local datums. If the source from which you obtain the coordinates still utilizes an older datum (*i.e.*, NAD27, PRD40) you must convert to NAD83. Conversion routines are available through the internet at <http://wireless.fcc.gov/uls/utilities/nadcon.html>.

#### Items 9-12

##### **Fixed Locations**

If you answered N/A in Item 6 for a Transmit Location, you must complete Items 9 through 12. If you provided an Antenna Registration Number in Item 6 for a Transmit Location, you must complete Item 12, County/Borough/Parish name. If the Location is a Receiver or Passive Repeater, Items 9 through 12 are not required to be completed.

**Item 9** This item must be completed for the Transmit Location. Enter a complete description of the transmit location such as street number and address or other geographic description such as direction and distance from a town or known landmark (*i.e.*, Rt 81, 5 km South of Fairview). P. O. Box Numbers or geographical coordinates are not acceptable for this item.

**NOTE:** For a Multiple MAS Master or DEMS Nodal station, if the only fixed sub-type of operation codes (see Table 1 at the end of this Schedule) to be used at the station are MAS Multiple Two-Way Master-Remote, MAS Multiple One-Way Outbound Master, or DEMS Multiple Two-Way Nodal-User, because there is no antenna structure at the coordinates specified in Items 7 and 8, enter 'Various Locations' in Item 9.

**Item 10** This item must be completed with the City in which the Transmitter is located.

**Item 11** This item must be completed with the State code in which the Transmitter is located. Refer to FCC Form 601 Main Form Instructions, Appendix II, for a list of valid state, jurisdiction and area codes.

**Item 12** This item must be completed with the County/Borough/Parish in which the Transmitter is located unless any of the following pertain to the Transmit Station location:

- a) the city entered in Item 10 is an Independent City that is not affiliated with a County/Borough/Parish (*i.e.*, Baltimore, MD)
- b) the State code entered in Item 11 does not have Counties/Boroughs/Parishes (*i.e.*, Puerto Rico, Virgin Islands)
- c) the State code entered in Item 11 is GM, Gulf of Mexico

**NOTE:** If the nearest City, County/Borough/Parish and State are located in a bordering county/borough/parish and/or state, enter a complete description of the location in Item 9 as shown in this example. Complete Item 10 if a City, Town or Village within the Transmitter's County/Borough/Parish is nearby and complete Items 11 and 12 with the County/Borough/Parish and State in which the coordinates are actually located.

Example:                9) (Street) Summit Mtn near Palo Verde, Imperial County, CA  
                             10)(City)  
                             11)(State) AZ  
                             12)(County/Borough/Parish) La Paz

**Area Locations**

For area locations, respond to Items 9-12 as specified in the table in the instructions for Item 4:

**Item 9** This item is not applicable for area locations and should be left blank.

**Item 10** If 'P' was entered in Item 4, enter the city or town name of the location in this item. This item is required only if Item 12 is blank.

**Item 11** If 'P', 'C', or 'S' was entered in Item 4, enter the State of the location in this item. Refer to FCC 601 Main Form Instructions, Appendix II, for a list of valid state, jurisdiction, and area codes.

**Item 12** If 'P' or 'C' was entered in Item 4, enter the County/Borough/Parish of the location in this item. This item is always required for area of operation code 'C'. This item is also required for area of operation code 'P' except when: (a) the city entered in Item 10 is an Independent City that is not affiliated with a County/Borough/Parish (*i.e.*, Baltimore, MD), (b) the State entered in Item 11 does not have counties/boroughs/parishes (*i.e.*, Puerto Rico, Virgin Islands), or (c) the State entered in Item 11 is 'GM' (Gulf of Mexico).

**Note:** Items 13-16 only apply to Fixed Locations. If you answered 'N/A' in Item 6 for a Transmit or Passive Repeater Location, you must complete Items 13-16. If you provided an Antenna Registration Number in Item 6 for a Transmit or Passive Repeater Location, Items 13-16 are optional (see Important Antenna Structure Registration Information on page 1 of Schedule I instructions). If the Location is a Receiver, Item 13 must be completed. Items 14-16 are not required.

**Item 13**

Enter the elevation above mean sea level (AMSL) of the ground at the antenna location. Enter this item in meters, rounded to the nearest tenth. Refer to letter 'a' in the antenna structure figure examples on page 9 of these instructions. This information can be determined in many ways, including a GPS receiver, 7.5 minute topographical quadrangle map of the area, or you may consult the city or county/borough/parish surveyor in your area. Topographical maps may be purchased from the U.S. Geological Survey, Washington, DC 20242 or from its office in Denver, Colorado 80225.

**NOTE:** For a Multiple MAS Master or DEMS Nodal station, if the only fixed sub-type of operation codes (see Table 1 at the end of this Schedule) to be used at the station are MAS Multiple Two-Way Master-Remote, MAS Multiple One-Way Outbound Master, or DEMS Multiple Two-Way Nodal-User, because there is no antenna structure at the coordinates specified in Items 7 and 8, enter '0' (the single digit zero) in Item 13.

**Item 14**

Enter the height above ground level to the highest point of the **supporting structure only**. Enter this item in meters, rounded to the nearest tenth. For example, if the antenna structure consists of a building/tower combination, include any elevator shaft, flagpole, or penthouse in the **overall** support structure height, but not the antenna, tower, pole, or mast. If the antenna structure is a tower only, include the height of the tower but not the antenna. Refer to letter 'b' in the antenna structure figure examples on page 9 of these instructions.

**NOTE:** For a Multiple MAS Master or DEMS Nodal station, if the only fixed sub-type of operation codes (see Table 1 at the end of this Schedule) to be used at the station are MAS Multiple Two-Way Master-Remote, MAS Multiple One-Way Outbound Master, or DEMS Multiple Two-Way Nodal-User, because there is no antenna structure at the coordinates specified in Items 7 and 8, enter '6.1' in Item 14.

**Item 15**

Enter the overall height above ground level of the entire antenna structure to the highest point, including any appurtenances. Enter this item in meters, rounded to the nearest tenth. You must include antennas, dishes, obstruction lighting, etc. Refer to letter 'c' in the antenna structure figure examples on page 9 of these instructions.

**NOTE:** For a Multiple MAS Master or DEMS Nodal station, if the only fixed sub-type of operation codes (see Table 1 at the end of this Schedule) to be used at the station are MAS Multiple Two-Way Master-Remote, MAS Multiple One-Way Outbound Master, or DEMS Multiple Two-Way Nodal-User, because there is no antenna structure at the coordinates specified in Items 7 and 8, enter '6.1' in Item 15.

### Item 16

Enter the code for the type of structure on which the antenna is or will be mounted from the following valid structure types:

#### Code Definition

B	Building with a side mounted antenna
BANT	Building with Antenna on Top
BMAST	Building with Mast/Antenna on Top
BPIPE	Building with Pipe/Antenna on Top
BPOLE	Building with Pole/Antenna on Top
BRIDG	Bridge
BTWR	Building with Tower/Antenna on Top
MAST	Self-Support Structure
N/A	Not Applicable***
NNTANN*	Antenna Tower Array
NTOWER**	Multiple Structures
PIPE	Any Type of Pipe
POLE	Any Type of Pole, used only to mount an antenna
RIG	Oil or Other Type of Rig
SIGN	Any Type of Sign or Billboard
SILO	Any Type of Silo
STACK	Smoke Stack
TANK	Any Type of Tank (Water, Gas, etc.)
TOWER	A Free Standing or Guyed Structure Used for Communications Purposes
TREE	When Used as a Support for an Antenna
UPOLE	Utility Pole/Tower Used to Provide Service (Electric, Telephone, etc.)

\* Valid Tower Arrays. Code definition: The first NN indicates the number of towers in an array. The second NN is optional and indicates the position of that tower in the array (e.g., 3TA2 would identify the second tower in a three-tower array).

\*\* Valid Multiple Structures. Code Definition: The N indicates the number of structures where multiple antenna structures are present in a multiple structure (Ex.: 2TOWER, 3TANK, 6BANT, 7BMAST).

\*\*\* Not Applicable Structure Type: This code is only valid to describe the antenna support structure at a location associated with the following types MAS and DEMS stations:

MAS Multiple Two-way Master-Remote  
MAS Multiple One-way Outbound Master  
DEMS Multiple Two-way Nodal-User

### Item 17

For Area of Operation code 'P', enter the radius of the area of operation. Enter in kilometers, rounded to the nearest tenth.

**Note:** For MAS Mobile Master (mobile-only), indicated by type of operation Multiple Address Sys tem on Schedule I Item 3 and sub-type of operation Mobile Master in Item 4a of Supplement 2 - enter 40.5.

For 18 GHz Low Power, indicated by on Schedule I Item 3 - enter 28.0.

### Items 18 and 19

These items must be completed for area operations that are defined by a rectangular area or box coordinates (Area of Operation code in Item 4 = 'R'). Enter geographic coordinates (latitude and longitude) of the northwest corner of the rectangular area of box in Items 18 and 19. See Notes in Items 7 and 8 of these instructions for important information regarding coordinates.

### Item 20

Respond to this Item only if you are applying for an area location. This item helps the FCC to determine if it will initiate coordination procedures with the Government of Canada. If any part of the area location is in an area that requires frequency coordination with Canada and you intend to operate in this area, enter 'Y'. In the event the applicant needs to submit additional information regarding coordination of a channel assignment with the Government of Canada, this should be attached as an exhibit which references Schedule I, Supplement 1, Item 20. If 'N' is entered, the FCC will not initiate coordination procedures with the Government of Canada and your area of operation will be excluded from these border areas. Appendix I in FCC Form 601 Main Form Instructions contains a list of counties/boroughs, by state, having areas within the various coordination zones and a list of which coordination zones apply for various frequency bands.

Item 21

If the response to Item 4 was 'O', enter a description of the area of operation. P.O. Box numbers or geographic coordinates are not acceptable for Item 21. The use of Other should only be used if the area of operation cannot be described by using codes P, R, C, S, N, or U. Area of operation provided as 'Other' may delay processing of the application.

Item 22

This item is required for compliance with the National Environmental Policy Act of 1969 (NEPA), as amended, 42 U.S.C. 4321-4335. See also Part 1, Subpart I of the FCC rules (47 CFR §§ 1.1301 - 1.1319).

Enter 'Y' if an FCC grant of this application will have a significant environmental effect. Section 1.1307 of the FCC rules lists categories of environmental effects for which applicants must file an environmental assessment. Otherwise enter 'N'. Examples of facilities that may have a significant effect on the environment include:

An antenna structure located in a residential area (as defined by applicable zoning laws) that will utilize high intensity aviation obstruction lighting

A facility located in an officially designated wilderness area, wildlife preserve, or floodplain

A facility that affects a site significant in American history

A facility whose construction involves extensive changes in surface features

Facilities, operations, or transmitters that would cause human exposure to levels of radio frequency radiation in excess of the limits as detailed in § 1.1310 and 2.109 of the Commission's rules.

Item 23

Applicants for stations located in one of the Quiet Zones listed below must notify the proper authority and indicate the date such notification was sent in Item 23.

1. National Radio Astronomy Observatory, Green Bank, Pocahontas County, West Virginia. The quiet zone is located within Virginia, West Virginia, and Garrett County, Maryland and bounded by 39 degrees 15' N on the north, 78 degrees 30' W on the east, 37 degrees 30' N on the south, and 80 degrees 30' W on the west. Contact the National Radio Astronomy Observatory, P.O. Box 2, Green Bank, West Virginia 24944.
2. Arecibo Observatory, Puerto Rico. The quiet zone consists of the islands of Puerto Rico, Desecheo, Mona, Vieques, and Culebra. Contact the Interference Office, Arecibo Observatory, HC 3 Box 53995, Arecibo, Puerto Rico 00612.

**Antenna Structure Figure Examples:**

