**FCC 601**
**Main Form**

# FEDERAL COMMUNICATIONS COMMISSION

## Information and Instructions

Approved by OMB
3060 – 0798
Est. Avg. Burden
Per Response:
1.25 hours

## FCC Application for Radio Service Authorization:
## Wireless Telecommunications Bureau
## Public Safety and Homeland Security Bureau

## NOTICE TO INDIVIDUALS REQUIRED BY THE PRIVACY ACT OF 1974 AND THE PAPERWORK REDUCTION ACT OF 1995

We have estimated that each response to this collection of information will take on average 1.25 hours. Our estimate includes the time to read the instructions, look through existing records, gather and maintain required data, and actually complete and review the form or response. If you have any comments on this estimate, or on how we can improve the collection and reduce the burden it causes you, please write the Federal Communications Commission, AMD-PERM, Washington, DC 20554, Paperwork Reduction Project (3060-0798). We will also accept your comments via the Internet if you send them to PRA@fcc.gov. *Please do not send completed application forms to this address.*

You are not required to respond to a collection of information sponsored by the Federal government, and the government may not conduct or sponsor this collection unless it displays a currently valid OMB control number with this notice. This collection has been assigned OMB control number 3060-0798.

The FCC is authorized under the Communications Act of 1934, as amended, to collect the personal information we request in this form. We will use the information you provide to determine whether approving this application is in the public interest. If we believe there may be a violation or potential violation of a statute, FCC regulation, rule or order, your application may be referred to the Federal, state, or local agency responsible for investigating, prosecuting, enforcing or implementing the statute, rule, regulation or order. In certain cases, the information in your application may be disclosed to the Department of Justice or a court or adjudicative body when (a) the FCC; or (b) any employee of the FCC; or (c) the United States Government, is a party to a proceeding before the body or has an interest in the proceeding.

All parties and entities doing business with the Commission must obtain a unique identifying number called the FCC Registration Number (FRN) and supply it when doing business with the Commission. Failure to provide the FRN may delay the processing of the application. This requirement is to facilitate compliance with the Debt Collection Improvement Act of 1996 (DCIA). The FRN can be obtained electronically through the FCC webpage at http://wireless.fcc.gov/uls (Select FCC Registration Number (FRN) Commission Registration System (CORES)) or by manually submitting FCC Form 160. FCC Form 160 is available from the FCC's web site at https://www.fcc.gov/licensing-databases/forms.

This notice is required by the Privacy Act of 1974, Public Law 93-579, December 31, 1974, 5 U.S.C. § 552a(e)(3) and the Paperwork Reduction Act of 1995, Public Law 104-13, October 1, 1995, 44 U.S.C. § 3507.

# Overview

**Purpose of Form**

Form FCC 601 is a multi-purpose form. It is used to apply for an authorization to operate radio stations, amend pending applications, modify existing licenses, and perform a variety of other miscellaneous transactions in the Wireless Telecommunications Bureau (WTB) radio services and/or the Public Safety and Homeland Security Bureau (PSHSB) radio services. The WTB radio services that use this form include Public Mobile Services, Personal Communications Services, General Wireless Communications Services, Private Land Mobile Radio Services, Broadcast Auxiliary Services, Broadband Radio Services, Educational Radio Services, Fixed Microwave Services, Maritime Services (excluding ships), and Aviation Services (excluding aircraft).

The purpose of this form is to collect data pertaining to the proposed request. This data is used by the FCC to determine whether the public interest would be served by a grant of the request.

**Introduction**

Form FCC 601 is a multi-part form comprising a main form and several optional schedules. Each application, amendment, modification, or other request must contain only one Main Form (pages 1 through 4) but may contain as few or as many of the optional schedules as necessary.

**Main Form**

The purpose of the Main Form is to obtain information sufficient to identify the filer, establish the filer's basic eligibility and qualifications, classify the filing, and determine the nature of the proposed service. The Main Form also contains the required certifications and signature block. The Main Form is required for every application filed on Form FCC 601, including Modification and Amendment. (Note: The FCC Registration Number must be completed on the Main Form for all purposes.)

**Schedules**

The purposes of the optional schedules are as follows:

**Schedule A**

The Schedule for Changes Affecting Multiple Call Signs or File Numbers is used to submit global changes to items on the FCC 601 Main Form that affect either multiple call signs or multiple file numbers.

**Schedule B**

The Schedule for Geographically Licensed Services is used to apply for the required license authorization when the Applicant has been determined to be the winning bidder at the close of an FCC auction.

**Schedule C**

[Reserved for future use]

**Schedule D**

The Schedule for Station Locations and Antenna Structures is used to supply technical information for all transmit station locations (including Fixed, Mobile, Temporary Fixed, and 6.1 Meter Control Stations), and antenna structures for all services except Microwave. It is also used by auction winners that must file technical data for international coordination or for an environmental assessment. File as many schedules as necessary to describe station locations and antenna structures. This schedule is used in conjunction with Technical Data Schedules E, F, G, H, and J.

**Schedule E**

The Schedule for Broadband Radio Service and Educational Broadband Service (Part 27) is used by Licensees to add site-specific technical data for international coordination, environmental assessment requirements or quiet zone requirements of a particular site. This schedule is used in conjunction with Location Schedule D.

**Schedule F**

The Technical Data Schedule for the Cellular and Air-ground (Commercial Aviation) Radiotelephone Services (Part 22) is used for site-specific applications and amendments in the Cellular and air-ground radiotelephone services. It is also used by auction winners that must file site-specific technical data for international coordination of a particular site. Schedule F is used to provide technical parameters of the facilities. This schedule is used in conjunction with Location Schedule D.

**Schedule G**

The Technical Data Schedule for the Maritime and Aviation Services (Parts 80 and 87) is used for site-specific applications and amendments in the maritime and aviation services. It is also used by auction winners that must file site-specific technical data for international coordination of a particular site. Schedule G is used to provide technical parameters of the facilities. This schedule is used in conjunction with Location Schedule D.

**Schedule H**

The Technical Data Schedule for the Private Land Mobile and Land Mobile Broadcast Auxiliary Radio Services (Parts 90 and 74) is used for site-specific applications and amendments in the private land and broadcast auxiliary radio services. It is also used by auction winners that must file site-specific technical data for international coordination of a particular site. Schedule H is used to provide technical parameters of the facilities. This schedule is used in conjunction with Location Schedule D.

**Schedule I**
The Technical Data Schedule for the Fixed Microwave and Microwave Broadcast Auxiliary Services (Parts 101 and 74) is used for site-specific applications and amendments in the Fixed Microwave and Microwave Broadcast Auxiliary Services. It is also used by auction winners that must file site-specific technical data for international coordination or for an environmental assessment of a particular site. Schedule I is used to provide microwave specific administrative data as well as all technical parameters of the facilities.

**Schedule J**
The Technical Data Schedule for the Paging, Rural, Air-ground, (General Aviation), and Offshore Radiotelephone Services (Part 22) is used for site-specific applications and amendments in the paging, rural, air-ground, and offshore radiotelephone services. It is also used by auction winners that must file site-specific technical data for international coordination of a particular site. Schedule J is used to provide technical parameters of the facilities. This schedule is used in conjunction with Location Schedule D.

**Schedule K**
The Schedule for Required Notifications for Wireless Services is used to notify the FCC that, within the required time period, coverage or construction requirements have been satisfied, or compliance with yearly station construction commitments for Licensees with approved extended implementation plans has been met. It is also used in the paging radiotelephone services to notify the FCC of a request for regular authorization for facilities previously operating under developmental authority.

**Schedule L**
The Schedule for Waiver Requests for Extension of Time for Wireless Services is used to request a waiver of FCC rules for additional time to either satisfy coverage or construction requirements.

**Schedule M**
The Schedule for Registration is used to register a link in radio service MM – Millimeter Wave Service 70/80/90 GHz, transmitter location for radio service IQ or QQ – Intelligent Transportation Service (ITS), or radio service NN - 3650 – 3700 MHz Service.

**Schedules Required**

If you are applying for initial authorization in a market-based service, you must file Schedule B in conjunction with your Main Form application.

If you are applying for a site-specific authorization in a market-based service to fulfill environmental assessment requirements, file along with your Main Form Application, Schedule I for Microwave Radio Services or Schedule D for all other radio services.

If you are applying for a site-specific authorization in a market-based service to fulfill international coordination requirements, file along with your Main Form Application, Schedule I for Microwave Radio Services or Schedule D and the appropriate technical data schedule for all other radio services.

If you are applying for authorization in a site licensed service, which requires you to report technical data, file along with your Main Form the technical data schedule appropriate to the service for which you are applying:

**Applicable Schedules Required for NE, MD, RM, CI, EX, RL and NT purposes for Specified Radio Services**

| Service | ULS Form/Schedule Title |
|---|---|
| All Geographically Licensed Services<br>(Initial Application) | FCC 601 Main Form - WTB Radio Service Authorization<br>Schedule B - Schedule for Geographically Licensed Services |
| Geographically Licensed Service<br>(Part 27 – Lower MHz (698-746 MHz Band)<br>(WZ Radio Service) | FCC 601 Main Form – WTB Radio Service Authorization<br>Schedule D – Schedule for Station Locations and Antenna Structures |
| Geographically Licensed Service<br>(site-specific environmental assessment) | FCC 601 Main Form - WTB Radio Service Authorization<br>Schedule I (Microwave Radio Services)<br>Schedule D (all other Radio Services) - Schedule for Station Locations and Antenna Structures |
| Geographically Licensed Service<br>(site-specific international coordination) | FCC 601 Main Form - WTB Radio Service Authorization<br>Schedule I (Microwave Radio Services)<br>Schedule D and appropriate technical data schedule as described below (all other Radio Services) |
| Cellular and Commercial Air-ground Services<br>(Part 22) | FCC 601 Main Form - WTB Radio Service Authorization<br>Schedule D - Schedule for Station Locations and Antenna Structures<br>Schedule F - Technical Data Schedule for the Cellular and Air-ground (Commercial Aviation) Radiotelephone Services (Part 22) |

| | |
|---|---|
| Broadband Radio Service and Educational Broadband Service (Part 27) | FCC 601 Main Form - WTB Radio Service Authorization<br>Schedule B – Schedule for Geographically Licensed Services<br>Schedule D – Schedule for Station Locations and Antenna Structures<br>Schedule E – Technical Data Schedule for Broadband Radio Service and Educational Broadband Service (Part 27) |
| **Service** | **ULS Form/Schedule Title** |
| Land Mobile - Part 22 Site-Specific Services or Part 90 Exclusive channels in the 929-930 MHz Band (GS Radio Service) | FCC 601 Main Form - WTB Radio Service Authorization<br>Schedule D - Schedule for Station Locations and Antenna Structures<br>Schedule H - Technical Data Schedule for the Private Land Mobile and Broadcast Auxiliary Land Mobile Radio Services (Parts 90 and 74)<br>Schedule J - Technical Data Schedule for Paging, Rural, Air-ground (General Aviation), and Offshore Radiotelephone Services (Part 22) |
| Land Mobile - Part 90 Site-Specific Services | FCC 601 Main Form - WTB Radio Service Authorization<br>Schedule D - Schedule for Station Locations and Antenna Structures<br>Schedule H - Technical Data Schedule for the Private Land Mobile and Broadcast Auxiliary Land Mobile Radio Services (Parts 90 and 74) |
| Microwave - Part 101 Site-Specific Services | FCC 601 Main Form - WTB Radio Service Authorization<br>Schedule I - Technical Data Schedule for the Fixed Microwave and Microwave Broadcast Auxiliary Services (Parts 101 and 74) |
| Maritime Coast/Aviation Ground Services (Parts 80 and 87) | FCC 601 Main Form - WTB Radio Service Authorization<br>Schedule D - Schedule for Station Locations and Antenna Structures<br>Schedule G - Technical Data Schedule for the Maritime and Aviation Services (Parts 80 and 87) |
| Broadcast Auxiliary - Land Mobile (Part 74) | FCC 601 Main Form - WTB Radio Service Authorization<br>Schedule D - Schedule for Station Locations and Antenna Structures<br>Schedule H - Technical Data Schedule for the Private Land Mobile and Broadcast Auxiliary Land Mobile Radio Services (Parts 90 and 74) |
| Broadcast Auxiliary - Microwave (Part 74) | FCC 601 Main Form - WTB Radio Service Authorization<br>Schedule I - Technical Data Schedule for the Fixed Microwave and Microwave Broadcast Auxiliary Radio Services (Parts 101 and 74) |
| 218-219 MHz Services (Part 95) (Individual CTS Reporting) | FCC 601 Main Form - WTB Radio Service Authorization<br>Schedule D - Schedule for Station Locations and Antenna Structures |
| Millimeter Wave Service 70/80/90 GHz (Part 101) | FCC 601 Main Form - WTB Radio Service Authorization<br>Schedule B – Schedule for Geographically Licensed Services<br>Schedule M – Schedule for Registration |
| Dedicated Short Range Communications Service/Intelligent Transportation Service (ITS) (Part 90) | FCC 601 Main Form - WTB Radio Service Authorization<br>Schedule D - Schedule for Station Locations and Antenna Structures<br>Schedule H - Technical Data Schedule for the Private Land Mobile and Broadcast Auxiliary Land Mobile Radio Services (Parts 90 and 74)<br>Schedule M – Schedule for Registration |
| 3650 – 3700 MHz Service (NN) (Part 90) | FCC 601 Main Form - WTB Radio Service Authorization<br>Schedule M – Schedule for Registration |
| Notification of:<br>Completion of Coverage Requirements<br>Completion of Construction Requirements<br>Compliance with yearly station construction commitments for Licensees with approved extended implementation plans<br>Developmental Paging Authorization to a Regular Authorization | FCC 601 Main Form - WTB Radio Service Authorization<br>Schedule K - Schedule for Required Notifications for Wireless Services |
| Waiver Request for Extension of Time for:<br>Completion of Coverage Requirements<br>Completion of Construction Requirements | FCC 601 Main Form - WTB Radio Service Authorization<br>Schedule L - Waiver Request for Extension of Time for Wireless Services |

# General Filing Instructions

**Information Current and Complete**

Information filed with the FCC must be kept current and complete. The Applicant must notify the FCC regarding any substantial and significant changes in the information furnished in the application(s). *See* 47 CFR § 1.65.

**Applicable Rules and Regulations**

Applicants should obtain the relevant parts of the FCC's rules in 47 CFR. Copies of 47 CFR may be purchased from the Superintendent of Documents; Government Printing Office; Washington, DC 20402; (202) 512-1800. Refer also to the Government Printing Office's website at http://www.access.gpo.gov. Some FCC rules require the Applicant to attach one or more exhibits to an application in addition to the information requested in the application form.

Upon grant of this license application, the Licensee may be subject to certain construction or coverage requirements. Failure to meet the construction or coverage requirements may result in termination of the license. Consult appropriate FCC regulations to determine the construction or coverage requirements that apply to the type of license requested in this application.

**Processing Fee and Filing Locations**

A processing fee may be required with this form. To determine the required fee amount, refer to Subpart G of Part 1 of the Code of Federal Regulations (47 CFR Part 1, Subpart G) or the current Fee Filing Guide. For assistance with fees applicable to the radio services governed by the FCC's rules, call (877) 480-3201 (TTY 717-338-2824). The Fee Filing Guide can be downloaded from WTB's web pagehttps://www.fcc.gov/licensing-databases/forms.,

**Paper applications requiring a fee** must be mailed to Federal Communications Commission, P. O. Box 979097, St. Louis, MO, 63197-9000 or hand delivered to the U.S. Bank, Attn: FCC Government Lockbox #979097, SL-MO-C2-GL, 1005 Convention Plaza, St. Louis, MO 63101.

**Non-feeable paper applications** should be mailed to Federal Communications Commission, 1270 Fairfield Road, Gettysburg, PA 17325-7245. Hand-deliveries and messenger-deliveries should be delivered to Federal Communications Commission, 1280 Fairfield Road, Gettysburg, PA 17325. (If this application is filed as a result of an auction, please specify the Auction Number as indicated in your bidder's package or Public Notice.)

**Packages**

If filing manually, the Main Form and the applicable schedules should be submitted as one package, stapled in the upper left corner. The Main Form should be first with the schedules attached in alphabetical order. Applicants filing electronically should not submit paper copies.

**Paper Copies**

The number of paper copies of this application required to be filed is one original. Applicants filing electronically should not submit paper copies.

**Exhibits**

Each document required to be filed as an exhibit should be current as of the date of filing. Each page of every exhibit must be identified with the number or letter of the exhibit, the number of the page of the exhibit, and the total number of pages of the exhibit. If material is to be incorporated by reference, see the instruction on incorporation by reference. If interference studies are required by rule, attach these as an exhibit.

**Incorporation by Reference**

You may incorporate by reference documents, exhibits, or other lengthy showings already on file with the FCC only if the information previously filed is more than one 8½" by 11" page in length, and all information therein is current and accurate in all significant respects; the reference states specifically where the previously filed information can be found (i.e., station call sign and application file number, title of proceeding, docket number and legal citations), including exhibit and page references. Use the relevant item number followed by 'A'. Items that call for numbers, or which can be answered 'Y' or 'N' or other short answers must be answered directly without reference to a previous filing.

**Waiver Requests**

Requests for waiver must contain as an exhibit a statement of reasons sufficient to justify a waiver. The required showing must be made for all rule waivers desired, identifying the specific rules or policies for which the waiver is requested. Refer to the Fee Filing Guide for fee requirements for waivers. For assistance with fees applicable to the radio services governed by the FCC's rules, call (877) 480-3201 (TTY 717-338-2824), or visit http://esupport.fcc.gov.

**Frequency Coordination**
Applications for certain station authorizations in Parts 80, 87, and 90 may be required to be initially submitted to a certified frequency coordinator for the radio service or frequency pool involved. Refer to the rules for your radio service for detailed information regarding frequency coordination. For frequency coordination fee information, contact the frequency coordinators for your radio service.

After the completion of frequency coordination, some radio services require the frequency coordinator to forward these applications to the FCC. Check with your frequency coordinator for applicability. All other applications shall be filed by the Applicant at the correct address listed on the most current Fee Filing Guide. Applications should be filed at least sixty (60) days prior to the date upon which the radio facilities are required to be in operation.

For information regarding certified coordinators for your radio service, contact the Federal Communications Commission, 1270 Fairfield Road, Gettysburg, PA 17325-7245, call (877) 480-3201 (TTY 717-338-2824), or visit http://esupport.fcc.gov.

**English to Metric Conversions**
All heights and distances must be provided as metric values. The following English to Metric equivalents should be used to convert heights and distances, where necessary:

| | | |
|---|---|---|
| 1 foot | = | 0.3048 meters |
| 1 mile | = | 1.6093 kilometers |
| 1 nautical mile | = | 1.85 kilometers |

**For Assistance**
For assistance with this application, contact the Federal Communications Commission, 1270 Fairfield Road, Gettysburg, PA 17325-7245, call (877) 480-3201 (TTY 717-338-2824), or visit http://esupport.fcc.gov.

Electronic Filers
Information about online filing of Form 601 is available from the Wireless Telecommunications website at http://wireless.fcc.gov/uls.

Applicants filing electronically should follow procedures contained in online help files. For technical assistance with filing electronically, contact the FCC at (877) 480-3201.

In instances where the Applicant files electronically and needs to include an exhibit(s) with the application and cannot transmit that exhibit(s) to the FCC electronically, the Applicant may mail exhibits to the following address:

Federal Communications Commission
Application Exhibit
1270 Fairfield Road
Gettysburg, PA 17325-7245

Hand-deliveries and messenger-deliveries should be delivered to Federal Communications Commission, 1280 Fairfield Road, Gettysburg, PA 17325.

Each exhibit should be clearly labeled with the Applicant's name, the 10-digit file number assigned to the application at the time of submission, and the type of exhibit (e.g., waiver request).

**How to Obtain an Official Authorization**
Please Note: Upon grant of this application, the new or modified official authorization will be available electronically to the licensee through License Manager. All commercial, private and public safety wireless service licensees have electronic access to download, save and print their official authorizations, to the extent needed, when securely logged into License Manager.

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A licensee can also obtain an electronic version of their authorization through email once the application is granted if the licensee voluntarily includes a valid email address in the application that is filed through ULS or that it provides to a private organization through which the Applicant files applications, e.g., a Frequency Coordinator. Official authorizations will be emailed to the licensee, not to the contact listed on the application. The Commission will not distribute official authorizations on paper by mail.

The term "authorization," for the purpose of accessing official authorizations electronically through ULS after grant of an application filed on FCC Form 601, includes all current commercial, private, and public safety wireless service licenses, and spectrum leases (excluding subleases and private commons arrangements) in "Active" status authorized under Parts 1, 20, 22, 24, 27, 30, 74, 80, 87, 90, 95, and 101 of the Commission's rules.

# Instructions for FCC 601 Main Form

**Radio Service Code**

Item 1 Enter the Radio Service Code for which the Applicant is applying by inserting the appropriate code from the list below:

Item 1a In some Services, you may modify your license to change Radio Service Codes (e.g., Microwave Licensees may modify a Private Point-to-Point license to a Common Carrier Point-to-Point license: Radio Service Code 'MG' to Radio Service Code 'CF'). If you are applying for such a modification to your license enter the Radio Service Code of your current license in Item 1a. The Radio Service Code for which you are applying should be entered in Item 1.

**Geographically Licensed Services**

3.5 GHz Band Priority Access Licenses……..**PL**
24 GHz, Market Area ..... **TZ**
39 GHz, Market Area ..... **TN**
218-219 MHz Service ..... **ZV**
220 MHz, Market Area ..... **QA**
600 MHz Band..... **WT**
700 MHz Public Safety Broadband Nationwide License ..... **SP**
700 MHz Upper Band (Block D)..... **WP**
700 MHz Upper Band (Block C)..... **WU**
700 MHz Guard Band ..... **WX**
700 MHz Lower Band (Blocks A, B, E) ..... **WY**
700 MHz Lower Band (Blocks C, D) ..... **WZ**
800 MHz Air-Ground Radiotelephone Service……..... **CJ**
1390-1392 MHz Band, Market Area ..... **BA**
1392-1395 and 1432-1435 MHz Bands, Market Area ..... **BB**
1670-1675 MHz Band, Market Area ..... **BC**
3650-3700 MHz Service ..... **NN**
Advanced Wireless Services (AWS) (1710-1755 MHz and 2110-2155 MHz)..... **AW**
AWS-3 (1695-1710 MHz, 1755-1780 MHz, and 2155-2180 MHz)……..**AT**
AWS-4 (2000-2020 MHz and 2180-2200 MHz)……..**AD**
AWS-H Block (at 1915-1920 MHz and 1995-2000 MHz)……..**AH**
Broadband Radio Service.....**BR**
Cellular Radiotelephone.....**CL**
Educational Broadband Service.....**ED**
Intelligent Transportation Service (Public Safety) .....**IQ**
Intelligent Transportation Service (Non-Public Safety).....**QQ**
Local Multipoint Distribution Service (LMDS)..... **LD**
Location and Monitoring Service, Multilateration (LMS)..... **LS**
Millimeter Wave Service 70/80/90 GHz .....**MM**
Multichannel Video Distribution and Data Service (MVDDS) .....**DV**
Multiple Address System ..... **MS**
Paging and Radiotelephone, Market Area
- Part 22, 931 MHz Paging..... **CZ**
- Part 22, VHF/UHF Paging (Excluding 931 MHz) ..... **CP**
- Part 90, 929-930 MHz Exclusive ..... **GC**

Personal Communications Service (PCS)
- 1910-1915/1990-1995 MHz Bands, Market Area ..... **CY**
- Broadband..... **CW**
- Narrowband ..... **CN**

Public Safety 4940-4990 MHz Band ..... **PA**
Public Safety 700 MHz Band – State License ..... **SL**
Public Coast, Market Area ..... **PC**
SMR, 806-821/851-866 MHz, Auctioned -."Radio service code to be used after rebanding, see FCC 04-168". ..... **YH**
SMR, 806-821/851-866 MHz, Market Area..... **YC**
SMR, 896-901/935-940 MHz, Market Area..... **YD**
Upper Microwave Flexible Use Service (UMFUS)…….. **UU**
Wireless Communications Service (WCS)..... **WS**

**Site-Specific Land Mobile**

Part 22 - Site-Specific Air-ground
- Commercial (800 MHz)..... **CA**
- General (454 MHz) ..... **CG**

Offshore Radiotelephone ..... **CO**
Paging and Radiotelephone, Site-Specific..... **CD**
Rural Radiotelephone ..... **CR**
BETRS..... **CB**

Part 90 - Below 800 MHz

Industrial/Business Pool - Commercial, Conventional ..... **IK**
Industrial/Business Pool - Commercial, Trunked ..... **YK**
Industrial/Business Pool - Private, Conventional ..... **IG**
Industrial/Business Pool - Private, Trunked ..... **YG**
Land Mobile Radiolocation ..... **RS**
Public Safety 700 MHz – General Use Radio Service ..... **SG**
Public Safety 700 MHz Radio Service – Private, Trunked ..... **SY**
Public Safety Pool, Conventional ..... **PW**
Public Safety Pool, Trunked ..... **YW**
220 MHz, Phase I Nationwide Commercial 5-Channel ..... **NC**
220 MHz, Site-Specific
- Non-Nationwide Data ..... **QD**
- Non-Nationwide Other ..... **QO**
- Non-Nationwide Public Safety/Mutual Aid ..... **QM**
- Non-Nationwide, 5-Channel Trunked ..... **QT**

Part 90 - Above 800 MHz Business

- 806-821/851-866 MHz, Conventional ..... **GB**
- 896-901/935-940 MHz, Conventional ..... **GU**
- 806-821/851-866 MHz, Trunked ..... **YB**
- 896-901/935-940 MHz, Trunked ..... **YU**

Industrial/Land Transportation

- 806-821/851-866 MHz, Conventional ..... **GO**
- 896-901/935-940 MHz, Conventional ..... **GI**
- 806-821/851-866 MHz, Trunked ..... **YO**
- 896-901/935-940 MHz, Trunked ..... **YI**

Business/Industrial/Land Transportation

- 809-824/854-869 MHz, Conventional -"Radio service code to be used after rebanding, see FCC 04-168" ... **GJ**
- 809-824/854-869 MHz, Trunked -"Radio service code to be used after rebanding, see FCC 04-168" ..... **YJ**

Land Mobile Radiolocation ..... **RS**

Location and Monitoring Service (LMS)

- 902-928 MHz Location Wideband (Grandfathered AVM) ..... **LW**
- 902-928 MHz Location Narrowband (Non-Multilateration) ..... **LN**

Paging

- 929-930 MHz, Site-Specific Channels ..... **GS**

Public Safety/Special Emergency

- 806-821/851-866 MHz, Conventional ..... **GP**
- 806-821/851-866 MHz, Trunked ..... **YP**

Public Safety, National Plan

- 821-824/866-869 MHz, Conventional ..... **GF**
- 821-824/866-869 MHz, Trunked ..... **YF**

Public Safety/Special Emergency and Public Safety, National Plan

- 806-817/851-862 MHz, Conventional -"Radio service code to be used after rebanding, see FCC 04-168" ... **GE**
- 806-817/851-862 MHz, Trunked -"Radio service code to be used after rebanding, see FCC 04-168" ..... **YE**

SMR, Site-Specific

- 806-821/851-866 MHz, Conventional -"Radio service code to be used after rebanding, see FCC 04-16….. **GM**
- 806-821/851-866 MHz, Conventional ..... **GX**
- 896-901/935-940 MHz, Conventional -"Radio service code to be used after rebanding, see FCC 04-168" .. **GL**
- 896-901/935-940 MHz, Conventional ..... **GR**
- 806-821/851-866 MHz, Trunked -"Radio service code to be used after rebanding, see FCC 04-168" ..... **YM**
- 806-821/851-866 MHz, Trunked ..... **YX**
- 896-901/935-940 MHz, Trunked -"Radio service code to be used after rebanding, see FCC 04-168" ..... **YL**
- 896-901/935-940 MHz, Trunked ..... **YS**

**Site-Specific Microwave**

Digital Electronic Message Service
- Common Carrier ..... **CE**
- Private ..... **PE**

Local Television Transmission ..... **CT**
Point-to-Point Microwave, Common Carrier ..... **CF**
Point-to-Point Microwave, Private
- Eligibility -- Aviation ..... **WA**
- Eligibility -- Industrial/Business ..... **MG**
- Eligibility -- Marine ..... **WM**
- Eligibility -- Public Safety ..... **MW**
- Eligibility -- Radiolocation ..... **WR**

**Maritime Coast/Aviation Ground**

Maritime
- Alaska Group ..... **MK**
- Coastal Group ..... **MC**
- Marine Auxiliary ..... **MA**
- Marine Radiolocation Land ..... **MR**

Aviation
- Aeronautical and Fixed ..... **AF**
- Aviation Auxiliary Group ..... **AA**
- Aviation Radionavigation ..... **AR**

**Broadcast Auxiliary**

Land Mobile
- Broadcast Auxiliary -- Low Power ..... **LP**
- Broadcast Auxiliary – Wireless Assist Video Devices (WAVD) ..... **LV**
- Broadcast Auxiliary -- Remote Pickup ..... **RP**

Microwave
- Aural Intercity Relay ..... **AI**
- Aural Microwave Booster ..... **AB**
- Aural Studio Transmitter Link ..... **AS**
- TV Intercity Relay ..... **TI**
- TV Microwave Booster ..... **TB**
- TV Pickup ..... **TP**
- TV Studio Transmitter Link ..... **TS**
- TV Translator Relay ..... **TT**

**General Information**

Item 2 Indicate the purpose for which the application is being filed by inserting the appropriate two-letter abbreviation from the following list. Only one purpose may be specified.

**NE** - New: To request a new license. This purpose should only be used for initial applications.

**MD** - Modification: To request a change in the conditions of any data (administrative and technical **OR** technical) for a license during the term of that license. This purpose is also used to apply for a site-specific authorization in a market-based service to fulfil environmental assessment requirements or international coordination requirements. Use Item 5 to provide the call sign of the affected station. All appropriate schedules must be completed, attached and must accurately describe the data that has been modified. See applicable Commission Rules.

**Note:** After a license is modified, the FCC will issue a new license and previous versions of the license will no longer be valid, regardless of the expiration date shown. License terms will not be extended as a result of an application for modification.

**Additional Note:** To consolidate multiple call signs into a single call sign, list existing call signs to be deleted on Schedule A, Schedule for Changes Affecting Multiple Call Signs or File Numbers. The call sign to be retained should be listed in Item 5 of the FCC 601 Main Form. If no call sign is provided in Item 5, a new one will be assigned, and you must complete the FCC 601 Main Form to provide administrative information about the new call sign. For stations in the Paging and Radiotelephone Service (CD), consolidation will result in all Locations, Antennas, and Frequencies being consolidated under a single call sign without modification (i.e., Applicants should not submit Schedules D and F). For stations in the Part 90 radio services, Applicants must include Schedules D and H describing the technical parameters of at least one, and no more than six locations to be authorized under the resulting call sign.

**RM** - Renewal/Modification: To renew an existing authorization or special temporary authorization (STA) and request a change in the conditions of that authorization. Use Item 5 to provide the call sign of the affected station. All appropriate schedules must be completed and attached, and must accurately describe the data that has been modified. (Specified renewal time frame, must be filed no later than expiration date of the authorization and no sooner than 90 days prior to expiration.)

**RL** - Registered Location/Link: Roadside units (RSUs) in the Intelligent Transportation Radio Service (IQ & QQ), links in the Millimeter Wave Service (MM), and fixed or base stations in the 3650-3700 MHz Service (NN) do not need to be individually licensed but do need to be registered. Use Item 5 to provide the call sign of the affected license. Use FCC Form 601 Schedule M to register RSUs, links or stations in these radio services along with the Main Form.

**NT** - Required Notifications: To notify the FCC that, within the required time period, coverage or construction requirements have been satisfied or compliance with yearly station construction commitments for Licensees with approved extended implementation plans have been met. Also complete and attach Required Notifications for Wireless Services, Form FCC 601, Schedule K.

**EX** - Request for Extension of Time: To request additional time to satisfy coverage or construction requirements. Also, complete and attach Request for Extension of Time for Wireless Services, Form FCC 601, Schedule L.

**AM** - Amendment: To amend a previously-filed, currently pending application(s). Use Item 4 to provide the File Number(s) of the affected pending application(s). The appropriate schedule must be completed and attached, and must accurately reflect the amended data. See applicable Commission Rules. If multiple pending applications are affected (Administrative data only), the Main Form and Schedule A are required.

**Simple Application Purpose & Requirements for Paper Submission on FCC 601**
**Note:** Make sure your license information is correct and includes the correct and complete name, mailing address and telephone number; otherwise, your paper submission will be dismissed for lack of information on the license record (unless the missing information is provided on this application).

**RO** - Renewal Only: To renew an existing authorization or special temporary authorization (STA) that has not expired and where no changes in the license conditions are being requested at the time of renewal. Refer to 47 CFR §1.949 for FCC rules on timely filings. (Specified renewal time frame, must be filed no later than expiration date of the authorization and no sooner than 90 days prior to expiration.) (To make any modifications to the administrative or technical data of the license, use the Renewal/Modification purpose.)

**Mandatory items required for submission of 'RO' purpose are as follows:**

Item 1) Radio Service Code
Item 2) Application Purpose
Item 5) Call Sign (if filing for multiple Call Signs, list additional call signs on Schedule A)
Items 9 & 10) Fee Status
Item 13) FCC Registration Number (FRN)
Item 52) Aeronautical Advisory Station (Unicom) Certification (For Aviation Services Only)
Items 53 & 54) Broadband Radio Service and Educational Broadband Service
Items 56, 57 & 58) Certifications
Items 60, 61 & 62) Signature and Date

**Optional Items: Item 6) Requested Authorization Expiration Date MM/DD**

**AU - (No Fee Required) Administrative Update: To request a change of administrative data on a license.**

**Mandatory items required for submission of 'AU' purpose are as follows:**

Item 2) Application Purpose
Item 5) Call Sign (if filing for multiple Call Signs, list additional call signs on Schedule A)
Item 13) FCC Registration Number (FRN)
Items 60, 61 & 62) Signature and Date

**One or more of the following items may be corrected with this purpose:**

Item 16) Licensee Name (without a change in ownership) (also answer Item 15)
Item 17) Entity Name (without a change in ownership, control (also answer item 15) or corporate structure)
Items 18 through 23) Mailing Address
Item 24) Telephone Number
Item 25) Fax Number
Item 26) E-Mail Address
Items 30 through 40) Contact Information
Control Point Information

**NOTE:** When updating control point information, only one call sign may be filed per Administrative Update application. Submit appropriate schedule along with the Main Form for specific radio service.

Main Form & Schedule F - Cellular & Commercial Air-Ground Services
Main Form & Schedule G - Maritime Coast/Aviation Ground Services
Main Form & Schedule H - Private Land Mobile & Land Mobile Broadcast Auxiliary Radio Services
Main Form & Schedule I - Fixed Microwave & Microwave Broadcast Auxiliary Services
Main Form & Schedule J - Paging, Rural, Air-Ground (General Aviation) and Offshore Radiotelephone Services

**CA** - (No Fee Required) Cancellation of License: To cancel an existing license. This action cancels all facilities operating under the call sign. To delete specific authorized facilities under a call sign, use the Modification purpose.

**Mandatory items required for submission of 'CA' purpose are as follows:**

Item 2) Application Purpose
Item 5) Call Sign (if filing for multiple Call Signs, list additional call signs on Schedule A)
Item 13) FCC Registration Number (FRN)
Item 24) Telephone Number
Items 60, 61 & 62) Signature and Date

**WD** - (No Fee Required) Withdrawal of Application: To withdraw a previously-filed, currently pending application.

**Mandatory items required for submission of 'WD' purpose are as follows:**

Item 2) Application Purpose
Item 4) File Number (if filing for multiple File Numbers, list additional File Numbers on Schedule A)
Item 13) FCC Registration Number (FRN)
Items 60, 61 & 62) Signature and Date

**No fee is required for Governmental Entities. Send non-feeable packages to:**

**Federal Communications Commission**
**1270 Fairfield Road**
**Gettysburg, PA 17325-7245**

Item 3a If the application is a request for a Demonstration License or a Special Temporary Authorization (STA), enter 'M' or 'S', respectively. Otherwise, enter 'N' for Not Applicable.

Demonstration licenses are intended for use by Licensees involved in the sale and/or marketing of radio equipment. Demonstration licenses may be used for purposes of demonstrating equipment to potential customers at trade shows or at other exhibitions, performing on site coverage studies for potential customers, or other uses as provided for in Subpart I of Part 2 of the Commission's Rules. Demonstration licenses may not be used for the Licensee's internal communications in its day to day business operations.

In emergencies or other urgent conditions requiring immediate or temporary use of facilities, request may be made for Special Temporary Authority (STA) to install and/or operate new or modified equipment, subject to the appropriate requirements governing Special Temporary Authorizations contained in the FCC rules. If item 3a is answered 'S', attach an exhibit including the following information: description of the nature of the extraordinary circumstance, equipment to be used, type of operation to be conducted, and an explanation of how the facilities will be used, times and dates of operation.

> **Note:** To file an initial request for an STA or Demonstration License, Applicants should select an application purpose of NE – "New" in Item 2 and then answer Items 3a and 3b as appropriate. STAs are granted for a maximum of 180 days. If another STA or Demonstration license is needed, Applicants may file by selecting application purpose RO – "Renewal Only" and supply the appropriate Call Sign in Item 5. The "Renewal Only" purpose is provided for the convenience of the Applicant (the Applicant will retain the same call sign if the request is granted).

Item 3b This question only applies to applications for Special Temporary Authority (STA). If you are requesting an STA due to an emergency or other urgent condition, enter 'Y' and attach an exhibit describing the nature of the emergency. Otherwise enter 'N'.

Per 47 CFR § 1.915, examples of emergencies are as follows: An emergency found by the Commission to involve danger to life or property or to be due to damaged equipment; a national emergency proclaimed by the President or declared by the Congress and during the continuance of any war in which the United States is engaged, when such action is necessary for the national defense or security or otherwise in furtherance of the war effort; or an emergency where the Commission finds that it would not be feasible to secure renewal applications from existing Licensees or otherwise to follow normal licensing procedures.

Item 4 If the application is a request for an Amendment or Withdrawal of a previously-filed currently pending application, provide the file number of the original application. This information can be obtained by contacting the FCC (877) 480-3201 (TTY 717-338-2824) or by using Search Applications function available at http://wireless.fcc.gov/uls. If the amendment or withdrawal affects multiple file numbers, complete and attach Schedule for Changes Affecting Multiple Call Signs or File Numbers, Form FCC 601, Schedule A.

Item 5 The information requested in this item identifies the existing stations to which the filing is relevant. If the application is a request for a Modification, Renewal Only, Renewal/Modification, Cancellation, or Administrative Update of an existing license, enter the call sign of the license. If the request affects multiple call signs, complete and attach Schedule for Changes Affecting Multiple Call Signs or File Numbers, Form FCC 601, Schedule A.

If the application is a request to register a location/link, enter the FCC call sign assigned to the geographic license.

Item 6a This item is optional. If the application is a request for a New, Amendment, Renewal Only, or a Renewal/Modification, enter the requested authorization expiration date. Applicants may, if desired, request the month and day of license expiration. However, in no cases will licenses be granted for terms that exceed the license term as governed by the rules for each service.

Item 6b This question applies only to applications for a Renewal Only or Renewal/Modification. The information requested in this item helps to identify the applicable renewal requirements for different types of **geographic area licenses** (licenses used to provide services to customers or licenses used for private business (internal) purposes or to meet the licensee's public interest/public safety communications needs).

Item 7 This question applies only to site-specific (other than Part 101 Microwave) and Cellular authorizations. If the application is a request for a Modification, Renewal/Modification, or Amendment (of a currently pending New or Modification) of any site-specific authorization, or a New filing for a site-specific Land Mobile (Part 90) authorization, you must indicate whether the request is a "major" action as defined in 47 CFR § 1.929 when read in conjunction with the applicable radio service rules found in Parts 22 and 90 of the Commission's Rules. If the rules for your particular radio service do not define a coverage area, service area, or interference contour, enter 'N'.

Item 8 Enter 'Y' if attachments (other than associated schedules) are being filed with this application. Otherwise, enter 'N'.

**Fees, Waivers, and Exemptions**

Items 9 & 10 These items allow the Applicant to apply for exemption from FCC application fees and regulatory fees. See the Fee Filing Guide or call (877) 480-3201 (TTY 717-338-2824).

Item 11a If the filing is a request for a waiver of the Commission's Rules, enter 'Y' and attach an exhibit that lists the rule section(s) of the affected rules and explains the circumstances. Otherwise, enter 'N'.

Item 11b Waiver requests in certain wireless and/or public safety services are subject to filing fees based on the number of rules for which waiver is sought. Enter the number of rule sections {Do not enter the Rule Section, only the number of Rule Section(s)}. Consult the Fee Filing Guide for information on the required fee amounts.

Item 12 Some applications may include technical data which is outside the limits of the existing rules but may have been granted previously by waiver, covered by a grandfathering provision in the rules, or permissible because the requested facility is functionally integrated with an existing station. Applicants should check their present authorization or the specific rules governing operation on the frequency(ies) requested to determine if entering 'Y' to this item is appropriate. Otherwise, enter 'N'.

**Applicant Information**

Items 13 through 26 identify the Applicant. If an authorization is granted, the information provided will become the Licensee's name, address, telephone number and e-mail of record. Please Note: Upon grant of this application, the FCC will send the authorization electronically to the License's email address of record. The new or modified official authorization also will be available electronically to the licensee through License Manager. All licensees have electronic access to download, save and print their official authorizations, when securely logged into License Manager.

Item 13 Enter your ten digit FRN assigned by the Commission Registration System (CORES). The FRN is a unique entity identifier for everyone doing business with the Commission. The FRN can be obtained electronically through the FCC webpage at http://wireless.fcc.gov/uls(Select FCC Registration Number (FRN) Commission Registration System (CORES)) or by manually submitting FCC Form 160. FCC Form 160 is available for downloading from http://www.fcc.gov/formpage.html. **Note:** Licensees should then associate their WTB call sign(s) electronically at http://wireless.fcc.gov/uls (Select FCC Registration Number (FRN) Commission Registration System (CORES)) or by manually submitting FCC Form 606. FCC Form 606 can also be obtained from the FCC Forms webpage.

Item 14 This item indicates the legal entity type of the Applicant. Select Individual, Unincorporated Association, Trust, Government Entity, Corporation, Limited Liability Company, General Partnership, Limited Partnership, Limited Liability Partnership, Consortium, or Other. When selecting 'Other', provide a description of the legal entity.

> **Note:** Any entity applying or modifying a license acquired via a FCC auction cannot select "Consortium" as its legal entity type. A consortium participating in competitive bidding that is the winning bidder may not apply as a consortium for licenses covered by the winning bids. Individual members of the consortium or new legal entities comprising individual consortium members may apply for the licenses covered by the winning bids of the consortium.

Item 15 Enter 'Y' if the new Licensee name change is due to a change in ownership, corporate structure or entity. If you answer Item 15 'Y', you must file FCC Form 603 for an Assignment of Authorization or a Transfer of Control before any modifications can be done to the license. Otherwise, enter 'N' and continue.

Items 16-17 If Item 14 is an 'Individual', enter the name of the person applying in Item 16. Otherwise, enter the name of the legal entity in Item 17.

Items 18-24 Enter the name, address, and telephone number of the person to whom the FCC should send correspondence. You may enter a post office box number in Item 19 or a street address in Item 20, or enter information for both items. Enter the city, state, and zip code in Items 21, 22, and 23, respectively. Refer to FCC 601 Main Form Instructions, Appendix II, for a list of valid state, jurisdiction, and area abbreviations. Enter a telephone number, including area code, in Item 24.

Items 25 and 26 Enter the Applicant's fax number and e-mail address, The Commission will no longer send paper authorizations by mail; applicants are encouraged to provide an e-mail address.

Failure to respond to FCC correspondence sent to the address of record may result in dismissal of an application, liability for forfeiture, or revocation of an authorization.

**Demographics (Optional)**

Item 27 The information is optional and is requested for informational purposes only. Responses to this item will in no way affect the processing of applications.

**Real Party in Interest**

Item 28 Applicants must identify a real party (parties) in interest if different from the Applicant. If the Applicant is also the real party in interest, leave this item blank. If a party other than the Applicant is the real party in interest (e.g., a parent or other controlling entity), enter that party's name in this item. If there is more than one real party in interest, attach an exhibit detailing all parties in interest.

The Real Party in Interest is defined as a person who "has an ownership interest, or will be in a position to actually or potentially control the operation of the station." *Astroline Communications Company Limited Partner v. FCC*, 857 F.2d 1556, 1564 (D.C. Cir. 1988); *see also In re Applications of Georgia Public Telecommunications Commission, et al.*, MM Docket No. 89-337, Memorandum Opinion and Order, 7 FCC Rcd 7996 (1992); *In re Applications of Madalina Broadcasting, et al.*, MM Docket No. 91-100, Initial Decision of Administrative Law Judge Joseph Chachkin, 8 FCC Rcd 6344 (1993).

Item 29 Enter your ten-digit FRN assigned by the Commission Registration System (CORES) for the Real Party in Interest. The FRN is a unique entity identifier for everyone doing business with the Commission. The FRN can be obtained electronically through the FCC webpage at http://wireless.fcc.gov/uls(Select FCC Registration Number (FRN) Commission Registration System (CORES)) or by manually submitting FCC Form 160. FCC Form 160 is available for downloading from http://www.fcc.gov/formpage.html.

**Contact Information**

Items 30-40 These items identify the contact representative, if different from the Applicant. This is usually the headquarters offices of a large company, the law firm or other representative of the Applicant, or the person or company that prepared or submitted the application on behalf of the Applicant. If there is a question about the application, an FCC representative will communicate with the Applicant's contact representative.

If the contact representative is the same as the Applicant, check the box and do not complete the remaining items in this section. If the contact representative is not the same as the Applicant, then you must provide the information and complete this section as follows:

- Either the Individual Name or the Company Name is required.
- If Individual Name is completed, then Company Name and Attention To are not required.
- If Company Name is completed, then either an Individual Name or the Attention to is required.
- Either a PO Box or a Street Address is required. Both may be provided.
- City, State and Zip Code are required.
- Telephone Number is required (including area code).
- Fax Number and E-Mail Address are optional.

If this section is used, a name (Item 30), company name (Item 31), address (Items 33-37), and telephone number (Item 38) are required at a minimum. If the address items are completed, you may enter a post office box number in Item 33 or a street address in Item 34, or enter information for both items. Refer to FCC 601 Main Form Instructions, Appendix II, for a list of valid state, jurisdiction, and area abbreviations. Enter the contact's fax number (Item 39) and e-mail address (Item 40) if available and desired.

**Regulatory Status**

Item 41 This item identifies the type(s) of radio service offerings being provided and must be completed. Enter all types of radio service offerings that apply. Enter 'C' for Common Carrier, 'N' for Non-Common Carrier, 'P' for Private, internal communications or 'B' for Broadcast Services, and 'BM' for Band Manager. Use the Modification (MD) purpose in Item 2 to change or add radio service offerings. **NOTE: For Broadcast Auxiliary radio services, select 'P' for Private, internal communications. Do not select Broadcast Services.**

All entities that are telecommunications carriers should select common carrier on this form. The term 'telecommunications carrier' means any provider of telecommunications services, except that such term does not include aggregators of telecommunications services (the term 'aggregator' means any person that, in the ordinary course of its operations, makes telephones available to the public or to transient users of its premises, for interstate telephone calls using a provider of operator services). A telecommunications carrier shall be treated as a common carrier under the Communications Act and the Commission's Rules (i.e., as an entity which holds itself out for hire indiscriminately, in interstate or foreign communications by wire or radio, or in interstate or foreign radio transmission of energy, for the purpose of carrying transmissions provided by the customer), only to the extent that it is engaged in providing telecommunications services.

The term 'telecommunications service' means the offering of telecommunications (i.e., the transmission, between or among points specified by the user, of information of the user's choosing, without change in the form or content of the information as sent and received) for a fee directly to the public, or to such classes of users as to be effectively available directly to the public, regardless of the facilities used.

Non-common carriers do not hold themselves out indiscriminately for hire as carriers of communications provided by the customer. A person engaged in radio broadcasting shall not, insofar as such person is so engaged, be deemed a common carrier. Thus, those entities meeting this definition would select non-common carrier for this item.

Private internal users are those entities that utilize telecommunications services purely for internal business purposes or public safety communications and not on a for-hire or for-profit basis. Such entities should select 'Private' for this item. **Broadcast Auxiliary should be included in this category and should select 'Private'.**

The term 'Broadcast Services' shall have the same meaning as that for "broadcasting" in § 3(7) of the Communications Act of 1934, i.e., the dissemination of radio communications intended to be received by the public, directly or by the intermediary of relay stations." 47 U.S.C. 153(7). Entities meeting this definition should select 'Broadcast Services' for this item. Broadcast Auxiliary Applicants should not select this type of radio service offering.

The term 'Band Manager' is defined for the 746-747 MHz, 762-764 MHz, 776-777 MHz, and 792-794 MHz Guard Bands as a commercial Licensee that functions solely as a spectrum broker by subdividing its licensed spectrum and making it available to system operators or directly to end users for fixed or mobile communications consistent with the Commission Rules. A Band Manager in the 700 MHz Guard Bands (i.e., a "Guard Band Manager") is directly responsible for any interference or misuse of its licensed frequencies arising from its use by such non-licensed entities. Entities meeting this definition should select 'Band Manager' for this item.

**Type Of Radio Service**

Item 42 This item identifies all types of radio services for the Applicant. Enter 'F' for Fixed, 'M' for Mobile, 'R' for Radiolocation, 'S' for Satellite, and 'B' for Broadcast Services. Enter all types of radio services, as applicable. Broadcast Auxiliary Applicants should select Fixed or Mobile, not Broadcast Services. **Note: Broadcast Services is for the direct dissemination to the public.**

Item 43 Indicate whether the Applicant plans to provide interconnected service to the public switched telephone network as defined in the FCC rules. Enter 'Y' if yes. Otherwise, enter 'N'.

**Alien Ownership Questions**

These items enable the FCC to determine whether an Applicant is eligible under § 310(a) and (b) of the Communications Act of 1934, as amended, to hold a station license. Applicants are required to answer these questions only if 1) they are filing FCC Form 601 for one of the following purposes indicated in Item 2: New, Amendment, Modification, or Renewal/Modification; and 2) the answers have changed from those previously provided. If the answer is 'Y', attach exhibit explaining circumstances. Applicants using FCC Form 601 for any other purpose are not required to answer these questions. Any Applicant that answers 'Y' to Items 44-48 must provide an attachment explaining the circumstances. The FCC will otherwise dismiss the Application without further consideration.

The Commission's foreign ownership rules for common carrier, aeronautical en route and aeronautical fixed radio station licensees are codified in 47 CFR §§ 1.990-1.994. *See also Review of Foreign Ownership Policies for Common Carrier and Aeronautical Radio Licensees under Section 310(b)(4) of the Communications Act of 1934, as amended*, IB Docket No. 11-133, Second Report and Order, 28 FCC Rcd 5741 (2013) ("*Foreign Ownership Second Report and Order*"). The foreign ownership rules will be renumbered and codified in Sections 1.5000 through 1.5004 of the Commission's rules, 47 CFR s 1.5000-1.5004, subject to OMB approval, in accordance with the Commission's decision in Review of Foreign Ownership Policies for Broadcast, Common Carrier and Aeronautical Radio Licensees under Section 310(b)(4) of the Communications Act of 1934, as amended, GN Docket No. 15-236, FCC 16-128, 31 FCC Rcd 11272 (2016).

Item 44 All Applicants filing FCC Form 601 for one of the purposes indicated above must answer Item 44. The FCC cannot grant an authorization to a foreign government or the representative of a foreign government. Therefore, if the true and correct answer to Item 44 is 'Y', the Applicant is not eligible to hold a license and the FCC will dismiss the application, if filed, without further consideration.

Items 45-46 The FCC cannot grant an authorization to provide common carrier or aeronautical en route service to any Applicant for which the true and correct answer to either of Items 45 or 46 is 'Y' Any Applicant that answers 'Y' to either of Items 45 or 46 must provide an attachment explaining why the requested license(s) is exempt from the prohibitions contained in Section 310(b)(1)-(2) of the Communications Act, 47 U.S.C. § 310(b)(1)-(2). The FCC will otherwise dismiss the application without further consideration.

Item 47 Enter 'Y' if the Applicant is a corporation of which more than one-fifth of the capital stock is owned of record or voted by aliens or their representatives, or by a foreign government or representative thereof, or by any corporation organized under the laws of a foreign country. Otherwise, enter 'N'. If the answer is 'Y', and if the requested license(s) would allow for the provision of a common carrier service, it is necessary for the Applicant to have or obtain Commission approval. *See* 47 CFR § 1.990(a)(2). If the answer is 'Y', and if the requested license(s) would allow for the provision of aeronautical en route service, the Applicant must provide an attachment explaining why the requested license(s) is exempt from the prohibitions contained in Section 310(b)(3) of the Communications Act, 47 U.S.C. § 310(b)(3). The FCC will otherwise dismiss the application without further consideration.

While Section 310(b)(3) of the Communications Act prohibits foreign individuals, governments, and corporations from owning more than 20 percent of the capital stock of a broadcast, common carrier, aeronautical en route, and aeronautical fixed radio station licensee, the Commission has determined that it will not apply the 20 percent limit to common carrier licensees in which the foreign investment is held in the licensee through U.S.-organized entities that do not control the licensee, to the extent the Commission determines such foreign ownership is consistent with the public interest. In making a public interest determination, the Commission applies the same policies and procedures that it applies in reviewing foreign ownership that is subject to Section 310(b)(4) of the Communications Act. The Commission adopted this Section 310(b)(3) "forbearance" approach in the *Review of Foreign Ownership Policies for Common Carrier and Aeronautical Radio Licensees under Section 310(b)(4) of the Communications Act of 1934, as Amended*, IB Docket No. 11-133, 27 FCC Rcd 9832 (2012) ("*Foreign Ownership First Report and Order*"). The Commission codified the forbearance approach in the *Foreign Ownership Second Report and Order*, 28 FCC Rcd at 5759-5763, ¶¶ 30-37.

The Commission's Section 310(b)(3) forbearance approach applies only to foreign equity and voting interests that are held, or would be held, in the common carrier Licensee through one or more intervening U.S.-organized entities that do not control the Licensee. Foreign equity and/or voting interests that are held, or would be held, directly in the Licensee, or indirectly other than through an intervening U.S.-organized entity, are not subject to the Commission's Section 310(b)(3) forbearance approach and shall not be permitted to exceed 20 percent equity or voting interests.

Accordingly, if the requested license(s) would allow for the provision of a common carrier service, any Applicant that answers 'Y' to Item 47 must provide an attachment consisting of one of the showings specified in (i), (ii), or (iii) below. The FCC will otherwise dismiss the application without further consideration.

(i) A demonstration that the subject application is exempt from the provisions of Section 310(b)(3);

(ii) A statement that the Applicant has received prior Commission approval of its foreign ownership pursuant to the Commission's Section 310(b)(3) forbearance approach, citation(s) to the relevant declaratory ruling(s) received by the Applicant (i.e., DA or FCC Number, FCC

Record citation if available, and release date), and a statement specifying that the Applicant is in compliance with the terms and conditions of its ruling and with the Commission's Rules; or

(iii) A copy of a petition for declaratory ruling filed pursuant to 47 CFR § 1.990(a)(2) requesting Commission approval of the Applicant's foreign ownership, held through one or more intervening U.S.-organized entities that hold non-controlling equity and/or voting interests in the Applicant, along with any foreign interests held in the Applicant directly (which shall not exceed 20 percent of its equity interests and/or 20 percent of its voting interests). The petition may be filed electronically on the Internet through the International Bureau Filing System (IBFS) and shall otherwise comport with the requirements of 47 CFR §§ 1.990-1.994.

With respect to the showing specified in (ii) above, an Applicant that is relying on a foreign ownership ruling(s) issued to an "affiliate" pursuant to the Commission's Section 310(b)(3) forbearance approach and 47 CFR § 1.990(a)(2) shall include in its showing a certification signed by the affiliate, a U.S.-organized successor-in-interest formed as part of a pro forma reorganization, or a controlling parent company, stating that the affiliate or successor-in-interest is in compliance with the terms and conditions of the foreign ownership ruling(s) and the Commission's Rules. *See* 47 CFR § 1.994(b). *See also* 47 CFR § 1.990(d)(2) (defining the term "affiliate" for purposes of Sections 1.990-1.994 of the Rules).

Item 48a Enter 'Y' if the Applicant is directly or indirectly controlled by any other U.S.-organized entity of which more than one-fourth of the capital stock is owned of record or voted by aliens or their representatives, or by a foreign government or representative thereof, or by any corporation organized under the laws of a foreign country. Otherwise, enter 'N'. If the answer is 'Y', and if the requested license(s) would allow for the provision of a common carrier or aeronautical en route service, it is necessary for the Applicant to have or obtain Commission approval of the foreign ownership of its direct and/or indirect controlling U.S.-organized parent company(ies) pursuant to Section 310(b)(4) of the Communications Act of 1934, 47 U.S.C. § 310(b)(4). *See* 47 CFR § 1.990(a)(1); *Foreign Ownership Second Report and Order*, 28 FCC Rcd at 5759-5763, ¶¶ 30-37.

Accordingly, any Applicant that answers 'Y' to Item 48a must provide an attachment consisting of one of the showings specified in (i), (ii), or (iii) below. The FCC will otherwise dismiss the application without further consideration.

(i) A demonstration that the requested license(s) is exempt from the provisions of Section 310(b)(4);

(ii) A statement that the Applicant has received prior Commission approval of the foreign ownership of its direct and/or indirect controlling U.S. parent company(ies) pursuant to Section 310(b)(4), citation(s) to the relevant declaratory ruling(s) received by the Applicant (i.e., DA or FCC Number, FCC Record citation if available, and release date), and a statement specifying that the Applicant is in compliance with the terms and conditions of its ruling and with the Commission's Rules; or

(iii) A copy of a petition for declaratory ruling filed pursuant to 47 CFR § 1.990(a)(1) requesting Commission approval of the foreign ownership of its direct and/or indirect controlling U.S.-organized parent company(ies). The petition may be filed electronically on the Internet through the International Bureau Filing System (IBFS) and shall otherwise comport with the requirements of 47 CFR §§ 1.990-1.994.

With respect to the showing specified in (ii) above, an Applicant that is relying on a foreign ownership ruling(s) issued to an "affiliate" pursuant to Section 310(b)(4) of the Act and 47 CFR § 1.990(a)(1) shall include in its showing a certification signed by the affiliate, a U.S.-organized successor-in-interest formed as part of a pro forma reorganization, or a controlling parent company, stating that the affiliate or successor-in-interest is in compliance with the terms and conditions of the foreign ownership ruling(s) and the Commission's Rules. *See* 47 CFR § 1.994(b). *See also* 47 CFR § 1.990(d)(2) (defining the term "affiliate" for purposes of Sections 1.990-1.994 of the Rules).

Item 48b An Applicant that has answered 'Y' to Item 47 and/or Item 48a is required to respond to Item 48b. Item 48b enables the FCC to determine whether the Applicant has attached to its application the appropriate foreign ownership showing required by the Commission's *Foreign Ownership Second Report and Order*, IB Docket No. 11-133, FCC 13-50, and the foreign ownership rules adopted in that Order, 47 CFR §§ 1.990-1.994. *See* Main Form Instructions for Item 47 and Item 48a.

**Basic Qualification Questions**

Items 49-51 These items enable the FCC to determine whether an Applicant is eligible under §§ 310(d) and 308(b) of the Communications Act of 1934, as amended, to hold or have ownership interest in a station license. Applicants are required to answer these questions only if 1) they are filing FCC Form 601 for one of the following purposes indicated in Item 2: New, Amendment, Modification, or Renewal/Modification; and 2) the answers have changed from those previously provided. Applicants using FCC Form 601 for any other purpose are not required to answer these questions. If the answer to any one or more of Items 49-51 is 'Y', attach as an exhibit a statement explaining the circumstances and a statement giving the reasons why the Applicant believes that grant of the application would be in the public interest notwithstanding the actual or alleged misconduct. If the Applicant responds 'Y' to any question and has previously provided a statement and explanation regarding the circumstances as an attachment to a prior application filed in ULS, and the facts and circumstances are unchanged, the Applicant may refer to the previous application by identifying the application file number and indicating the disposition of the prior application.

**Aeronautical Advisory Station (Unicom) Certification**
Item 52 This item certifies that the Licensee has complied with 47 CFR § 87.215(g). Failure to certify may result in dismissal of the application and forfeiture of any fees paid.

**Broadband Radio Service and Educational Broadband Service Cable Cross-Ownership**
Item 53a and 53b These items enable the FCC to determine whether an Applicant has complied with 47 CFR § 27.1202.

**Broadband Radio Service and Educational Broadband Service**
Item 54 (for EBS only) and Item 55 (for BRS and EBS). These items enable the FCC to determine whether the Licensee has complied with 47 CFR § 27.50, § 27.55, § 27.1203 and § 27.1221.

**Applicants Who Participated in an Auction**
Item 56 This item enables the FCC to determine whether the Applicant has complied with the qualifying rural wireless partnership exception.

**Renewal Applicants**
Items 57, 58, and 59 These items enable the FCC to determine whether the Applicant has complied with the applicable requirements to warrant renewal of its license(s). Licensee compliance with these requirements will be measured from no earlier than October 1, 2020 , *see* Amendment of Parts 1, 22, 24, 27, 74, 80, 90, 95, and 101 To Establish Uniform License Renewal, Discontinuance of Operation, and Geographic Partitioning and Spectrum Disaggregation Rules and Policies for Certain Wireless Radio Services, 32 FCC Rcd 8874, 8889, para. 35 (2017), unless directed otherwise in this form and its instructions.

These questions must be answered on renewal applications for 700 MHz, AWS-4, H Block, AWS-3, and/or 600 MHz licenses filed beginning October 1, 2020. These questions must be answered on renewal applications for all geographic-area licenses identified in 47 CFR § 1.907 ("Covered Geographic Licenses") beginning January 1, 2023, with the exception of UMFUS licenses, but licensee compliance with these requirements will be measured from October 1, 2020. In advance of the January 1, 2023 date, licensees holding Covered Geographic Licenses other than 700 MHz, AWS-4, H Block, AWS-3, and/or 600 MHz licenses will not be required to answer these questions and will be required to comply with the service-specific renewal rules in effect as of August 3, 2017. Licensees holding UMFUS licenses will not be required to answer these questions until June 1, 2024.

These questions must be answered on renewal applications for Covered Site-Based licenses filed after October 1, 2020.

For Item 57, the licensee of a Covered Site-based License that has temporarily reduced operations under the license for fewer than 180 days during the term of the license, or the licensee of a Covered Geographic License (not including a partitioned or disaggregated license without a performance requirement) that has temporarily dropped below its construction benchmark associated with the license for fewer than 180 days during the term of the license, may make the applicable Operation/Performance Requirement Certification. Also, for Item 57, licensees of a partitioned or disaggregated Covered Geographic License without a performance requirement as of October 1, 2020 will not be required to make the applicable certification regarding use of its spectrum until the end of its second or subsequent license term after October 1, 2020.

For Item 58, if a licensee seeks to renew a license in a service that did not have an explicit definition of permanent discontinuance as of August 3, 2017, such a licensee has until January 1, 2019 to come into compliance with our new permanent discontinuance rules. If a licensee in such service is not providing service or is not operational on January 1, 2019, the discontinuance period would start as of that date.

For Item 59, if the Applicant was granted a waiver under applicable FCC rules and policies, and the Applicant has substantially complied with the terms of such waiver and the Communications Act of 1934, as amended, it may select 'Y' as the appropriate response.

**General Certification Statements**
By signing this form, the Applicant certifies that the statements listed in this section are true, complete, correct, and made in good faith. General Certification (9) is required for applications for licenses for spectrum that is required by Sections 6103, 6401-6403 of the Middle Class Tax Relief and Job Creation Act of 2012, codified at 47 U.S.C. §§ 309, 1413, 1451-1452, to be assigned by a system of competitive bidding under 47 U.S.C. § 309(j) (e.g., radio service AH (AWS-H Block at 1915-1920 MHz and 1995-2000 MHz), radio service AT (AWS-3, 1695-1710 MHz, 1755-1780 MHz and 2155-2180 MHz), and radio service WT (600 MHz Band)). For purposes of this certification, the term "reasons of national security" means matters relating to the national defense and foreign relations of the United States.

**Signature**
Items 57-59 These items must be completed. To be acceptable for filing, applications and amendments must be signed in accordance with Part 1 of the FCC rules. The signor must be a person authorized to sign the application. Paper originals of applications must bear an original signature. On paper originals neither rubber-stamped nor photocopied signatures are acceptable. For filers filing electronically via ULS, the electronic signature shall consist of the name of the Applicant typed on the application as a signature.

# Appendix I

## General Guidelines on International Coordination Requirements

International coordination is an ongoing process, and agreements with neighboring countries are subject to change at any time.

A current list of agreements with Canada, arranged by frequency band, is available at https://www.fcc.gov/canadian-agreements-frequency. A current list of agreements with Mexico, arranged by frequency band, is available at https://www.fcc.gov/mexican-agreements-frequency. These links provide guidance on whether the frequency band being applied for is subject to international coordination with Canada or Mexico. Applicants should refer to the actual agreement to determine the specific coordination criteria applicable to a frequency band. If you are unsure of the coordination criteria for a particular frequency band, contact the Commission for guidance.

International agreements shown at the links above specify general coordination criteria only for those frequency bands for which coordination authority resides with the FCC. Frequency bands that are shared with the Federal Government may have different coordination criteria and are coordinated by the Interdepartment Radio Advisory Committee (IRAC). *See* 47 CFR § 2.106 for a table of frequency allocations. The following list of counties/boroughs, by state, provides further guidance on which areas require frequency coordination with Canada.

# List of Counties/Boroughs, by State, Having Areas Within Various Canadian Coordination Zones

For use with Schedules D, I and M

X- County/Borough is completely within specified zone.

X P – County/Borough is partially within specified zone.

| | North of Line A East of Line C | Within 120 km (75 mi) of Canadian Border | Within 56.3 km (35 mi) of Canadian Border |
|---|---|---|---|
| **Alaska** | | | |
| Haines Borough | X | X | X |
| Juneau Borough | X | X | X |
| Ketchikan Gateway | X | X | X P |
| North Slope | X P | X P | X P |
| Prince Of Wales outer Ketchikan | X | X P | X P |
| .Sitka | X | X P | |
| Skagway-Hoonah-Angoon | X | X P | X P |
| Southeast Fairbanks | X P | X P | X P |
| Valdez-cordova | X P | X P | X P |
| Wrangell-petersburg | X | X P | X P |
| Yakutat | X | X P | X P |
| Yukon-koyukuk | X P | X P | X P |
| **Idaho** | | | |
| Bonner | X P | X P | X P |
| Boundary | X | X | X |
| Kootenai | | X P | |
| Shoshone | X P | X P | |
| **Indiana** | | | |
| Allen | X P | | |
| De Kalb | X P | | |
| Steuben | X P | | |
| **Maine** | | | |
| Androscoggin | X P | X P | |
| Aroostook | X | X | X |
| Cumberland | | X P | |
| Franklin | X | X | X P |
| Hancock | X | X P | X P |
| Kennebec | X P | X P | |
| Oxford | X P | X P | X P |
| Penobscot | X P | X P | X P |
| Piscataquis | X | X | X P |
| Somerset | X | X P | X P |
| Waldo | X P | X P | |
| Washington | X | X | X P |
| **Michigan** | | | |
| Alcona | X | X | |
| Alger | X | X P | |
| Alpena | X | X | X P |
| Antrim | X P | | |
| Arenac | X | X P | |
| Baraga | X | | |
| Bay | X | X P | |
| Branch | X P | | |
| Calhoun | X P | | |
| Charlevoix | X | X P | |
| Cheboygan | X | X | X P |
| Chippewa | X | X | X |
| Clare | X P | | |
| Clinton | X | | |

| | North of Line A East of Line C | Within 120 km (75 mi) of Canadian Border | Within 56.3 km (35 mi) of Canadian Border |
|---|---|---|---|
| **Michigan (cont'd)** | | | |
| Crawford | X | | |
| Delta | X | | |
| Dickinson | X | | |
| Eaton | X P | | |
| Emmet | X | X | |
| Genesee | X | X | |
| Gladwin | X | | |
| Gogebic | X | | |
| Gratiot | X | | |
| Hillsdale | X | X P | |
| Houghton | X | X P | |
| Huron | X | X | X P |
| Ingham | X | X P | |
| Ionia | X P | | |
| Iosco | X | X P | |
| Iron | X | | |
| Isabella | X P | | |
| Jackson | X | X P | |
| Kalkaska | X P | | |
| Keweenaw | X | X | X |
| Lapeer | X | X | X P |
| Leelanau | X P | | |
| Lenawee | X | X | X P |
| Livingston | X | X | X P |
| Luce | X | X | X P |
| Mackinac | X | X | X P |
| Macomb | X | X | X |
| Marquette | X | X P | |
| Menominee | X P | | |
| Midland | X | | |
| Missaukee | X P | | |
| Monroe | X | X | X P |
| Montcalm | X P | | |
| Montmorency | X | X | |
| Oakland | X | X | X P |
| Ogemaw | X | | |
| Ontonagon | X | X P | |
| Oscoda | X | X P | |
| Otsego | X | X P | |
| Presque Isle | X | X | X P |
| Roscommon | X | | |
| Saginaw | X | X P | |
| Sanilac | X | X | X P |
| Schoolcraft | X | X P | |
| Shiawassee | X | X P | |
| St. Clair | X | X | X |
| Tuscola | X | X | |
| Washtenaw | X | X | X P |
| Wayne | X | X | X |
| **Minnesota** | | | |
| Beltrami | X P | X P | X P |
| Carlton | X P | | |

| | North of Line A East of Line C | Within 120 km (75 mi) of Canadian Border | Within 56.3 km (35 mi) of Canadian Border |
|---|---|---|---|
| **Minnesota (Cont'd)** | | | |
| Cass | | X P | |
| Clearwater | X P | X P | |
| Cook | X | X | X P |
| Itasca | X P | X P | |
| Kittson | X | X | X |
| Koochiching | X | X | X P |
| Lake | X | X P | X P |
| Lake Of The Woods | X | X | X P |
| Marshall | X | X | X P |
| Pennington | X P | X | |
| Polk | X P | X P | |
| Red Lake | | X P | |
| Roseau | X | X | X |
| St. Louis | X P | X P | X P |
| **Montana** | | | |
| Blaine | X P | X P | X P |
| Chouteau | X P | X P | |
| Daniels | X | X | X |
| Flathead | X P | X P | X P |
| Glacier | X | X | X P |
| Hill | X | X | X P |
| Lake | | X P | |
| Lewis And Clark | | X P | |
| Liberty | X | X | X P |
| Lincoln | X | X P | X P |
| Mccone | X P | X P | |
| Phillips | X P | X P | X P |
| Pondera | X P | X | |
| Richland | X P | X P | |
| Roosevelt | X | X | X P |
| Sanders | X P | X P | |
| Sheridan | X | X | X P |
| Teton | X P | X P | |
| Toole | X | X | X P |
| Valley | X P | X P | X P |
| **New Hampshire** | | | |
| Carroll | X P | X P | |
| Coos | X P | X | X P |
| Grafton | X P | X P | |
| **New York** | | | |
| Allegany | X P | X P | |
| Cattaraugus | X P | X | X P |
| Cayuga | X P | X | X P |
| Chautauqua | X | X | X P |
| Clinton | X | X | X P |
| Cortland | | X P | |
| Erie | X | X | X |
| Essex | X | X P | X P |
| Franklin | X | X | X P |
| Genesee | X | X | X P |

X – County is completely within specified zone.

X P - County is partially within specified zone.

**New York (Cont'd)**

| | North of Line A East of Line C | Within 120 km (75 mi) of Canadian Border | Within 56.3 km (35 mi) of Canadian Border |
|---|---|---|---|
| Hamilton | X P | X P | |
| Herkimer | X P | X P | |
| Jefferson | X | X | X P |
| Lewis | X | X | X P |
| Livingston | X | X | |
| Madison | X P | X P | |
| Monroe | X | X | X P |
| Niagara | X | X | X |
| Oneida | X P | X P | |
| Onondaga | X P | X | X P |
| Ontario | X | X | |
| Orleans | X | X | X |
| Oswego | X | X | X P |
| Schuyler | | X | |
| Seneca | X P | X P | |
| St. Lawrence | X | X | X P |
| Steuben | X P | X P | |
| Tompkins | | X P | |
| Warren | X P | | |
| Washington | X P | | |
| Wayne | X | X | X P |
| Wyoming | X | X | X P |
| Yates | X P | X P | |

**North Dakota**

| | North of Line A East of Line C | Within 120 km (75 mi) of Canadian Border | Within 56.3 km (35 mi) of Canadian Border |
|---|---|---|---|
| Benson | X P | X P | |
| Bottineau | X | X | X |
| Burke | X | X | X |
| Cavalier | X | X | X |
| Divide | X | X | X |
| Grand Forks | X P | X P | |
| Mchenry | X P | X P | X P |
| Mckenzie | X P | X P | |
| Mountrail | X P | X P | X P |
| Nelson | X P | X P | |
| Pembina | X | X | X |
| Pierce | X P | X P | X P |
| Ramsey | X P | X P | X P |
| Renville | X | X | X P |
| Rolette | X | X | X |
| Towner | X | X | X P |
| Walsh | X | X | X P |
| Ward | X P | X P | X P |
| Williams | X P | X | X P |

**Ohio**

| | North of Line A East of Line C | Within 120 km (75 mi) of Canadian Border | Within 56.3 km (35 mi) of Canadian Border |
|---|---|---|---|
| Ashland | X P | X P | |
| Ashtabula | X | X | X P |
| Crawford | | X | |
| Cuyahoga | X | X | X P |
| Defiance | X | X P | |
| Erie | X | X | X |
| Fulton | X | X | |
| Geauga | X | X | X P |
| Hancock | X P | X P | |
| Hardin | | X P | |
| Henry | X | X | |
| Holmes | | X P | |
| Huron | X | X | X P |
| Lake | X | X | X P |

**Ohio (Cont'd)**

| | North of Line A East of Line C | Within 120 km (75 mi) of Canadian Border | Within 56.3 km (35 mi) of Canadian Border |
|---|---|---|---|
| Lorain | X | X | X P |
| Lucas | X | X | X P |
| Mahoning | | X P | |
| Marion | | X P | |
| Medina | XP | X | |
| Morrow | | X P | |
| Ottawa | X | X | X |
| Paulding | X P | | |
| Portage | X P | X P | |
| Putnam | X P | X P | |
| Richland | | X P | |
| Sandusky | X | X | X P |
| Seneca | X | X | X P |
| Stark | | X P | |
| Summit | X P | X | |
| Trumbull | X P | X P | |
| Wayne | | X P | |
| Williams | X | X P | |
| Wood | X | X | X P |
| Wyandot | | X P | |

**Pennsylvania**

| | North of Line A East of Line C | Within 120 km (75 mi) of Canadian Border | Within 56.3 km (35 mi) of Canadian Border |
|---|---|---|---|
| Crawford | X P | X | X P |
| Elk | | X P | |
| Erie | X | X | X P |
| Forest | | X P | |
| Mckean | | X P | |
| Mercer | | X P | |
| Potter | | X P | |
| Venango | | X P | |
| Warren | X P | X | |

**Vermont**

| | North of Line A East of Line C | Within 120 km (75 mi) of Canadian Border | Within 56.3 km (35 mi) of Canadian Border |
|---|---|---|---|
| Addison | X | X P | |
| Caledonia | X | X | X P |
| Chittenden | X | X | X P |
| Essex | X | X | X P |
| Franklin | X | X | X |
| Grand Isle | X | X | X |
| Lamoille | X | X | X P |
| Orange | X P | X P | |
| Orleans | X | X | X |
| Rutland | X P | | |
| Washington | X | X | X P |
| Windsor | X P | X P | |

**Washington**

| | North of Line A East of Line C | Within 120 km (75 mi) of Canadian Border | Within 56.3 km (35 mi) of Canadian Border |
|---|---|---|---|
| Chelan | X P | X P | X P |
| Clallam | X | X | X P |
| Douglas | X P | X P | |
| Ferry | X P | X P | X P |
| Grant | | X P | |
| Grays Harbor | X P | X P | |
| Island | X | X | X P |
| Jefferson | X | X | X P |
| King | X P | X P | |
| Kitsap | X | X | |
| Lincoln | | X P | |
| Mason | X P | X P | |
| Okanogan | X P | X | X P |

**Washington (Cont'd)**

| | North of Line A East of Line C | Within 120 km (75 mi) of Canadian Border | Within 56.3 km (35 mi) of Canadian Border |
|---|---|---|---|
| Pend Oreille | X | X | X P |
| Pierce | X P | X P | |
| San Juan | X | X | X |
| Skagit | X | X | X P |
| Snohomish | X | X P | X |
| Spokane | X P | X P | |
| Stevens | X P | X P | X P |
| Whatcom | X | X | X |

**Wisconsin**

| | North of Line A East of Line C | Within 120 km (75 mi) of Canadian Border | Within 56.3 km (35 mi) of Canadian Border |
|---|---|---|---|
| Ashland | X P | | |
| Bayfield | X P | | |
| Douglas | X P | | |
| Florence | X P | | |
| Forest | X P | | |
| Iron | X P | | |
| Marinette | X P | | |
| Vilas | X P | | |

# Appendix II

## STATE TABLE

## Abbreviations for States, Jurisdictions, and Areas

| | |
|---|---|
| AL | Alabama |
| AK | Alaska |
| AZ | Arizona |
| AR | Arkansas |
| CA | California |
| CO | Colorado |
| CT | Connecticut |
| DE | Delaware |
| DC | District of Columbia |
| FL | Florida |
| GA | Georgia |
| GM | Gulf of Mexico |
| HI | Hawaii |
| ID | Idaho |
| IL | Illinois |
| IN | Indiana |
| IA | Iowa |
| KS | Kansas |
| KY | Kentucky |
| LA | Louisiana |
| ME | Maine |
| MD | Maryland |
| MA | Massachusetts |
| MI | Michigan |
| MN | Minnesota |
| MS | Mississippi |
| MO | Missouri |
| MT | Montana |
| NE | Nebraska |
| NV | Nevada |
| NH | New Hampshire |
| NJ | New Jersey |
| NM | New Mexico |
| NY | New York |
| NC | North Carolina |
| ND | North Dakota |
| OH | Ohio |
| OK | Oklahoma |
| OR | Oregon |
| PA | Pennsylvania |
| RI | Rhode Island |
| SC | South Carolina |
| SD | South Dakota |
| TN | Tennessee |
| TX | Texas |
| UT | Utah |
| VT | Vermont |
| VA | Virginia |
| WA | Washington |
| WV | West Virginia |
| WI | Wisconsin |
| WY | Wyoming |
| AS | American Samoa |
| GU | Guam |
| MP | Northern Mariana Islands |
| PR | Puerto Rico |
| UM | U.S. Territories: (Baker Island, Howland Island, Jarvis Island, Johnston Atoll, Kingman Reef, Midway Island, Navassa Island, Palmyra Atoll and Wake Island) |
| VI | Virgin Islands |
| AA | Armed Forces-Americas (excluding Canada) |
| AE | Armed Forces-(Europe, Middle East, Africa, Canada) |
| AP | Armed Forces-Pacific |

**FCC 601**
**Main Form**

# FCC Application for Radio Service Authorization: Wireless Telecommunications Bureau Public Safety and Homeland Security Bureau

Approved by OMB
3060 - 0798
See instructions for public burden estimate

| 1) Radio Service Code: | 1a) Existing Radio Service Code: |
|---|---|
| | |

## General Information

2) (Select only one) **( )**

**NE** - New **RO** - Renewal Only **AU** - Administrative Update **NT** - Required Notifications
**MD** - Modification **RM** - Renewal/Modification **WD** - Withdrawal of Application **EX** - Requests for Extension of Time
**AM** - Amendment **CA** - Cancellation of License **RL** – Registered Location/Link

| | |
|---|---|
| 3a) If this application is for a Demonstration License or a Special Temporary Authorization (STA), enter the code and attach the required exhibit as described in the instructions. Otherwise enter '**N/A**' (Not Applicable). | ( )**M S N/A** |
| 3b) If this application is for Special Temporary Authority due to an emergency situation, enter 'Y'; otherwise enter 'N'. Refer to Rule 1.915 for an explanation of situations considered to be an emergency. | ( )**Y**es **N**o |
| 4) If this application is for an Amendment or Withdrawal, enter the file number of the pending application currently on file with the FCC. | File Number |
| 5) If this application is for a Modification, Renewal Only, Renewal/Modification, Cancellation of License, , or Administrative Update, enter the call sign of the existing FCC license. If this is a request for Registered Location/Link, enter the FCC call sign assigned to the geographic license. | Call Sign |
| 6a) If this application is for a New, Amendment, Renewal Only, or Renewal/Modification, enter the requested authorization expiration date (this item is optional). | MM DD<br>_____/_____ |
| 6b) If this application is for a Renewal Only or Renewal/Modification and the license is a geographic area license, is the license used to provide service to customers (**C**), or is the license used for private business (internal) purposes or to meet the licensee's public interest/public safety communications needs (**P**)? | ( )**C P** |
| 7) Is this application "major" as defined in § 1.929 of the Commission's Rules when read in conjunction with the applicable radio service rules found in Parts 22 and 90 of the Commission's Rules? (NOTE: This question only applies to certain site-specific applications. See the instructions for applicability and full text of § 1.929). | ( )**Y**es **N**o |
| 8) Are attachments (other than associated schedules) being filed with this application? | ( )**Y**es **N**o |

## Fees, Waivers, and Exemptions

| | |
|---|---|
| 9) Is the Applicant exempt from FCC application fees? | ( )**Y**es **N**o |
| 10) Is the Applicant exempt from FCC regulatory fees? | ( )**Y**es **N**o |
| 11a) Does this application include a request for a Waiver of the Commission's Rule(s)? If 'Yes', attach an exhibit providing rule number(s) and explaining circumstances. | ( )**Y**es **N**o |
| 11b) If 11a is 'Y', and a feeable waiver request is attached, enter the number of rule sections involved. | Number of Rule Section(s): _____ |
| 12) Are the frequencies or parameters requested in this filing covered by grandfathered privileges, previously approved by waiver, or functionally integrated with an existing station? | ( )**Y**es **N**o |

**Applicant Information**

13) FCC Registration Number (FRN):

14) Applicant/Licensee Legal Entity Type: (Select One)
( )Individual ( )Unincorporated Association ( )Trust ( )Government Entity ( )Corporation ( )Limited Liability Company

( )General Partnership ( )Limited Partnership( )Limited Liability Partnership ( )Consortium

( ) Other: _____

| | | |
|---|---|---|
| 15) If the Licensee name is being updated, is the update a result from the sale (or transfer of control) of the license(s) to another party and for which proper Commission approval has not been received or proper notification not provided? | | ( )**Y**es **N**o |

| | | | |
|---|---|---|---|
| 16) First Name (if individual): | MI: | Last Name: | Suffix: |

17) Legal Entity Name (if other than individual):

18) Attention To:

| | | |
|---|---|---|
| 19) P.O. Box: | And/Or | 20) Street Address**:** |

| | | |
|---|---|---|
| 21) City: | 22) State: | 23) Zip Code: |

| | |
|---|---|
| 24) Telephone Number: | 25) Fax: |

26) E-Mail Address:

27) **Demographics (Optional)**

| Race: | Ethnicity: | Gender: |
|---|---|---|
| ( )American Indian or Alaska Native | ( )Hispanic or Latino | ( )Male |
| ( )Asian | ( )Not Hispanic or Latino | ( )Female |
| ( )Black or African-American | | |
| ( )Native Hawaiian or Other Pacific Islander | | |
| ( )White | | |

**Real Party in Interest**

| | |
|---|---|
| 28) Name of Real Party in Interest of Applicant (If different from Applicant): | 29) FCC Registration Number (FRN) of Real Party in Interest: |

**Contact Information** (If different from the Applicant)
**( ) Check here if same as Applicant.**

| | | | |
|---|---|---|---|
| 30) First Name: | MI: | Last Name: | Suffix: |

31) Company Name:

32) Attention To:

| | | |
|---|---|---|
| 33) P.O. Box: | And /Or | 34) Street Address**:** |

| | | |
|---|---|---|
| 35) City: | 36) State: | 37) Zip Code: |

| | |
|---|---|
| 38) Telephone Number**:** | 39) Fax: |

40) E-Mail Address:

**Regulatory Status**

41) This filing is for authorization to provide or use the following type(s) of radio service offering (enter all that apply):

( )**C**ommon Carrier ( )**N**on-Common Carrier ( )**P**rivate, internal communications ( )**B**roadcast Services ( )**B**and **M**anager

**Type of Radio Service**

42) This filing is for authorization to provide the following type(s) of radio service (choose all that apply):

( )**F**ixed ( )**M**obile ( )**R**adiolocation ( )**S**atellite (sound) ( )**B**roadcast Services

43) Does the Applicant propose to provide service interconnected to the public telephone network? ( )**Y**es **N**o

**Alien Ownership Questions (If any answer is 'Y", provide an attachment explaining the circumstances. In preparing the attachment, refer to the Main Form Instructions for the "Alien Ownership Questions".)**

| | |
|---|---|
| 44) Is the Applicant a foreign government or the representative of any foreign government? | ( )**Y**es **N**o |
| 45) Is the Applicant an alien or the representative of an alien? | ( )**Y**es **N**o |
| 46) Is the Applicant a corporation organized under the laws of any foreign government? | ( )**Y**es **N**o |
| 47) Is the Applicant a corporation of which more than one-fifth of the capital stock is owned of record or voted by aliens or their representatives, or by a foreign government or representative thereof, or by any corporation organized under the laws of a foreign country? | ( )**Y**es **N**o |

48a) Is the Applicant directly or indirectly controlled by any other corporation of which more than one-fourth of the capital stock is owned of record or voted by aliens or their representatives, or by a foreign government or representative thereof, or by any corporation organized under the laws of a foreign country? ( ) **Y**es **N**o

48b) If the answer to 47 or 48a is 'Y' select one of the choices below.

☐ The Applicant is exempt from the provisions of Section 310(b).

*It is not necessary to file a petition for declaratory ruling if the Applicant includes in the attachment required by Item 47 or Item 48a a showing that the requested license(s) is exempt from the provisions of Section 310(b).*

☐ The Applicant has received a declaratory ruling(s) approving its foreign ownership, and the application involves only the acquisition of additional spectrum for the provision of a wireless service in a geographic coverage area for which the Applicant has been previously authorized.

*If checked, include in the attachment required by Item 47 or Item 48a the citation(s) of the applicable declaratory ruling(s) by DA/FCC number, the FCC Record citation, if available, release date, and a statement that there has been no change in the foreign ownership of the Applicant since the issuance of its ruling.*

☐ The Applicant: (i) has received a declaratory ruling(s) approving its foreign ownership, but is not able to make the certification specified immediately above; or (ii) is an "affiliate" of a Licensee or Lessee/Sublessee that received a declaratory ruling(s) under 47 CFR § 1.990(a) and is relying on the affiliate's ruling for purposes of filing this application as permitted under the affiliate's ruling and 47 CFR § 1.994(b).

*If checked, and if the* Applicant *received its declaratory ruling(s) on or after August 9, 2013, include in the attachment required by Item 47 or Item 48a the citation(s) of the Applicant's declaratory ruling(s) by DA/FCC number, the FCC Record citation, if available, release date, and a statement that the Applicant is in compliance with the terms and conditions of its ruling and with the Commission's Rules.*

*If checked, and if the Applicant received its declaratory ruling(s) prior to August 9, 2013, include in the attachment required by Item 48a a copy of a petition for declaratory ruling filed contemporaneously with the Commission to extend the Applicant's existing ruling(s) to cover the same radio service(s) and geographic coverage area(s) involved in the application. Alternatively, the Applicant may request a new declaratory ruling pursuant to Section 1.990(a) of the Commission's Rules, 47 CFR § 1.990(a). Petitions for declaratory ruling may be filed electronically on the Internet through the International Bureau Filing System (IBFS) (with a copy attached hereto).*

*If checked, and if the Applicant is relying on an affiliate's ruling for purposes of filing this application, include in the attachment required by Item 47 or Item 48a the citation(s) of the applicable declaratory ruling(s) by DA/FCC number, the FCC Record citation, if available, release date, and a statement that the Applicant is in compliance with the terms and conditions of the named affiliate's ruling and with the Commission's Rules. The Applicant must also include a certification of compliance signed by the named affiliate or other qualified entity as specified in 47 CFR § 1.994(b). See Main Form Instructions for Items 47 or 48a, as applicable.*

☐ The Applicant has not received a declaratory ruling approving its foreign ownership and is requesting a declaratory ruling under 47 CFR § 1.990(a) in a petition filed contemporaneously with the Commission.

*If checked, include in the attachment required by Item 47 or 48a a copy of the petition for declaratory ruling filed contemporaneously with the Commission pursuant to 47 CFR § 1.990(a). Petitions for declaratory ruling may be filed electronically on the Internet through the International Bureau Filing System (IBFS) (with a copy attached hereto).*

**Basic Qualification Questions**

| | |
|---|---|
| 49) Has the Applicant or any party to this application had any FCC station authorization, license or construction permit revoked or had any application for an initial, modification or renewal of FCC station authorization, license, or construction permit denied by the Commission? | ( )**Y**es **N**o |
| 50) Has the Applicant or any party to this application, or any party directly or indirectly controlling the Applicant, ever been convicted of a felony by any state or federal court? | ( )**Y**es **N**o |
| 51) Has any court finally adjudged the Applicant or any party directly or indirectly controlling the Applicant guilty of unlawfully monopolizing or attempting unlawfully to monopolize radio communication, directly or indirectly, through control of manufacture or sale of radio apparatus, exclusive traffic arrangement, or any other means or unfair methods of competition?<br><br>If the answer to any of 49-51 is 'Y', attach an exhibit explaining the circumstances. | ( )**Y**es **N**o |

**Aeronautical Advisory Station (Unicom) Certification**

52) ( ) I certify that the station will be located on property of the airport to be served, and, in cases where the airport does not have a control tower, RCO, or FAA flight service station, that I have notified the owner of the airport and all aviation service organizations located at the airport within ten days prior to application.

**Broadband Radio Service and Educational Broadband Service Cable Cross-Ownership**

| | |
|---|---|
| 53a) Will the requested facilities be used to provide multichannel video programming service? | ( )**Y**es **N**o |
| 53b) If the answer to question 53a is 'Y', does the Applicant operate, control or have an attributable interest (as defined in 47 CFR § 27.1202) in a cable television system whose franchise area is located within the geographic service area of the requested facilities?<br><br>**Note: If the answer to question 53b is 'Y'**, attach an exhibit explaining how the Applicant complies with 47 CFR § 27.1202 or justifying a waiver of that rule. If a waiver of the Commission Rule(s) is being requested, Item 11a must be answered 'Y'. | ( )**Y**es **N**o |

**Broadband Radio Service and Educational Broadband Service (Part 27)**

| | |
|---|---|
| 54) (For EBS only) Does the Applicant comply with the programming requirements contained in 47 CFR § 27.1203?<br><br>**Note: If the answer to item 54 is 'N',** attach an exhibit explaining how the Applicant complies with 47 CFR § 27.1203 of the Commission's Rules or justifying a waiver of that rule. If a waiver of the Commission Rule(s) is being requested, Item 11a must be answered 'Y'. | ( )**Y**es **N**o |
| 55) (For BRS and EBS) Does the Applicant comply with 47 CFR §§ 27.50, 27.55, and 27.1221?<br><br>**Note: If the answer to item 55 is 'N',** attach an exhibit justifying a waiver of that rule(s). If a waiver of the Commission Rule(s) is being requested, Item 11a must be answered 'Y'. | ( )**Y**es **N**o |

**For Applicants Who Participated in an Auction**

| | |
|---|---|
| 56) Is the Applicant a qualifying rural wireless partnership or a member of a qualifying rural wireless partnership?<br><br>**Note: If the answer to item 56 is 'Y',** attach an exhibit listing all members of the qualifying rural wireless partnership, including their FRN numbers. | ( )**Y**es **N**o |

**For Renewal Applicants**

57) **Operation/Performance Requirement Certification**

| | |
|---|---|
| **[For a site-based license]**: Applicant certifies that it is continuing to operate consistent with its most recently filed construction notification (or most recent authorization, if no construction notification was required). | ( ) Yes No |
| **[For a geographic license, commercial service - licensee in its initial license term with an interim performance requirement]**: Applicant certifies that it has met its interim performance requirement, that over the portion of the license term following the interim performance requirement, it continues to use its facilities to provide at least the level of service required by its interim performance requirement, it has met its final performance requirement, and it continues to use its facilities to provide at least the level of service required by its final performance requirement through the end of the license term. | ( ) Yes No |
| **[For a geographic license, commercial service - licensee in its initial license term with no interim performance requirement]**: Applicant certifies that it has met its final performance requirement and it continues to use its facilities to provide at least the level of service required by its final performance requirement through the end of the license term. [Note: licensee must provide a showing demonstrating that the final performance requirement has been met, either separately in a timely application for notification of completion of construction, or as part of its renewal application, depending on the radio service.] | ( ) Yes No |
| **[For a geographic license, commercial service - licensee in any subsequent term]**: Applicant certifies that it continues to use its facilities to provide at least the level of service required by its final performance requirement through the end of any subsequent license terms. | ( ) Yes No |
| **[For a geographic license, private systems - licensee in its initial license term with an interim performance requirement]**: Applicant certifies that it has met its interim performance requirement, that over the portion of the license term following the interim performance requirement, it continues to use its facilities to further its private business or public interest/public safety communications needs at or above the level required to meet its interim performance requirement, it has met its final performance requirement, and it continues to use its facilities to provide at least the level of operation required by its final performance requirement through the end of the license term. | ( ) Yes No |
| **[For a geographic license, private systems - licensee in its initial license term with no interim performance requirement]**: Applicant certifies that it has met its final performance requirement, it continues to use its facilities to further its private business or public interest/public safety communications needs, and it continues to use its facilities to provide at least the level of operation required by its final performance requirement through the end of the license term. [Note: licensee must provide a showing demonstrating that the final performance requirement has been met, either separately in a timely application for notification of completion of construction, or as part of its renewal application, depending on the radio service.] | ( ) Yes No |

| | |
|---|---|
| **[For a geographic license, private systems - licensee in any subsequent term]**: Applicant certifies that it continues to use its facilities to further its private business or public interest/public safety communications needs at or above the level required to meet its final performance requirement through the end of any subsequent license terms. | ( ) Yes No |
| **[For a partitioned or disaggregated license without a performance requirement, for the first renewal application filed after October 1, 2020**: Applicant certifies that the partitioned and/or disaggregated license that is the subject of this renewal application has no separate performance requirement and that this is the first renewal of this license filed subsequent to October 1, 2020 | ( ) Yes No |
| **[For a partitioned or disaggregated license without a performance requirement, for any subsequent renewal filings]**: Applicant certifies that it continues to use its facilities to provide service or to further the applicant's private business or public interest/public safety needs. | ( ) Yes No |

58) **Discontinuance of Service Certification** [same for all]

| | |
|---|---|
| Applicant certifies that no permanent discontinuance of service or operation, as applicable, occurred during its current license term. | ( ) Yes No |

**Note: If the response to either item 57 or item 58 is 'N'**, attach an exhibit that demonstrates that over the course of the license term, the Applicant provided and continues to provide service to the public, or operated and continues to operate the license to meet the Applicant's private business or public interest/public safety communications needs. This exhibit must include a detailed description of the Applicant's provision of service or, when allowed under the relevant service rules or pursuant to waiver, use of the spectrum for private business or public interest/public safety communications needs, during the entire license period and address, as applicable: 1) the level and quality of service provided by the applicant (e.g., the population served, the area served, the number of subscribers, the services offered); (2) the date service commenced, whether service was ever interrupted, and the duration of any interruption or outage; (3) the extent to which service is provided to rural areas; (4) the extent to which service is provided to qualifying tribal land as defined in 47 CFR § 1.2110(e)(3)(i); and (5) any other factors associated with the level of service to the public. The licensee may note in its exhibit: 1) any grant(s) of waiver or extension of a performance deadline or license renewal subject to meeting a performance requirement; or 2) if the final performance deadline and/or expiration date for the license accelerated because the licensee did not meet an interim performance requirement.

59) **Regulatory Compliance Certification** [same for all]

| | |
|---|---|
| Applicant certifies that it has substantially complied with all applicable FCC rules, policies, and the Communications Act of 1934, as amended. | ( ) Yes No |

**Note: If the response to item 59 is 'N'**, attach an exhibit explaining the circumstances and demonstrating why Applicant's license should be renewed.

**General Certification Statements**

| | |
|---|---|
| 1) | The Applicant waives any claim to the use of any particular frequency or of the electromagnetic spectrum as against the regulatory power of the United States because of the previous use of the same, whether by license or otherwise, and requests an authorization in accordance with this application. |
| 2) | The Applicant certifies that grant of this application would not cause the Applicant to be in violation of any pertinent cross-ownership or attribution rules.* *If the Applicant has sought a waiver of any such rule in connection with this application, it may make this certification subject to the outcome of the waiver request. |
| 3) | The Applicant certifies that all statements made in this application and in the exhibits, attachments, or documents incorporated by reference are material, are part of this application, and are true, complete, correct, and made in good faith. |
| 4) | The Applicant certifies that neither the Applicant nor any other party to the application is subject to a denial of Federal benefits pursuant to § 5301 of the Anti-Drug Abuse Act of 1988, 21 U.S.C. § 862, because of a conviction for possession or distribution of a controlled substance. This certification does not apply to applications filed in services exempted under § 1.2002(c) of the rules, 47 CFR § 1.2002(c). *See* 47 CFR § 1.2002(b) for the definition of "party to the application" as used in this certification. |
| 5) | The Applicant certifies that it either (1) has current required ownership data on file with the Commission, (2) is filing updated ownership data simultaneously with this application, or (3) is not required to file ownership data under the Commission's Rules. |
| 6) | The Applicant certifies that the facilities, operations, and transmitters for which this authorization is hereby requested are either: (1) categorically excluded from routine environmental evaluation for RF exposure as set forth in 47 CFR § 1.1307(b); or, (2) have been found not to cause human exposure to levels of radiofrequency radiation in excess of the limits specified in 47 CFR §§ 1.1310 and 2.1093; or, (3) are the subject of one or more Environmental Assessments filed with the Commission. |
| 7) | The Applicant certifies that it has reviewed the appropriate Commission Rules defining eligibility to hold the requested license(s), and is eligible to hold the requested license(s). |
| 8) | The Applicant certifies that it is not in default on any payment for Commission licenses and that it is not delinquent on any non-tax debt owed to any federal agency. |
| 9) | The Applicant certifies that the Applicant and all of the related individuals and entities required to be disclosed on this application and FCC Form 602 (FCC Ownership Disclosure Information for the Wireless Telecommunications Services) are not person(s) who have been, for reasons of national security, barred by any agency of the Federal Government from bidding on a contract, participating in an auction, or receiving a grant. This certification applies only to applications for licenses for spectrum that is required by Sections 6103, 6401-6403 of the Middle Class Tax Relief and Job Creation Act of 2012, codified at 47 U.S.C. §§ 309, 1413, 1451-1452, to be assigned by a system of competitive bidding under 47 U.S.C. § 309(j). |

**Signature**

60)Typed or Printed Name of Party Authorized to Sign

| First Name: | MI: | Last Name: | Suffix: |
|---|---|---|---|
| 61) Title: | | | |
| Signature: | | | 62) Date: |

**FAILURE TO SIGN THIS APPLICATION MAY RESULT IN DISMISSAL OF THE APPLICATION AND FORFEITURE OF ANY FEES PAID.**

**Upon grant of this license application, the Licensee may be subject to certain construction or coverage requirements. Failure to meet the construction or coverage requirements will result in termination of the license. Consult appropriate FCC regulations to determine the construction or coverage requirements that apply to the type of license requested in this application.**

**WILLFUL FALSE STATEMENTS MADE ON THIS FORM OR ANY ATTACHMENTS ARE PUNISHABLE BY FINE AND/OR IMPRISONMENT (U.S. Code, Title 18, § 1001) AND/OR REVOCATION OF ANY STATION LICENSE OR CONSTRUCTION PERMIT (U.S. Code, Title 47, § 312(a)(1)), AND/OR FORFEITURE (U.S. Code, Title 47, § 503).**

**FCC 601**
**Schedule A**

# FEDERAL COMMUNICATIONS COMMISSION

## Information and Instructions

Approved by OMB
3060 – 0798
See 601 Main Form Instructions
for public burden estimate

## Schedule for Changes Affecting Multiple Call Signs or File Numbers Form FCC 601

## Schedule A
## Instructions

Form FCC 601, Schedule A, is a supplementary schedule for use with the FCC Application for Radio Service Authorization: Wireless Telecommunications Bureau and/or Public Safety and Homeland Security Bureau, FCC 601 Main Form. Schedule A is not used with initial applications. Complete this schedule to submit global changes to items on the FCC 601 Main Form that affect multiple call signs or file numbers, depending on the Application Purpose entered for Item 2 of that form. Note the following:

*Multiple File Numbers may be affected by these purposes:* Amendment or Withdrawal of Application

*Multiple Call Signs may be affected by these purposes:* Renewal Only, Cancellation of License, or Administrative Update

Each Schedule A or groups of Schedule A filed with the FCC 601 Main Form must use the same purpose, and only one purpose can be specified per submission.

**FCC 601**
**Schedule A**

# Schedule for Changes Affecting Multiple Call Signs or File Numbers

Approved by OMB
3060 - 0798
See 601 Main Form
for public burden estimate

Enter only multiple call signs or only multiple file numbers for the following Form FCC 601 Main Form purposes:

Amendment or Withdrawal of Application (File Numbers)

Renewal Only, Cancellation of License, , or Administrative Update (Call Signs)

**Note**: Form FCC 601 Main Form allows the selection of only one purpose per submission.

Each Schedule A or groups of Schedule A filed with the FCC 601 Main Form must use the same purpose.

| Call Sign or File Number | Call Sign or File Number | Call Sign or File Number | Call Sign or File Number |
|---|---|---|---|
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# FEDERAL COMMUNICATIONS COMMISSION

## Information and Instructions

Approved by OMB
3060 – 0798
See 601 Main Form Instructions
for public burden estimate

## Schedule for Geographically Licensed Services

Form FCC 601, Schedule B, is a supplementary schedule for use with the FCC Application for Radio Service Authorization: Wireless Telecommunications Bureau and/or Public Safety and Homeland Security Bureau, FCC 601 Main Form. This schedule is used to apply for the required license authorization when the Applicant has been determined to be the winning bidder at the close of an FCC auction. The FCC 601 Main Form must be filed in conjunction with this schedule.

**Schedule B**
**Instructions**

**Market/Channel Block**

Items 1 through 4 are to be completed with the market or markets that are licensed on a geographic licensing area or market basis (e.g., Personal Communications Service) and have been won through an auction (in this case, multiple sites may be completed for each Schedule B).

Item 1 This item identifies the market(s) to which the filing pertains. Market designators are listed in FCC Public Notices or in the FCC rules.

Item 2 This item, in addition to the market designator, identifies the market to which the filing pertains. The market names are listed in FCC Public Notices or in the FCC rules.

Item 3 This item identifies the spectrum, assigned in channel blocks, for the market area listed in Item 1.

Item 4 Complete this item only if the market area listed in Item 1 has been subdivided (in a partition and/or disaggregation).

**Note**: In some circumstances geographic area Licensees must apply for a site-specific authorization when either (a) a site requires international coordination, or (b) a site will have an environmental impact, or (c) a base or fixed station in the 700 MHz WCS channels is operating in excess of 1 kW ERP.

(a) Sites requiring international coordination:

International coordination is generally needed when a site is located North of Line A or East of Line C. Appendix I in FCC Form 601 Main Form instructions contains a list of counties/boroughs, by state, having areas North of Line A and East of Line C. In these instances, Licensees must file an application for modification using FCC Form 601 Main Form and Schedule I for microwave radio services or Schedule D and the appropriate technical data schedule for all other radio services.

(b) Sites having an environmental impact:

Sites having a significant environmental effect are defined in 47 CFR § 1.1307. In these instances, Licensees must file an application for modification using FCC Form 601 Main Form and Schedule I for microwave radio services or Schedule D for all other radio services. 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; or

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

(c) ) Based or fixed stations in the 700 MHz WCS channels operating in excess of 1 kW ERP:

Pursuant to 47 CFR § 27.50(c)(8), Licensees authorized for the 700 MHz WCS channels that operate base or fixed stations in excess of 1 kW ERP must file an application for modification using FCC Form 601 Main Form and Schedule D. Licensees must provide the coordinates of the facilities on Schedule D and provide as an exhibit the station's maximum ERP (watts), antenna height above ground (meters) and a depiction of the vertical antenna pattern. Licensees must provide the same technical parameters to all adjacent Part 27 Licensees authorized to construct and operate a base or fixed station within 75 km of the location(s) indicated on Schedule D.

Item 5 For auction winners filing electronically, this item will be prefilled from the FCC Form 175 that was completed for the subject licenses.

Item 6 For auction winners filing electronically, this item will be prefilled from the FCC Form 175 that was completed for the subject licenses.

Item 7 For each market and channel block please indicate whether a tribal lands bidding credit will be sought by checking the appropriate block.

**Note:** The processing of each application requesting a tribal land bidding credit will be suspended for 180 days. This 180-day period provides the Applicant time to secure the required certification(s) from the appropriate tribal government(s) and to amend the application in accordance with the Commission's rules.

**Tribal Lands Information**

Complete this section ONLY after receiving the required certification(s) from the tribal government(s).

The information provided in this section will enable the FCC to determine whether an Applicant is eligible to receive a tribal land bidding credit and the amount of the bidding credit.

Item 8 Enter the market designator for those markets where a tribal lands bidding credit is being sought.

Item 9 Enter the assigned channel blocks for the market area listed in Item 8.

Item 10 Enter the names of the tribal lands for which a bidding credit is being sought. The term "tribal lands" shall mean "reservation" as defined by the Bureau of Indian Affairs. A reservation is any federally recognized Indian tribe's reservation, Pueblo, or Colony, including former reservations in Oklahoma, Alaska Native regions established pursuant to the Alaska Native Claims Settlement Act (85 Stat.688), and Indian allotments.

Item 11 Enter, in square kilometers, the area for each tribal land within the designated market.

Item 12 For each market, place an 'x' next to the tribal lands where the required certification(s) has been received and bidding credit is sought. Attach the certification(s) as an exhibit and title it "Tribal Government Certification".

Item 13 On the first line for each market, enter the dollar amount of the tribal lands bidding credit as calculated in accordance with the Commission's rules.

Item 14 If requesting a waiver of the Commission's rules to obtain a tribal lands bidding credit higher than allowed under the rules, enter the additional dollar amount for each market, on the first line for that market, and attach an exhibit justifying the request. You must provide a certification from an independent auditor that the estimated costs set forth in the exhibit are reasonable.

**Note**: Your tribal lands bidding credit cannot exceed the applicable bidding credit cap as defined in the rules.

**Agreements**

**Agreements Regarding Designated Entities (e.g., Small Businesses and Rural Service Providers) and Closed Bidding**

Item 15a Answer this item 'Y' if the Applicant has any agreements, whether oral or written, which could affect its overall eligibility for designated entity benefits, including, where applicable, its eligibility to participate in closed bidding or its eligibility for the award of designated entity benefits for any particular license for which the Applicant claimed a bidding credit (e.g., small business or rural service provider (RSP) bidding credit). Such agreements include, but are not limited to, partnerships, shareholder agreements, management agreements, spectrum leasing agreements, spectrum use agreements, spectrum resale (including wholesale) arrangements, and all agreements or arrangements establishing *de facto/de jure* control of the Applicant or of the subject licenses. If answering 'Y', enter the agreement information in item 16, including the unique identifying name of the agreement, the parties to the agreement, and the FCC Registration Number (FRN) of the party(ies) to the agreement. Attach an exhibit summarizing the agreements (with appropriate references to specific provisions in the text of such agreements and instruments and the date(s) on which the applicant entered into the agreements) and provide copies of the agreements. In addition, if the agreement allows a disclosable interest holder (DIH) that holds a ten percent or greater interest of any kind in the Applicant to use more than 25% of the spectrum capacity (as measured in megahertz) of any license subject to this application, provide in an exhibit: (1) the DIH's name, FRN and its relationship to the Applicant; (2) the names and FRNs of the DIH's Affiliates; (3) the percentage of spectrum capacity that the DIH uses or has an agreement to use for each license; (4) the gross revenues for each of the last three reportable years for the DIH and its Affiliates (for a small business credit); (5) the combined number, if any, of commercial communications services subscribers to wireless, wireline, broadband, and cable services that the DIH and each of its Affiliates serve (along with the Federal Information Processing Standard (FIPS) numbers of each county where each entity has at least one

subscriber) (for a RSP bidding credit); and (6) whether the Applicant asserts that the DIH is independently eligible for the RSP bidding credit. Otherwise, enter 'N'.

**Agreements with Other Parties and Joint Bidding Arrangements**
Item 15b Answer this item 'Y' if between the Form 175 deadline and through the release of the auction closing public notice, the Applicant, or any party that controls or is controlled by the Applicant, entered into any partnerships, joint ventures, consortia, or other agreements, arrangements, or understandings of any kind relating to the licenses in this application, including any agreements that address or communicate directly or indirectly bids (including specific prices), bidding strategies (including the specific licenses on which to bid or not to bid), or the post-auction market structure. Provide all the requested information in item 16, including the unique identifying name of the agreement, the parties to the agreement, and the FCC Registration Number (FRN) of the party(ies) to the agreement, and attach an exhibit describing the terms and conditions and identifying all parties to the agreement or arrangement. Otherwise, enter 'N'.

**Note concerning Items 16 through 47:** For auction winners filing electronically, the following information will be prefilled from the FCC Form 175 that was completed for the subject licenses except for those agreements in items 15a and 15b above. Applicants must review the information for accuracy and completeness in completing each item. If any information has changed or must be supplemented, the Applicant must edit the information and attach an exhibit explaining the change.

**Agreement Identifier**
Item 16 This item must be completed. It indicates the action the Applicant wants the FCC to take on an agreement and the type of agreement. Check the appropriate block to either Add or Delete Agreements or Party(ies) to Agreements. Enter the unique identifying name of the agreement and check the appropriate block of the party(ies) to agreement for either Entity Name or Individual Name. If filing for an entity, enter the legal entity name. If filing is for an 'Individual', enter the first name, middle initial, last name and suffix of the individual. Provide the FCC Registration Number (FRN) of each party to the agreement. The Applicant must provide in an exhibit a detailed explanation of the terms and conditions of each agreement or arrangement, as required by Commission rules.

**Additional Demographic Information (Not Required)**
Item 17 Check the appropriate block for Applicant status if a Minority-Owned Business, Rural Telephone Company, or a Woman-Owned Business if applicable. This item is not required.

**Revenue and Asset Information**
Item 18 Enter 'Y' if any revenue and asset information has changed for the Applicant, the Disclosable Interest Holder, or the Affiliate. Otherwise, enter 'N'. If 'Y', provide details in an attachment.

**Revenue and Asset Information for the Applicant**
Item 19 Check the block if modifying the Applicant information. When modifying, enter only the items changed. All other information will be copied from the FCC Form 175 filed previously.

**Gross Revenue Disclosure**
**Most Recent Reportable Year**
Item 20a Enter 'Y' if the Applicant and any predecessors-in-interest were in existence and had gross revenues for the most recent reportable year. If 'Y', complete items 20b and 20c. Enter 'N' if the Applicant and any predecessors-in-interest were not in existence for the most recent reportable year and explain why in an attachment.

**One Year Prior to Most Recent Reportable Year**
Item 21a Enter 'Y' if the Applicant and any predecessors-in-interest were in existence and had gross revenues for one year prior to the most recent reportable year. If 'Y', complete items 21b and 21c. Enter 'N' if the Applicant and any predecessors-in-interest were not in existence for one year prior to the most recent reportable year and explain why in an attachment.

**Two Years Prior to Most Recent Reportable Year**
Item 22a Enter 'Y' if the Applicant and any predecessors-in-interest were in existence and had gross revenues for two years prior to the most recent reportable year. If 'Y', complete items 22b and 22c. Enter 'N' if the Applicant and any predecessors-in-interest were not in existence for two years prior to the most recent reportable year and explain why in an attachment.

**Average Gross Revenue**
Item 23 The Universal Licensing System will calculate the average gross revenue for the reported years provided in Items 20, 21 and 22.

**Asset Disclosure**
Item 24 Enter the total assets disclosed as of the application filing deadline.

**Financial Statements**
Item 25 Check if the Applicant used audited financial statements *or* unaudited statements prepared in accordance with Generally Accepted Accounting Principles and certified by Applicant's chief financial officer or the equivalent.

**Revenue and Asset Information for each Disclosable Interest Holder**
Item 26 Select the proper block to Add, Modify, or Delete a Disclosable Interest Holder (DIH). If Adding, complete items 27 through 33. If Modifying, enter only the items changed. If Deleting, complete the Entity Name or the Individual Name and the FCC Registration Number of the DIH. Modify and Delete are used for Amendments of a previously filed application. If necessary, attach additional copies

of this page to list more DIHs.

**Disclosable Interest Holder**
Item 27 Select the proper block for either Entity Name or Individual name of the Disclosable Interest Holder (DIH) and provide Entity Name or Individual name and the FCC Registration Number of the DIH.

**Gross Revenue Disclosure**
**Most Recent Reportable Year**
Item 28a Enter 'Y' if the Disclosable Interest Holder (DIH) and any predecessors-in-interest were in existence and had gross revenues for the most recent reportable year. If 'Y', complete items 28b and 28c. Enter 'N' if the DIH and any predecessors-in-interest were not in existence for the most recent reportable year and explain why in an attachment.

**One Year Prior to Most Recent Reportable Year**
Item 29a Enter 'Y' if the Disclosable Interest Holder (DIH) and any predecessors-in-interest were in existence and had gross revenues for one year prior to the most recent reportable year. If 'Y', complete items 29b and 29c. Enter 'N' if the DIH and any predecessors-in-interest were not in existence for one year prior to the most recent reportable year and explain why in an attachment.

**Two Years Prior to Most Recent Reportable Year**
Item 30a Enter 'Y' if the Disclosable Interest Holder (DIH) and any predecessors-in-interest were in existence and had gross revenues for two years prior to the most recent reportable year. If 'Y', complete items 30b and 30c. Enter 'N' if the DIH and any predecessors-in-interest were not in existence for two years prior to the most recent reportable year and explain why in an attachment.

**Average Gross Revenue**
Item 31 The Universal Licensing System will calculate the average gross revenue for the reported years provided in Items 28, 29 and 30.

**Asset Disclosure**
Item 32 Enter the total assets disclosed as of the application filing deadline.

**Financial Statements**
Item 33 Check if the Disclosable Interest Holder (DIH) used audited financial statements **or** unaudited statements prepared in accordance with Generally Accepted Accounting Principles and certified by DIH's chief financial officer or the equivalent.

**Revenue and Asset Information for each Affiliate**
Item 34 Select the proper block to Add, Modify, or Delete an Affiliate. If Adding, complete items 35 through 41. If Modifying, enter only the items changed. If Deleting, complete the Entity Name or the Individual Name and the FCC Registration Number of the Affiliate. Modify and Delete are used for Amendments of previously filed application. If necessary, attach additional copies of this page to list more Affiliates.

**Affiliate**
Item 35 Select the proper block for either Entity Name or Individual name of the Affiliate and provide Entity Name or Individual name and the FCC Registration Number of the Affiliate.

**Gross Revenue Disclosure**
**Most Recent Reportable Year**
Item 36a Enter 'Y' if the Affiliate and any predecessors-in-interest were in existence and had gross revenues for the most recent reportable year. If 'Y', complete items 36b and 36c. Enter 'N' if the Affiliate and any predecessors-in-interest were not in existence for the most recent reportable year and explain why in an attachment.

**One Year Prior to Most Recent Reportable Year**
Item 37a Enter 'Y' if the Affiliate and any predecessors-in-interest were in existence and had gross revenues for one year prior to the most recent reportable year. If 'Y', complete items 37b and 37c. Enter 'N' if the Affiliate and any predecessors-in-interest were not in existence for one year prior to the most recent reportable year and explain why in an attachment.

**Two Years Prior to Most Recent Reportable Year**
Item 38a Enter 'Y' if the Affiliate and any predecessors-in-interest were in existence and had gross revenues for two years prior to the most recent reportable year. If 'Y', complete items 38b and 38c. Enter 'N' if the Affiliate and any predecessors-in-interest were not in existence for two years prior to the most recent reportable year and explain why in an attachment.

**Average Gross Revenue**
Item 39 The Universal Licensing System will calculate the average gross revenue for the reported years provided in Items 36, 37 and 38.

**Asset Disclosure**
Item 40 Enter the total assets disclosed as of the application filing deadline.

**Financial Statements**
Item 41 Check if the Affiliate used audited financial statements *or* unaudited statements prepared in accordance with Generally Accepted Accounting Principles and certified by the Affiliate's chief financial officer or the equivalent.

**Closed Bidding / Small Business Bidding Credit Eligibility**
**Total Gross Revenues for Most Recent Reportable Year**
Item 42 The Universal Licensing System will calculate the total gross revenue for the most recent reportable year and the year-end date.

**Total Gross Revenues for One Year Prior to Most Recent Reportable Year**
Item 43 The Universal Licensing System will calculate the total gross revenue for one year prior to most recent reportable year and the year-end date.

**Total Gross Revenues for Two Years Prior to Most Recent Reportable Year**
Item 44 The Universal Licensing System will calculate the total gross revenue for two years prior to most recent reportable year and the year-end date.

**Total Aggregate Average Gross Revenues for Small Business Bidding Credit Designated Entity**
Item 45. The Universal Licensing System will calculate the aggregate average gross revenue for the Small Business Bidding Credit designated entity.

**Total Aggregate Average Gross Revenues for Closed Bidding**
Item 46 The Universal Licensing System will calculate the aggregate average gross revenue for the closed bidding.

**Total Assets Disclosure**
Item 47 The Universal Licensing System will calculate the total assets for the closed bidding.

**Rural Service Provider Bidding Credit Eligibility**
Item 48 If the Applicant is seeking a Rural Service Provider (RSP) bidding credit, provide in an exhibit the following information:
a) for the Applicant, submit the combined number of commercial communications service subscribers to wireless, wireline, broadband, and cable services that the Applicant serves and provide a list of the name(s) and the Federal Information Processing Standard (FIPS) number(s) for each county in which the Applicant has at least one commercial wireless, wireline, broadband, or cable subscriber;
b) for each of the Applicant's Affiliates, Controlling Interests, and the Affiliates of its Controlling Interests, submit the individual or entity's name, its FCC Registration Number (FRN), its relationship to the Applicant, and its combined number of commercial communications service subscribers to wireless, wireline, broadband, and cable services. For each of the Applicant's Affiliates, Controlling Interests, and the Affiliates of its Controlling Interests, also provide a list of the name(s) and the FIPS number(s) for each county in which it has at least one commercial wireless, wireline, broadband, or cable subscriber;
c) if neither the Applicant, nor any of its Affiliates, its Controlling Interests, or the Affiliates of its Controlling Interests have at least one wireless, wireline, broadband, or cable subscriber in a market for which the Applicant is applying for a license, list the market(s) in which the Applicant, its Affiliates, its Controlling Interests, and the Affiliates of its Controlling Interests have no such subscribers;
d) a detailed explanation demonstrating that: (i) the Applicant is in the business of providing commercial communications services; (ii) the Applicant serves predominantly rural areas; and (iii) the primary focus of the Applicant's business activity is the provision of services to rural areas (defined as counties with a population density of 100 or fewer persons per square mile); and
e) if the Applicant is an existing rural partnership that was providing service as of July 16, 2015, provide a detailed explanation demonstrating that each member of the partnership is independently eligible for the RSP bidding credit by providing, with respect to each member of the partnership, the same information as is required in a-d above.

Subscriber counts should be current as of the FCC Form 175 filing deadline. The Applicant, and other reporting entities, should count a subscriber only once even if that subscriber receives more than one service from the Applicant or entity. For example, a subscriber receiving both wireline service and broadband from the Applicant would be counted as a single subscriber of the Applicant.

FIPS numbers are available from the US Census Bureau and identified by the Commission as needed (*see, e.g.*, Appendix B of *Wireless Telecommunications Bureau Provides Details about Partial Economic Areas*, GN Docket No. 12-268, 29 FCC Rcd 6491, 6502 (2014)).

**Certification Statements**
By signing the FCC 601 Main Form, the Applicant certifies that the statements and information provided in this section are true, complete, correct, and made in good faith.

**Schedule for Geographically Licensed Services**

# FCC 601

**Schedule B**

**MARKET/CHANNEL BLOCK INFORMATION**

Approved by OMB
3060 – 0798
See 601 Main Form Instructions
for public burden estimate

| 1) Market Designator | 2) Market Name | 3) Channel Block | 4) Sub-Market Designator | 5) Type of bidding credit requested | 6) Open/Closed Bidding | 7) I Am Seeking A Tribal Lands Bidding Credit In This Market |
|---|---|---|---|---|---|---|
| | | | | | | ( ) **Y**es ( ) **N**o |
| | | | | | | ( ) **Y**es ( ) **N**o |
| | | | | | | ( ) **Y**es ( ) **N**o |

**TRIBAL LANDS INFORMATION**

| 8) Market Designator | 9) Channel Block | 10) Name of Tribal Lands | 11) Area, in square kms, of tribal lands contained within designated market | 12) Indicate with an "x" those tribal lands where Applicant has secured the required certification(s) from the tribal governments [attach certification(s)] | 13) The amount of bidding credit as defined by FCC Rules (by Market) | 14) Additional amount of bidding credit requested (attach justification) |
|---|---|---|---|---|---|---|
| | | | | | | |
| | | | | | | |
| | | | | | | |

**Agreements**

| | |
|---|---|
| 15a) Agreements Regarding Designated Entities (e.g., Small Businesses and Rural Service Providers) and Closed Bidding.<br><br>Has the Applicant entered into any agreements or arrangements, written or oral, which could affect its overall eligibility for designated entity benefits, including, where applicable, its eligibility to participate in closed bidding or its eligibility for the award of designated entity benefits for any particular license for which it claimed a bidding credit? If answering 'Y', proceed to item 16, check 'Add' for the Action Requested, select 'Designated Entity' and/or 'Closed Bidding' as the type of agreement, enter the unique identifying name of the agreement, and check the appropriate block of the party(ies) to agreement for either Entity Name or Individual Name. If filing is for an entity, enter the legal entity name. If filing is for an individual, enter the first name, middle initial, last name and suffix of the individual. Provide the FCC Registration Number (FRN) of the party(ies) to the agreement. Attach an exhibit summarizing the agreements (with appropriate references to specific provisions in the text of such agreements and instruments and the date(s) on which the Applicant entered into the agreements) and provide copies of the agreements. If the agreement allows a disclosable interest holder (DIH) that holds a ten percent or greater interest of any kind in the Applicant to use more than 25% of the spectrum capacity (as measured in megahertz) of any license subject to this application, provide in an exhibit: (1) the DIH's name, FRN and its relationship to the Applicant; (2) the names and FRNs of the DIH's Affiliates; (3) the percentage of spectrum capacity that the DIH uses or has an agreement to use for each license; (4) the gross revenues for each of the last three reportable years for the DIH and its Affiliates (for a small business bidding credit); (5) the combined number, if any, of commercial communications services subscribers to wireless, wireline, broadband, and cable services that the DIH and each of its Affiliates serve (along with the Federal Information Processing Standard (FIPS) numbers of each county where each entity has at least one subscriber) (for a RSP bidding credit); and (6) whether the Applicant asserts that the DIH is independently eligible for the RSP bidding credit. | **( ) Yes ( ) No** |

| | |
|---|---|
| 15b) Agreements with Other Parties and Joint Bidding Arrangements.<br><br>Between the Form 175 deadline and through the release of the auction closing public notice, has the Applicant, or any party that controls or is controlled by the Applicant, entered into any partnerships, joint ventures, consortia, or other agreements, arrangements, and/or understandings of any kind relating to the licenses in this application, including any agreements that address or communicate directly or indirectly bids (including specific prices), bidding strategies (including the specific licenses on which to bid or not to bid), or the post-auction market structure. If answering 'Y', proceed to item 16, check 'Add' for the Action Requested, select the type of agreement, enter the unique identifying name of the agreement, and check the appropriate block of the party(ies) to agreement for either | **(  ) Yes  (  ) No** |

| | |
|---|---|
| Entity Name or Individual Name. If filing is for an entity, enter the legal entity name. If filing is for an individual, enter the first name, middle initial, last name and suffix of the individual. Provide the FCC Registration Number of the party(ies) to the agreement. Attach an exhibit describing the terms and conditions and identifying all parties to the agreement or arrangement. | |

**16) Agreement Identifier:** Action Requested: ☐ Add ☐ Delete

Type of Agreement: ☐ Collusion-Based ☐ Designated Entity ☐Closed Bidding ☐ Bidding/Joint Bidding ☐ Joint Venture ☐ Partnership
☐ Consortium ☐ Post-Auction Market Structure ☐ Operational ☐ Transfer/Assignment
☐ Other (Description of Type of Agreement) _____

| |
|---|
| Agreement Name: |

**Party(ies) to Agreement(s)**

Action Requested: ☐ Add ☐ Delete

| | | | | |
|---|---|---|---|---|
| ☐ Entity Name: | Legal Entity Name | | | FCC Registration Number (FRN): |
| ☐ Individual Name: | First | MI | Last | Suffix |
| FCC Registration Number (FRN): | | | | |

Action Requested: ☐ Add ☐ Delete

| | | | | |
|---|---|---|---|---|
| ☐ Entity Name: | Legal Entity Name | | | FCC Registration Number (FRN): |
| ☐ Individual Name: | First | MI | Last | Suffix |
| FCC Registration Number (FRN): | | | | |

Action Requested: ☐ Add ☐ Delete

| | | | | |
|---|---|---|---|---|
| ☐ Entity Name: | Legal Entity Name | | | FCC Registration Number (FRN): |
| ☐ Individual Name: | First | MI | Last | Suffix |
| FCC Registration Number (FRN): | | | | |

**17) Additional Demographic Information (Not Required)**

Applicant Status:

☐ Minority Owned Business ☐ Rural Telephone Company ☐ Woman Owned Business

**Revenue and Asset Information**

| | |
|---|---|
| 18) Has any Revenue and Asset information changed for the Applicant, the Disclosable Interest Holder, or the Affiliate? If 'Y', explain why in an exhibit. | ( ) **Y**es **N**o |

**19) Revenue and Asset Information for the Applicant**
**Purpose (Check Modify and complete all changes different from previously filed FCC Form 175)**

☐ Modify

**Gross Revenue Disclosure Most Recent Reportable Year**

| | |
|---|---|
| 20a) Were the Applicant and any predecessors-in-interest in existence for a full year of the relevant period? If 'N', explain why in an attachment. | ( ) **Y**es **N**o |

If 'Y', provide the following information.

20b) Gross Revenues $_____(Format: 99,999.99)

20c) Year-end Date: _____(Date Format: MM/DD/YYYY)

**One Year Prior to Most Recent Reportable Year**

| | |
|---|---|
| 21a) Were the Applicant and any predecessors-in-interest in existence for a full year of the relevant period? If 'N', explain why in an attachment. | ( ) **Y**es **N**o |

If 'Y', provide the following information.

21b) Gross Revenues $_____(Format: 99,999.99)

21c) Year-end Date: _____(Date Format: MM/DD/YYYY)

**Two Years Prior to Most Recent Reportable Year**

| | |
|---|---|
| 22a) Were the Applicant and any predecessors-in-interest in existence for a full year of the relevant period? If 'N', explain why in an attachment. | ( ) **Y**es **N**o |

If 'Y', provide the following information.

22b) Gross Revenues $_____(Format: 99,999.99)

22c) Year-end Date: _____(Date Format: MM/DD/YYYY)

**Average Gross Revenue**

23) Average Gross Revenue of Reported Years: $_____(Format: 99,999.99)

**Asset Disclosure**

24) Total Assets as of Application Filing Deadline: $_____(Format: 99,999.99)

**Financial Statements**

25) Audited or Unaudited (Check One)

☐ The Applicant used audited financial statements.

☐ The Applicant used unaudited financial statements prepared in accordance with Generally Accepted Accounting Principles (GAAP) and certified by the Applicant's chief financial officer or the equivalent.

**FCC 601**
**Schedule B**

**26) Revenue and Asset Information for Each Disclosable Interest Holder (DIH) (including each of Applicant's Controlling Interests, and Affiliates of its controlling interests)**

**Purpose (Select One)**

| | | |
|---|---|---|
| ☐ Add | ☐ Modify | ☐ Delete |

**27) Disclosable Interest Holder**

| | | | | |
|---|---|---|---|---|
| Entity Name: | | | | FCC Registration Number (FRN): |
| ☐ Individual Name: First | MI | Last | Suffix | FCC Registration Number (FRN): |

**Gross Revenue Disclosure Most Recent Reportable Year**

| | |
|---|---|
| 28a) Were the Disclosable Interest Holder and any predecessors-in-interest in existence for a full year of the relevant period? If 'N', explain why in an attachment. | ( ) **Y**es **N**o |

If 'Y', provide the following information.

28b) Gross Revenues $_____(Format: 99,999.99)

28c) Year-end Date: _____(Date Format: MM/DD/YYYY)

**One Year Prior to Most Recent Reportable Year**

| | |
|---|---|
| 29a) Were the Disclosable Interest Holder and any predecessors-in-interest in existence for a full year of the relevant period? If 'N', explain why in an attachment. | ( ) **Y**es **N**o |

If 'Y', provide the following information.

29b) Gross Revenues $_____(Format: 99,999.99)

29c) Year-end Date: _____(Date Format: MM/DD/YYYY)

**Two Years Prior to Most Recent Reportable Year**

| | |
|---|---|
| 30a) Were the Disclosable Interest Holder and any predecessors-in-interest in existence for a full year of the relevant period? If 'N', explain why in an attachment. | ( ) **Y**es **N**o |

If 'Y', provide the following information.

30b) Gross Revenues $_____(Format: 99,999.99)

30c) Year-end Date: _____(Date Format: MM/DD/YYYY)

**Average Gross Revenue**

31) Average Gross Revenue of Reported Years: $_____(Format: 99,999.99)

**Asset Disclosure**

32) Total Assets as of Application Filing Deadline: $_____(Format: 99,999.99)

**Financial Statements**

33) Audited or Unaudited (Check One)

☐ The Disclosable Interest Holder (DIH) used audited financial statements.

☐ The DIH used unaudited financial statements prepared in accordance with Generally Accepted Accounting Principles (GAAP) and certified by the DIH's chief financial officer or the equivalent.

**FCC 601**
**Schedule B**

**34) Revenue and Asset Information for Each Affiliate**
**Purpose (Select One)**

| | | |
|---|---|---|
| ☐ Add | ☐ Modify | ☐ Delete |

**35) Affiliate**

| | | | | |
|---|---|---|---|---|
| Entity Name: | | | | FCC Registration Number (FRN): |
| ☐ Individual Name: First | MI | Last | Suffix | FCC Registration Number (FRN): |

**Gross Revenue Disclosure Most Recent Reportable Year**

| | |
|---|---|
| 36a) Were the Affiliate and any predecessors-in-interest in existence for a full year of the relevant period? If 'N', explain why in an attachment. | ( ) **Y**es **N**o |
| If 'Y', provide the following information.<br>36b) Gross Revenues $_____(Format: 99,999.99)<br>36c) Year-end Date: _____(Date Format: MM/DD/YYYY) | |

**One Year Prior to Most Recent Reportable Year**

| | |
|---|---|
| 37a) Were the Affiliate and any predecessors-in-interest in existence for a full year of the relevant period? If 'N', explain why in an attachment. | ( ) **Y**es **N**o |
| If 'Y', provide the following information.<br>37b) Gross Revenues $_____(Format: 99,999.99)<br>37c) Year-end Date: _____(Date Format: MM/DD/YYYY) | |

**Two Years Prior to Most Recent Reportable Year**

| | |
|---|---|
| 38a) Were the Affiliate and any predecessors-in-interest in existence for a full year of the relevant period? If 'N', explain why in an attachment. | ( ) **Y**es **N**o |
| If 'Y', provide the following information.<br>38b) Gross Revenues $_____(Format: 99,999.99)<br>38c) Year-end Date: _____(Date Format: MM/DD/YYYY) | |

**Average Gross Revenue**

39) Average Gross Revenue of Reported Years: $_____(Format: 99,999.99)

**Asset Disclosure**

40) Total Assets as of Application Filing Deadline: $_____(Format: 99,999.99)

**Financial Statements**

41) Audited or Unaudited (Check One)

☐ The Affiliate used audited financial statements.

☐ The Affiliate used unaudited financial statements prepared in accordance with Generally Accepted Accounting Principles (GAAP) and certified by the Affiliate's chief financial officer or the equivalent.

**FCC 601**
**Schedule B**

## Closed Bidding/Designated Entity Eligibility

### Total Gross Revenues for Most Recent Reportable Year

42a) Gross Revenues $_____(Format: 99,999.99)

42b) Year-end Date: _____(Date Format: MM/DD/YYYY)

### Total Gross Revenues for One Year Prior to Most Recent Reportable Year

43a) Gross Revenues: $_____(Format: 99,999.99)

43b) Year-end Date: _____(Date Format: MM/DD/YYYY)

### Total Gross Revenues for Two Years Prior to Most Recent Reportable Year

44a) Gross Revenues: $_____(Format: 99,999.99)

44b) Year-end Date: _____(Date Format: MM/DD/YYYY)

### Total Aggregate Average Gross Revenues for Designated Entity

45) Aggregate Average Gross Revenue: $_____(Format: 99,999.99)

### Total Aggregate Average Gross Revenues for Closed Bidding

46) Aggregate Average Gross Revenue: $_____(Format: 99,999.99)

### Total Assets Disclosure for Closed Bidding

47) Total Assets: $_____ (Format: 99,999.99)

**Rural Service Provider Bidding Credit**

| | |
|---|---|
| 48) Is the Applicant seeking a Rural Service Provider (RSP) bidding credit? | (  ) **Y**es **N**o |

If 'Y', in an exhibit provide the following information:

a) for the Applicant, submit the combined number of commercial communications service subscribers to wireless, wireline, broadband, and cable services that the Applicant serves and provide a list of the name(s) and the Federal Information Processing Standard (FIPS) number(s) for each county in which the Applicant has at least one commercial wireless, wireline, broadband, or cable subscriber;
b) for each of the Applicant's Affiliates, Controlling Interests, and the Affiliates of its Controlling Interests, submit the individual or entity's name, its FCC Registration Number (FRN), its relationship to the Applicant, and its combined number of commercial communications service subscribers to wireless, wireline, broadband, and cable services. For each of the Applicant's Affiliates, Controlling Interests, and the Affiliates of its Controlling Interests, also provide a list of the name(s) and the FIPS number(s) for each county in which it has at least one commercial wireless, wireline, broadband, or cable subscriber;
c) if neither the Applicant, nor any of its Affiliates, its Controlling Interests, or the Affiliates of its Controlling Interests have at least one wireless, wireline, broadband, or cable subscriber in a market for which the Applicant is applying for a license, list the market(s) in which the Applicant, its Affiliates, its Controlling Interests, and the Affiliates of its Controlling Interests have no such subscribers;
d) a detailed explanation demonstrating that: (i) the Applicant is in the business of providing commercial communications services; (ii) the Applicant serves predominantly rural areas; and (iii) the primary focus of the Applicant's business activity is the provision of services to rural areas (defined as counties with a population density of 100 or fewer persons per square mile); and
e) If the Applicant is an existing rural partnership that was providing service as of July 16, 2015, provide a detailed explanation demonstrating that each member of the partnership is independently eligible for the RSP bidding credit by providing, with respect to each member of the partnership, the same information as is required in a-d above.

## Certifications (By signing the Main Form, the Applicant certifies that the statements listed are true, complete, correct and made in good faith)

### For Applicants Claiming Eligibility as an Entrepreneur Under the General Rule

Applicant certifies that it is eligible to obtain the licenses for which it applied.

### For Applicants Claiming Eligibility as a Publicly Traded Corporation

Applicant certifies that it is eligible to obtain the licenses for which it applied and that it is complying with the definition of a Publicly Traded Corporation, as set out in the applicable FCC rules

### For Applicants Claiming Eligibility using a Control Group Structure

Applicant certifies that it is eligible to obtain the licenses for which it applied.

Applicant certifies that the Applicant's sole control group member is a pre-existing entity, if applicable.

### For Applicants Claiming Eligibility as a Designated Entity

Applicant certifies that it is eligible to obtain the licenses for which it applied.

Applicant certifies that the Applicant's sole control group member is a pre-existing entity, if applicable.

Applicant certifies that it provided all agreements or arrangements that allow a Disclosable Interest Holder that holds a ten percent or greater interest of any kind to use more than 25% of the spectrum capacity of any license(s) that will be acquired with a bidding credit.

### For Applicants Claiming Eligibility as a Rural Telephone Company

Applicant certifies that it meets the definition of a Rural Telephone Company as set out in the applicable FCC rules, and disclosed all parties to agreement(s) to partition licenses won in this auction. See applicable FCC rules.

### For Applicants Claiming Tribal Lands Bidding Credit

Applicant certifies that it will comply with the bidding credit buildout requirements and consult with the tribal government(s) regarding the siting of facilities and deployment of service on the tribal land(s) as set out in the applicable FCC rules.

### For Auction Applicants

Applicant certifies that it provided separate gross revenue information for itself, for each of Applicant's officers and directors; for each of Applicant's other Controlling Interests; for each of Applicant's Affiliates; and for each Affiliate of each of Applicant's officers, directors, and other Controlling interests.

Applicant certifies that it provided separate gross revenue and total asset information for itself, for each of Applicant's officers and directors; for each of Applicant's other Controlling Interests; for each of Applicant's Affiliates; and for each Affiliate of each Applicant's officers, directors, and other Controlling Interests.

Applicant certifies that it has provided a description of, and identified each party to, any partnerships, joint ventures, consortia, or other agreements, arrangements, or understandings of any kind relating to the licenses in this application, including any agreements that address or communicate directly or indirectly bids (including specific prices), bidding strategies (including the specific licenses on which to bid or not to bid), or the post-auction market structure, to which the Applicant, or any party that controls or is controlled by the Applicant, is a party, and which were entered into as of the Form 175 deadline and through the release of the auction closing public notice.

Applicant certifies that, except for agreements, arrangements or understandings specifically excluded under Part 1 of the Commission's rules, as of the Form 175 deadline and through the release of the auction closing public notice, the Applicant, or any party that controls or is controlled by the Applicant, did not enter any partnerships, joint ventures, consortia, or other agreements, arrangements, or understandings of any kind relating to the licenses in this application, including any agreements that address or communicate, directly or indirectly, bids, (including specific prices), bidding strategies (including the specific licenses on which to bid or not to bid), or the post-auction market structure, with: any other applicant (or any party that controls or is controlled by another applicant), with a nationwide provider that is not an applicant (or any party that controls or is controlled by such a nationwide provider); or if the applicant is a nationwide provider, with any non-nationwide provider that is not an applicant (or with any party that controls or is controlled by such a non-nationwide provider).

### For Applicants Claiming Rural Service Provider Bidding Credit Eligibility

Applicant certifies that it provided separate subscribership information for itself and for each of Applicant's Affiliates, Controlling Interests, and the Affiliates of its Controlling Interests.

### For Applicants Claiming Reserve Spectrum Eligibility

Applicant certifies that, as of the FCC Form 175 filing deadline, it met the qualification criteria to bid on the reserved license(s) for which it applies in this Form 601.

**FCC 601**
**Schedule D**

# FEDERAL COMMUNICATIONS COMMISSION

Approved by OMB
3060 - 0798
See 601 Main Form Instructions
for public burden estimate

## Information and Instructions

## Wireless Telecommunications Bureau and/or Public Safety and Homeland Security Bureau Schedule for Station Locations and Antenna Structures

Form FCC 601, Schedule D, is a supplementary schedule for use with the FCC Application for Radio Service Authorization: Wireless Telecommunications Bureau and/or Public Safety and Homeland Security Bureau, FCC 601 Main Form. This schedule is used to supply technical information for fixed transmit station locations, including antenna structures and Mobile, Temporary Fixed, Itinerant, and 6.1 Meter Control Station Locations. It is also used by geographic Licensees (all radio services, except microwave) to apply for a site-specific authorization to fulfill international coordination requirements, environmental assessment requirements or for reporting of cell transmitter stations (CTS) in the 218-219 MHz Service (when required by Part 95) or for reporting of base or fixed stations operating in excess of 1 kW ERP in the 700 MHz WCS channels (when required by Part 27). File as many schedules as necessary to describe all station locations, including antenna structures, in your application. The FCC 601 Main Form must be filed in conjunction with this schedule. This schedule is used in conjunction with the following technical data schedules:

**Note:** When required, antenna structures must be registered using FCC 854. The use of this form to supply antenna structure information does not replace the requirement to register antenna structures on the FCC 854. For more information, see our web site at http://wireless.fcc.gov/antenna, call (877) 480-3201 (TTY 717-338-2824), or visit the web at http://esupport.fcc.gov.

FCC 601, Schedule E - Technical Data Schedule for the Broadband Radio Service and Educational Broadband Service (Part 27)
**Note:** BRS and EBS may only apply for fixed, temporary fixed or mobile station locations.

FCC 601, Schedule F - Technical Data Schedule for the Cellular and Air-ground (Commercial Aviation) Radiotelephone Services (Part 22)
**Note:** Services that use Schedule F may only apply for fixed station locations.

FCC 601, Schedule G - Technical Data Schedule for the Maritime and Aviation Services (Parts 80 and 87)

FCC 601, Schedule H - Technical Data Schedule for the Private Land Mobile and Broadcast Auxiliary Land Mobile Radio Services (Parts 90 and 74)
**Note:** Part 90 Services that use Schedule H may only have a maximum of six fixed sites per call sign.

FCC 601, Schedule J - Technical Data Schedule for the Paging, Rural, Air-ground (General Aviation), and Offshore Radiotelephone Services (Part 22)

It is recommended that Schedule D be completed prior to completing any required technical data schedules.

**Note:** Some services have specific requirements and/or restrictions for some of the items on this schedule. Please refer to the instructions of the appropriate technical data schedule for service specific response requirements and restrictions.

## Schedule D Instructions

This schedule must be completed when any station location is to be added, modified, or deleted. Use as many copies of Schedule D as necessary to provide information for all stations.

**Adding a Fixed Station Location**
If you are adding a new fixed station location, complete all required items for each fixed station location being added.

**Note:** If you are adding a 6.1 Meter (20 foot) Control Station in the 470-512 MHz band, 72-76 MHz band or adding a 6.1 Meter (20 foot) Control Station that requires greater than 5 watts output power/ERP for operations in regions North of Line 'A' or in Alaska East of Line 'C', complete all required items for the control station as if adding a fixed station location. Enter location description code as "FX" in Item 3.

**Modifying a Fixed Station Location**
If you are modifying a fixed station location, in addition to Items 1, 2, and 6 (provide the seven digit FCC Antenna Structure Registration Number or FCC 854 File Number), complete only the items that have changed for each fixed station location. If the modification is to delete existing data, enter CLR (clear) in the appropriate field (manual filed forms only). If the modification involves technical data filed on one of accompanying FCC Technical Data Service Schedules E, F, G, H, or J, or involves the relocation of a fixed station, then Items 26

and 27 (if applicable) must also be completed. If modifying a fixed station location in the Broadband Radio Services or the Educational Broadband Services, also complete items 23 & 28.

**Adding a Mobile, Temporary Fixed, Itinerant, or 6.1 Meter Control Station Location**

If you are adding a new mobile station, temporary fixed station, itinerant station, or 6.1 meter control station, complete all required items for each station to be added.

> **Note:** If you are adding a 6.1 Meter (20 foot) Control Station in the 470-512 MHz band, 72-76 MHz band or adding a 6.1 Meter (20 foot) Control station that requires greater than 5 watts output power/ERP for operations in regions North of Line 'A' or in Alaska East of Line 'C', complete all required items for the control station as if adding a fixed station location. Enter location description code as "FX" in Item 3.

**Modifying a Mobile, Temporary Fixed, Itinerant, or 6.1 Meter Control Station Location**

If you are modifying a station, in addition to Items 1, and 2, complete only the items that have changed for each station. If the modification is to delete existing data, enter CLR (clear) in the appropriate field (manual filed forms only). If the modification involves technical data filed on one of accompanying FCC Technical Data Service Schedules E, G, H, or J, or involves the relocation of a control station, then Items 26 and 27 (if applicable) must also be completed. If modifying a station in the Broadband Radio Services or the Educational Broadband Services, complete items 23 & 28 also.

**Deleting a Station Location**

If you are deleting a station location, only Items 1, 2, 7 and 8 are required, if applicable. If a station location is deleted, the frequency, emission, and all related technical data that is linked to that station location will automatically be deleted and will no longer be part of your authorization. Therefore, it is not necessary to complete the complementary technical data service schedule to delete frequency and emissions when a station location is deleted using this schedule. Station locations that are currently licensed under the call sign by the FCC will continue to be shown on the Authorization as is, unless a specific action is requested.

**IMPORTANT ANTENNA STRUCTURE REGISTRATION INFORMATION:** The Commission will evaluate your application for a fixed location based on the FCC Antenna Structure Registration Number or FCC 854 File Number you provide (if required). If you mistype your FCC Antenna Structure Registration Number or FCC 854 File Number, or provide location data (latitude, longitude, elevation, and structure heights) that is inconsistent with the data found in the Commission's Antenna Structure Registration database, your application will be dismissed.

Inconsistent data is defined as follows:

1. Latitude and Longitude data provided on Schedule D differs from the data in the Antenna Structure Registration database by more than 1 second; or
2. The height or elevation reported on Schedule D is more than 0.5 meters (1.5. feet) greater than the data in the Antenna Structure Registration Database; or elevation is more than 3 meters (9.8 feet) less than the elevation listed in the Antenna Structure Registration Database.

**IMPORTANT INFORMATION REGARDING LOCATION, ANTENNA, AND CONTROL POINT NUMBERS:** To identify existing locations, antennas, or control points, you must use the location, antenna, and control point numbers assigned by the Universal Licensing System (ULS). These numbers may not be identical to the location, antenna, and control point numbers on your current authorization if that authorization was not issued by the Universal Licensing System. If you are unsure of the location, antenna, or control point number that corresponds to a particular location, antenna, or control point, you can query the ULS for the most up-to-date information regarding your authorization. To query the ULS license database for your call sign, point your web browser to http://wireless.fcc.gov/uls/ and click on the Search - Licenses. Alternatively, you may call (877) 480-3201 (TTY 717-338-2824) for assistance.

Item 1 This item must be completed. It indicates the action the Applicant wants the FCC to take on the specified location. Enter 'A' for Add, 'M' for Modify, or 'D' for Delete.

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, Antenna, and Control Point Numbers. For a new station 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.

Item 3 Enter the appropriate location description for the specified location. Valid location description codes are listed below:

FX - Fixed
MO - Mobile
IT - Itinerant
TF - Temporary Fixed
6.1 - 6.1 Meter Control Station

**Note**: For '**IQ**' radio service only, leave item 3 blank as the Location Description is not required.

Item 4 Does not apply if Item 3 equals FX. For Mobile, Temporary Fixed, Itinerant, and 6.1 Meter Control Stations, enter the appropriate area of operation code using the table that follows. Additional Schedule D fields must be completed according to the area of operation code chosen. Refer to the table to determine which additional fields are required on Schedule D for the chosen area of operation code. Only one area of operation code may be selected for each location.

**Note:** If area of operation will cover multiple counties/boroughs/parishes, use area of operation code 'O' and in Item 24, specify all applicable counties/boroughs/parishes in and the state(s) the counties/boroughs/parishes are located in.

**Area of Operation Codes and Required Data Values**

| Code Description | Additional Schedule D Data Elements Required for each Area of Operation Code | Item Numbers |
|---|---|---|
| A KMRA* around a Fixed location (option not available to Maritime or Aviation Services) | Fixed Location Number, Temporary Fixed or Mobile Radius | 17, 18 |
| P KMRA* around a Center point | Latitude, Longitude, City**, State, County/Borough/Parish**, Temporary Fixed or Mobile Radius | 7, 8, 10, 11, 12, 18 |
| R Rectangular Area of Operation | Latitude, Longitude, Maximum Latitude, Maximum Longitude | 7, 8, 21, 22 |
| N Nationwide including Hawaii Alaska & US Territories | | |
| U Continental US | | |
| C County/Borough/Parish Wide Area of Operation | State, County/Borough/Parish | 11, 12 |
| S Statewide Area of Operation | State | 11 |
| O Other | Description (should include State) | 24 |
| X Land Mobile Control Station Meeting the 6.1 Meter Rule | State, County/Borough/Parish | 11, 12 |

*Kilometers Radius
** Complete as applicable - refer to instructions for applicability.

Item 5 This item is optional. Enter a location name that describes the location (up to 20 characters maximum).

Item 6 This item is required for fixed 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 854R) or the FCC 854 File Number. 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 854. The use of this FCC 601 to supply antenna structure information does not replace the requirement to register antenna structures on the FCC 854. For more information, see our web site at http://wireless.fcc.gov/antenna, call (877) 480-3201 (TTY 717-338-2824), or you may visit the web at http://esupport.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 an attachment to your application.

Items 7 and 8 For fixed locations, if you entered 'N/A'; in Item 6, you must enter the geographic coordinates (latitude and longitude) of the location. If you provided an FCC Antenna Structure Registration Number or an FCC 854 File Number in Item 6, then these items are optional (see Important Antenna Structure Registration Information on page 2 of these instructions). For all other 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 21 and 22 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 72, minutes (*MM*) can range from 0 to 59, and seconds (*SS.S*) can range from 0 to 59.9. If desired, seconds may be rounded to the nearest tenth of a second (in which case, use the format DD-MM-SS.S). In the right corner, specify the direction as either N for North or S for South.

Enter the longitude using the format *DDD-MM-SS*, where the degrees (*DDD*) term can have a value in the range of 64 to 180, minutes (*MM*) can range from 0 to 59, and seconds (*SS.S*) can range from 0 to 59.9. If desired, seconds may be rounded to the nearest tenth of a second (in which case, use the format DDD-MM-SS.S). In the 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 Fixed Location, you must complete Items 9 through 12. If you provided an FCC Antenna Structure Registration Number or an FCC Form 854 File Number in Item 6 for a Fixed Location, you must complete Item 12, County/Borough/Parish name.

Item 9 This item must be completed for the Fixed Location. Enter a complete description of the 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.

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

Item 11 This item must be completed with the State code in which the station is located. Refer to FCC 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 or equivalent entity in which the station is located unless any of the following pertain to the Fixed 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, enter the equivalent entity (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 or equivalent entity and State are located in a bordering County/Borough/Parish or equivalent entity and/or State, enter a complete description of the location in Item 9 as shown in the example. Complete Item 10 if a City, Town or Village within the station's County/Borough/Parish or equivalent entity is nearby, and complete Items 11 and 12 with the County/Borough/Parish or equivalent entity and State in which the coordinates are actually located.

Example:
9) (Street) Summit Mtn near Palo Verde, Imperial County, CA
10) (City) Palo Verde
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', 'S', or 'X' was entered in Item 4, enter the State of the location in this item (if 'X' was entered in Item 4, enter the State of the primary control station). Refer to FCC 601 Main Form Instructions, Appendix II, for a list of valid state, jurisdiction, and area codes.

Item 12 If 'C', 'P' or 'X' was entered in Item 4, enter the County/Borough/Parish or equivalent entity of the location in this item.

This item is always required for area of operation code 'C'.

This item is 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), or (b) the State entered in Item 11 is 'GM' (Gulf of Mexico).

This item is required for area of operation code 'X' for Radio Service Codes IK or YK utilizing frequencies below 470 MHz 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), or (b) 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 Fixed Location, you must complete Items 13-16. If you provided an FCC Antenna Structure Registration Number or FCC 854 File Number in Item 6 for a Fixed Location, Items 13-16 are optional. (See Important Antenna Structure Registration Information on Page 2 of Schedule D Instructions.)

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 7 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.

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, flag pole, 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 7 of these Instructions.

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 7 of these instructions.

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 |
| BANT | Building with Antenna on Top |
| BMAST | Building with Mast |
| BPIPE | Building with Pipe |
| BPOLE | Building with Pole |
| BRIDG | Bridge |
| BTWR | Building with Tower |
| GTOWER | Guyed structure used for communication purposes |
| LTOWER | Lattice Tower |
| MAST | Mast |
| MTOWER | Monopole |
| NNGTANN* | Guyed Tower Array |
| NNLTANN* | Lattice Tower Array |
| NNMTANN* | Monopole Array |
| PIPE | Any type of Pipe |
| POLE | Any type of Pole |
| 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.) |
| 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., 3GTA2 would identify the second tower in a three tower array).

Item 17 If you entered Area of Operation code 'A' in Item 4, enter the location number of the corresponding fixed location.

Item 18 For Area of Operation codes 'A' or 'P', enter the radius of the area of operation. Enter in kilometers, rounded to the nearest tenth. Refer to CFR 47 for limitations.

Item 19 Applicable to Aviation Services (Part 87) only. Enter the three or four character code assigned to the airport (if applicable).

Item 20 This item only applies when Item 3 equals FX and Item 1 is 'A' or 'M'. If Commission's rules recognize Primary and Secondary protection in conjunction with other fixed site facilities in the service, enter 'P' if you wish primary protection for the site or 'S' if you wish no protection for the site. If Commission's rules do not recognize Primary and Secondary protection in conjunction with other fixed site facilities in the service, Item 20 can be left blank. Refer to the applicable Commission's Rules for your service for more information on Primary and Secondary protection.

Items 21 and 22 These items must be completed for 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 21 and 22. See Notes in Items 7 and 8 of these instructions for important information regarding coordinates.

Item 23 Respond to this Item only if Item 3 is MO, TF, IT or 6.1. Does not apply when Item 3 equals FX. This item helps the FCC to determine if it will initiate coordination procedures with Canada. If any part of the mobile 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 Canada, this should be attached as an exhibit, which references Schedule D Item 23. If 'N' is entered, the FCC will not initiate coordination procedures with Canada and your area of operation will be excluded from these border areas. Appendix I in FCC 601 Main Form Instructions contains a link to current agreements with Canada by frequency, and also contains a list of counties/boroughs, by state, having areas within the various coordination zones. (If the county/borough has an 'X' in the block then enter 'Y'. If the county/borough doesn't have an 'X' then enter 'N'. If the county/borough has an 'X' and a 'P', this indicates part of the county/borough requires frequency coordination with Canada then enter 'Y' or 'N' depending on whether or not you intend on operating in the border area.)

**NOTE:** For ED and BR radio services, enter 'Y' if you propose to operate in a Canadian border area. Otherwise, enter 'N'.

Item 24 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 24. The use of 'Other' should only be used if the area of operation cannot be described by using codes A, P, R, C, S, N, or U. Area of operation provided as 'Other' may delay processing of the application.

Item 25 This item is applicable only if you are applying for an area of operation in services other than Land Mobile (public or private), Broadcast Auxiliary Land Mobile Radio, Broadband Radio Service, or Educational Broadband Service. Enter the number of units for each type listed: Hand Held, Mobile, Temporary Fixed, Aircraft, and Itinerant. For paging systems (Part 22), provide the number of subscribers (in mobiles) along with the number of temporary fixed transmitters.

Item 26 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). This item must be answered, either 'Y' or 'N'.

Enter 'Y' if an FCC grant of this application will have a significant environmental effect. 47 CFR § 1.1307 lists categories of environmental effects for which Applicants must file an environment 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 47 CFR § 1.1310

Item 27a Applicants filing for a new or modified fixed station located in one of the Quiet Zone areas listed below must notify the proper authority and indicate the date such notification was sent in Item 27a.
Applicants proposing to modify other technical parameters (including, but not limited to frequency, power, antenna height, etc.) of their system operations, where the station is currently authorized to operate within the quiet zone area, must also notify the proper authority and indicate the date such notification was sent in Item 27a.
*See* Part 1, Subpart F of the FCC Rules (47 CFR § 1.924)

Item 27b If the Applicant has obtained prior written consent from the Quiet Zone entity for the technical parameters specified in the application, enter "Y" and include a copy of the consent as a Quiet Zone Consent attachment. If prior written consent has not been obtained, enter "N".

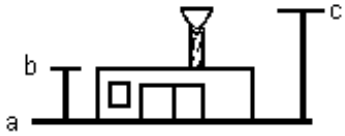
Quiet Zone areas:

1. National Radio Astronomy Observatory, Green Bank, Pocohontas County, West Virginia. The quiet zone is located within Virginia, West Virginia, and Garrett County, Maryland and bounded by N 39 degrees 15' 0.4" on the north, W 78 degrees 29' 59.0" on the east, N 37 degrees 30' 0.4" on the south, and W 80 degrees 29' 59.2" on the west. Contact the Director, National Radio Astronomy Observatory, P. O. Box 2, Green Bank, WV 24944.

2. Arecibo Observatory, Puerto Rico. The quiet zone consists of the Puerto Rico, Desecheo, Mona, Vieques, and Culebra islands. Contact the Interference Office, Arecibo Observatory, Post Office Box 53995, Arecibo, Puerto Rico 00612, or electronically at prcz@naic.edu.

Item 28 For ED and BR radio services, enter 'Y' if you propose to operate in a Mexican border area. Otherwise, enter 'N'.

**Antenna Structure Figure Examples**



**FCC 601**
**Schedule D**

# Wireless Telecommunications Bureau and/or Public Safety and Homeland Security Bureau Schedule for Station Locations and Antenna Structures

Approved by OMB
3060 - 0798
See 601 Main Form Instructions for public burden estimate

| | | | |
|---|---|---|---|
| 1) Action Requested: ( ) **A**dd **M**od **D**el | | 2) Location Number**:** | |
| 3) Location Description**:** | 4) Area of Operation Code**:** | 5) Location Name**:** | |
| 6) FCC Antenna Structure Registration Number, FCC 854 File Number or N/A: | | | |
| 7) Latitude (DD-MM-SS.S): **NAD83** ( ) N or S | | 8) Longitude (DDD-MM-SS.S)**:** **NAD83** ( ) E or W | |
| 9) Street Address, Name of Landing Area, or Other Location Description: | | | |
| 10) City: | 11) State**:** | 12) County/Borough/Parish: | |
| 13) Elevation of Site AMSL (meters) ('a' in antenna structure example)**:** | 14) Overall Ht AGL Without Appurtenances (meters) ('b' in antenna structure example)**:** | 15) Overall Ht AGL With Appurtenances (meters) ('c' in antenna structure example)**:** | |
| 16) Support Structure Type: | | | |
| 17) Location Number: (only for Area of Operation Code 'A') | 18) Radius (km): | 19) Airport Identifier: | 20) Site Status: |
| 21) Maximum Latitude (DD-MM-SS.S): **NAD83** **Use for rectangle only (Northwest corner)** ( ) N or S | | 22) Maximum Longitude (DDD-MM-SS.S)**:** **NAD83** **Use for rectangle only (Northwest corner)** ( ) E or W | |
| 23) Do you propose to operate in an area that requires frequency coordination with Canada? ( ) **Y**es **N**o | | | |
| 24) Description: (only for Area of Operation Code 'O') | | | |
| 25) Number of Units: ____Hand Held_____Mobile ____Temporary Fixed ___Aircraft ___Itinerant | | | |
| 26) Would a Commission grant of Authorization for this location be an action which may have a significant environmental effect? *See* 47 CFR § 1.1307. If 'Yes', submit an environmental assessment as required by 47 CFR §§ 1.1308 and 1.1311. ( ) **Y**es **N**o | | | |
| 27a) If the site is located in one of the Quiet Zones listed in Item 27b of the Instructions, provide the date (mm/dd/yyyy) that the proper Quiet Zone entity was notified:_____/____/_____ | | | |
| 27b) Has the Applicant obtained prior written consent from the proper Quiet Zone entity for the same technical parameters that are specified in this application? ( ) **Y**es **N**o | | | |
| 28) Do you propose to operate in an area that requires frequency coordination with Mexico? ( ) **Y**es **N**o | | | |

**FCC 601**
**Schedule E**

# FEDERAL COMMUNICATIONS COMMISSION

Approved by OMB
3060 - 0798
See 601 Main Form Instructions
For public burden estimate

## Information and Instructions

## Schedule for the
## Broadband Radio Service and Educational Broadband Service
## (Part 27)

Form FCC 601, Schedule E, is a supplementary schedule for use with the FCC Application for Radio Service Authorization: Wireless Telecommunications Bureau and/or Public Safety and Homeland Security Bureau, FCC 601 Main Form. This schedule is used to add, modify, or delete geographic service area channels and/or site-specific technical data. Site-specific technical data should be provided to fulfill international coordination requirements, environmental assessment requirements or quiet zone requirements. You must have a valid geographic license (call sign) in the Broadband Radio Service (BRS) or the Educational Broadband Radio Service (EBS) prior to filing site-based technical data.

## Schedule E
## Instructions

**GEOGRAPHIC SERVICE AREA DATA**

**Transition Area (BTA Number)**
Item 1 Enter the Basic Trading Area (BTA) Number for this filing. *See* 47 CFR § 27.6.

**Channel Plan/Channel Number Information**
Item 2 This item indicates the action the filer wants the FCC to take on the specified channel plan and channel number. Enter 'A' for Add, 'M' for Modify, or 'D' for Delete.

Item 3 Enter 'O' for old channel plan or 'N' for new channel plan. *See* 47 CFR § 27.5.

Item 4 Enter the channel number based on the channel plan entered in item 3. *See* 47 CFR § 27.5.

**SUPPLEMENT 1**

**SITE-SPECIFIC TECHNICAL DATA**

To fulfill international coordination requirements, environmental assessment requirements or quiet zone requirements, you must file technical information for each fixed location, including the antenna structures and/or each hand/held mobile transmit location, or temporary fixed station location using FCC 601, Schedule D, Schedule for Station Locations and Antenna Structures. It is recommended that you complete Schedule D prior to completing Schedule E.

**IMPORTANT INFORMATION REGARDING LOCATION and ANTENNA NUMBERS:** To identify existing locations and antennas, you must use the location and antenna numbers assigned by the Universal Licensing System (ULS). These numbers may not be identical to the location and antenna numbers on your current authorization if that authorization was not issued by the Universal Licensing System. If you are unsure of the location and antenna number that corresponds to a particular location or antenna, you can query the ULS for the most up-to-date information regarding your authorization. To query the ULS license database for your call sign, point your web browser to http://wireless.fcc.gov/uls and click on Search - Licenses. Alternatively, you may call (877) 480-3201 (TTY 717-338-2824) for assistance.

**ANTENNA INFORMATION**
This section must be completed only when antenna information is to be added, modified, or deleted. If you are adding a new antenna, complete Items 1-11 for each antenna to be added. If you are modifying an existing antenna, in addition to Items 1, 2, and 3, complete only the items that have changed for the antenna. If you are deleting an antenna, only Items 1, 2, and 3 are required. Antennas 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 section.

Item 1 This item indicates the action the filer wants the FCC to take on the specified antenna. Enter 'A' for Add, 'M' for Modify, or 'D' for Delete.

Item 2 For each location, enter its corresponding location number, as entered on Schedule D Item 2. If the location has been previously licensed under this call sign by the FCC, enter the FCC-assigned location number (see above Important Information Regarding Location and Antenna Numbers). Otherwise, enter the code assigned on Schedule D to represent the location. Refer to the instructions for Schedule D for more information on assigning location numbers.

Item 3 If the antenna has been previously licensed under this call sign by the FCC, enter the antenna's FCC-assigned number (see above Important Information Regarding Location and Antenna Numbers). Otherwise, enter a temporary code to represent each antenna. The temporary code should begin with an A to indicate it is an antenna and end with a number to uniquely identify it (e.g., A1, A2 and A3). A single location can have multiple antennas. Antenna numbers need only be unique within each location. The FCC will assign an official number to the new antenna, which will appear on the Authorization and in the ULS database.

**Note:** Location number (Item 2) and antenna number (Item 3) are used to associate information in the Antenna Information Section with information in the Frequency Channel Information Section. To do this, enter the necessary technical information into the Antenna Information Section using the appropriate location number and antenna number. Then, enter the necessary technical information in Frequency Channel Information Section for that antenna, using the same location number/antenna number pair. Each antenna specified in the Frequency Channel Information Section must have corresponding data in the Antenna Information Section.

Item 4 Enter the name of the manufacturer of the transmitting antenna.

Item 5 Enter the model number of the transmitting antenna.

Item 6 Enter the height above ground level to the center of the final radiating element. Enter this item in meters, rounded to the nearest tenth. For a parabolic dish antenna, this is the height to the center of the dish. In all cases, the height should not exceed the overall height of the structure with appurtenances.

Item 7 Enter the azimuth of the transmit antenna in degrees (rounded to one decimal place) clockwise from True North. For omni-directional antennas, enter '360'.

Item 8 Enter the beamwidth (degrees, rounded to one decimal place) of the transmitting antenna. That is, enter the angular distance between the half power points of the antenna's major lobe in the horizontal plane. For omni-directional antennas, enter '360'.

Item 9 Indicate transmitter antenna polarization with the following codes:

E – Elliptical
F – 45 degrees H –
Horizontal J –
Linear
L – Left-hand circular
R – Right-hand circular
S – Horizontal and vertical
T – Right and left-hand circular
V – Vertical
X – Other (provide a description in an attachment)

For linear polarization other than horizontal or vertical, the polarization should be stated in degrees measured from the vertical, with angles between 1 and +89 degrees denoting the outgoing electric field vector displacement in the clockwise direction, and angles between -1 and -89 degrees denoting the outgoing electric field vector displacement in the counterclockwise direction.

Item 10 Enter the gain of the transmitting antenna over an isotropic radiator in dBi, rounded to one decimal place.

Item 11 Specify the amount of nonstandard transmitter antenna beam tilt of the transmitter, if any, accurate to the nearest 1/10th of a degree; i.e., beam tilt in addition to that incorporated into the antenna design.

**FREQUENCY INFORMATION**

This section must be completed only when frequencies are to be added, modified, or deleted for a specific location. If you are adding a new frequency, complete all items in this section for each frequency to be added. If you are modifying a frequency (i.e., changing from one

operating frequency to a different operating frequency), enter the existing and new frequencies in the appropriate boxes in Item 15. If you are modifying attributes of an existing frequency, in addition to Items 12 through 15, complete only the items that have changed for the frequency. In order to modify an Emission Designator (Item 18), complete Items 12-15, specifying the appropriate location number, antenna number, and frequency listing **all** active emission designators now associated with the specified location, antenna, and frequency (complete as many rows as necessary, listing emission designators in Item 18). If you are deleting a frequency, only Items 12 through 15 are required. Frequencies 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 section. Enter frequency information for each antenna specified in the Antenna Information Section. For multiple frequency lines, repeat the location number/antenna number combination for each frequency.

Item 12 This item indicates the action the filer wants the FCC to take on the specified antenna. Enter 'A' for Add, 'M' for Modify, or 'D' for Delete.

Item 13 Enter the corresponding location number, as entered in Item 2 of the Antenna Information Section of this Schedule.

Item 14 Enter the corresponding antenna number, as entered in Item 3 of the Antenna Information Section of this Schedule.

Items 15(a) and 15(b) Enter one frequency or one frequency band per line. Enter frequencies in MHz. The requested frequencies must be available in the Commission's rules governing the radio service in which you are seeking eligibility. Use a separate line for each frequency or frequency band.

To add frequencies on an antenna at a location, enter the specific frequency in the column labeled 'New" in item 15(a). If applying for a frequency band, show the lower and upper frequencies in the box labeled "New" in items 15(a) and (b).

To modify a frequency or frequency band on an antenna at a location, enter the existing frequency in the column labeled 'Existing' and enter the new frequency or frequency band in Items 15(a) and (b) labeled 'New'.

To modify a frequency on an antenna at a location, enter the existing frequency in the column labeled 'Existing' and enter the new frequency in the column labeled 'New'.

Item 16 Specify the associated visual carrier frequency offset, if any. Allowable offsets are "+" (plus), "-" (minus) and "0" (zero). Leave the offset box empty if no frequency offset is proposed.

Item 17 Enter the Effective Isotropic Radiated Power (EIRP), in dBm rounded to one decimal place, radiated off the transmitting antenna.

Item 18 Enter the transmitter emission designator, composed of its necessary bandwidth and emission type. (*See* 47 CFR §§ 2.201 and 2.202 for further information on emission and bandwidth designation.)

Item 19 For digital systems, digital modulation type is required.

FCC 601
Schedule E

# Schedule for the Broadband Radio Service and Educational Broadband Service (Part 27)

Approved by OMB
3060 - 0798
See 601 Main Form Instructions
For public burden estimate

## GEOGRAPHIC SERVICE AREA DATA

### 1) Transition Area (BTA Number)

| |
|---|
| BTA Number |
| BTA Number |
| BTA Number |
| BTA Number |

### Channel Plan/Channel Number Information

| 2)Action (A/M/D) | 3)Channel Plan (Old or New) | 4)Channel Number |
|---|---|---|
| | | |
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**FCC 601**
**Schedule E**

**Schedule for the**
**Broadband Radio Service and Educational Broadband Service**
**(Part 27)**

Approved by OMB
3060 - 0798
See 601 Main Form Instructions
For public burden estimate

## Supplement 1

# SITE-SPECIFIC TECHNICAL DATA

## Antenna Information

| 1) Action (A/M/D) | 2) Location Number | 3) Antenna Number | 4) Transmitter Antenna Manufacturer | 5) Transmitter Antenna Model Number | 6) Transmitter Antenna Center Line (meters- AGL) | 7) Transmitter Antenna Azimuth (degrees) | 8) Transmitter Antenna Beamwidth (degrees) | 9) Transmitter Antenna Polarization | 10) Transmitter Antenna Gain (dBi) | 11) Transmitter Antenna BeamTilt (degrees) |
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## Frequency Information

| 12) Action (A/M/D) | 13) Location Number | 14) Antenna Number | 15a) Lower or Center Frequency (MHz) | 15b) Upper Frequency (MHz) | 16) Offset | 17) EIRP (dBm) | 18) Emission Designators | 19) Digital Modulation Type |
|---|---|---|---|---|---|---|---|---|
| | | | Existing (if mod) | | | | | |
| | | | New | | | | | |
| | | | Existing (if mod) | | | | | |
| | | | New | | | | | |
| | | | Existing (if mod) | | | | | |
| | | | New | | | | | |
| | | | Existing (if mod) | | | | | |
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| | | | Existing (if mod) | | | | | |
| | | | New | | | | | |
| | | | Existing (if mod) | | | | | |
| | | | New | | | | | |

**FCC 601**
**Schedule E**

Approved by OMD
3060 - 0798
See 601 Main Form Instructions
For public burden estimate

## Supplement 2

## UU Radio Service
### Channel Swapping Information

| Original License Information | | | | | |
|---|---|---|---|---|---|
| Call Sign | Market Code | Old Channel Block | Old Frequency | New Channel Block | New Frequency |
| | | | | | |
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| Information on Items Selected For Channel Swap | | | | | |
|---|---|---|---|---|---|
| Call Sign | Market Code | Old Channel Block | Old Frequency | New Channel Block | New Frequency |
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**FCC 601**
**Schedule F**

# FEDERAL COMMUNICATIONS COMMISSION

Approved by OMB
3060 - 0798
See 601 Main Form Instructions
for public burden estimate

## Information and Instructions

## Technical Data Schedule for the Cellular and Air-ground (Commercial Aviation) Radiotelephone Services (Part 22)

Form FCC 601, Schedule F, is a supplementary schedule for use with the FCC Application for Radio Service Authorization: Wireless Telecommunications Bureau and/or Public Safety and Homeland Security Bureau, FCC 601 Main Form. This schedule is used to apply for an authorization to operate a radio station, amend a pending application, or modify an existing license in the Cellular Radiotelephone and Commercial Air-ground Radiotelephone Services. Additionally, this schedule is used by auction winners that must file site-specific technical data for international coordination or for an environmental assessment of a particular site. The FCC 601 Main Form must be filed in conjunction with this schedule.

You must file technical information for each location and antenna structure using FCC 601, Schedule D, Schedule for Station Locations and Antenna Structures. It is recommended that you complete Schedule D prior to completing Schedule F.

**IMPORTANT INFORMATION REGARDING LOCATION, ANTENNA, SECTOR, AND CONTROL POINT NUMBERS:** To identify existing locations, antennas, sectors, or control points, you must use the location, antenna, sector, and control point numbers assigned by the Universal Licensing System (ULS). These numbers might not be identical to the location, antenna, sector, and control point numbers on your current authorization if that authorization was not issued by the ULS. If you are unsure of the location, antenna, sector, or control point number that corresponds to a particular location, antenna, sector, or control point, you can query the ULS for the most up-to-date information regarding your authorization. To query the ULS license database for your call sign, point your web browser to http://wireless.fcc.gov/uls and click on Search - Licenses. Alternatively, you may call (877) 480-3201 (TTY 717-338-2824) for assistance.

## Schedule F
## Instructions

**Cellular Unserved Area Information**

Item 1 Indicate if this is a New or Modification application for the Cellular Radiotelephone Service. If the application is claiming Unserved Area, complete Items 2 through 5 as applicable. If this application is for a new license won in an FCC auction, do not file FCC 601 Schedule F. Instead, file Form FCC 601 Schedule B along with the FCC 601 Main Form.

Item 2 Enter the market(s) in which the Unserved Area is located and list the markets contained within the proposed Service Area Boundaries. Market designators are listed in the FCC Public Notices. Only one Cellular Geographic Service Area (CGSA) may be included on an application (but a CGSA may cover more than one Cellular Market Area (CMA)).

Item 3 Enter the market name of the market designator listed in Item 2.

Item 4 Enter the sub-market designator only if the market has been subdivided. Sub-market designators are listed in the FCC Public Notices.

Item 5 Enter the applicable channel block, either 'A' or 'B'.

**Control Points**

This section must be completed only when a control point is to be added, modified, or deleted. If you are adding a new control point, complete all items in this section for each control point to be added. If you are modifying an existing control point, in addition to Items 6 and 7, complete only the items that have changed for each control point. If you are deleting a control point, only Items 6 and 7 are required. Control Points 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 section.

Item 6 This item indicates the action the filer wants the FCC to take on the specified control point. Enter 'A' for Add, 'M' for Modify, or 'D' for Delete.

Item 7 If the control point has been previously licensed under this call sign by the FCC, enter its FCC-assigned control point number (see Important Information Regarding Location, Antenna, and Control Point Numbers on page 1 of these instructions). For a new control point, assign a temporary code to represent the control point. The assigned code should begin with C to indicate it is a control point and end with a number to uniquely identify it (e.g., C1, C2, C3, etc.). The FCC will assign an official number to the new control point, which will appear on the Authorization.

Item 8 Enter the street address, city or town, county/borough/parish or equivalent entity, and state of the control point. Refer to FCC 601 Main Form Instructions, Appendix II, for a list of valid state, jurisdiction, and area abbreviations.

Item 9 Enter the telephone number, including area code, where a person responsible for operation of the station or system could be reached.

**Commercial Aviation Air-ground Technical Parameters (Antenna Data)**

This section must be completed by Commercial Air-ground Applicants when antennas are to be added, modified, or deleted. If you are adding new antennas, complete all items in this section for each antenna to be added. If you are modifying an existing antenna, in addition to Items 10, 12, and 13, complete only the items that have changed for each antenna. If you are deleting antennas, only Items 10, 12, and 13 are required. Technical parameters 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 section.

Item 10 This item indicates the action the filer wants the FCC to take on the specified antenna. Enter 'A' for Add, 'M' for Modify, or 'D' for Delete.

Item 11 Enter the channel block of the requested ground station (1-10). Refer to the Commission's rules for Commercial Aviation Air-ground Radiotelephone Services for more information on channel blocks and their assigned frequencies.

Item 12 For each antenna structure, enter its corresponding location number, as entered on Schedule D Item 2. If the location has been previously licensed under this call sign by the FCC, enter the FCC-assigned location number (see Important Information Regarding Location, Antenna, and Control Point Numbers on page 1 of these instructions). Otherwise, enter the code assigned on Schedule D to represent the location. Refer to the instructions for Schedule D for more information on assigning location numbers.

Item 13 If the antenna has been previously licensed with the Commission, enter the antenna's FCC-assigned number (see Important Information Regarding Location, Antenna, and Control Point Numbers on page 1 of these instructions). Otherwise, enter a temporary code to represent each antenna. The assigned code should begin with an A to indicate it is an antenna and end with a number to uniquely identify it (e.g., A1, A2, A3, etc.). A single location can have multiple antennas. Antenna numbers need only be unique within each location. The FCC will assign an official number to the new antenna, which will appear on the Authorization.

Item 14 This item reports the actual height at which the antenna is mounted. Enter this item in meters, rounded to the nearest tenth.

Item 15 This item reports the maximum effective radiated power (ERP) of the facility in any direction on the specified channel. The value must be stated in watts.

**Cellular Radial Data**

This section must be completed by Cellular Service applicants when adding a new location, modifying the radial data for an existing location, or amending the radial data proposed in a pending application.

**For PSD operations:**

If you are adding a new location, complete items 16–21. If you are modifying data or amending a pending application, complete Items 16, 17, 19 and only those items that you are proposing to change. Applicants must attach a required exhibit in accordance with 47 CFR § 22.911(c).

**For Non-PSD operations:**

If you are adding a new location, complete items 16–18 and 22–27. If you are modifying existing radial data or amending a pending application, complete Items 16, 17, 22 and only those items that you are proposing to change. Radial data 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 section. Applicants must propose one set of radial data for each antenna used at a location. If a sectorized antenna system (i.e. multiple antennas) is to be used, you may submit separate radial data for each of the antenna sectors, or alternatively submit one set of radial data representing the composite antenna pattern for the sector antennas. If separate antenna systems are used for the control channels and voice channels, submit the radial data for the antenna system that establishes the largest service area boundary (SAB).

Item 16 This item indicates the action the filer wants the FCC to take on the data of the specified antenna or sector. Enter 'A' for Add, 'M' for Modify, or 'D' for Delete.

Item 17 For each antenna structure, enter its corresponding location number, as entered on Schedule D Item 2. If the location has been previously licensed under this call sign by the FCC, enter the FCC-assigned location number (see Important Information Regarding Location, Antenna, and Control Point Numbers on page 1 of these instructions). Otherwise, enter the code assigned on Schedule D to represent the location. Refer to the instructions for Schedule D for more information on assigning location numbers.

Item 18 This item indicates whether the applicant is using the non-PSD methodology (under 47 CFR § 22.911(a) or 22.911(b)), or the PSD methodology (under 47 CFR § 22.911(c)).

**Items 19–21 pertain to PSD operations:**

Item 19 If the sector has been previously licensed with the Commission, enter the sector's FCC-assigned number (see Important Information Regarding Location, Antenna, Sector and Control Point Numbers on page 1 of these instructions for Schedule F). Otherwise, the FCC will assign an official number to the new sector, which will appear on the Authorization. A single location can have multiple sectors. Sector numbers need only be unique within each location.

Item 20 This item reports the maximum ERP in watts/MHz per sector (for applicants that determine their CGSA using a PSD methodology).

Item 21 If this location contributes to the CGSA, and you are requesting that the CGSA boundary be determined using a PSD methodology, confirm that the required exhibit has been attached in accordance with 47 CFR § 22.911(c) (or, if "N/A", attach an exhibit explaining the circumstances).

**Items 22-27 pertain to Non-PSD operations**

Item 22 If the antenna has been previously licensed with the Commission, enter the antenna's FCC-assigned number (see Important Information Regarding Location, Antenna, Sector and Control Point Numbers on page 1 of these instructions for Schedule F). Otherwise, the FCC will assign an official number to the new antenna, which will appear on the Authorization. A single location can have multiple antennas. Antenna numbers need only be unique within each location. Sectorized antenna systems represented with a composite antenna pattern and single set of radial data should be reported as a single antenna.

Item 23 This item reports the maximum ERP in watts per emission (for applicants that determine their CGSA using a non-PSD methodology).

Item 24 If this location contributes to the CGSA, and you are requesting that the CGSA boundary be determined using an alternative methodology as set forth in 47 CFR § 22.911(b) (non-PSD), enter 'Y'. Otherwise enter 'N'. If you respond 'Y' to this item, you must attach an exhibit explaining the circumstances.

Item 25 This item reports (for non-PSD operations) the height of the antenna center of radiation above the average terrain elevation (AAT) along each of the eight cardinal radials. Enter this item in meters, rounded to the nearest tenth.

Item 26 This item reports, in watts (for non-PSD operations), the effective radiated power (ERP) along each of the eight cardinal radials.

Item 27 This item reports (for non-PSD operations) the distance to the Cellular Geographic Service Area (CGSA) produced from the specified antenna. This item should only be reported for those radials that establish the CGSA boundary. Therefore, some azimuths may not have entries. Enter this item in kilometers rounded to the nearest tenth.

**Certification**

By signing the FCC 601 Main Form, Cellular Applicants certify compliance with 47 CFR § 22.913 and all other applicable Commission rules.

**FCC 601**
**Schedule F**

# Technical Data Schedule for the Cellular and Air-ground (Commercial Aviation) Radiotelephone Services (Part 22)

Approved by OMB
3060 - 0798
See 601 Main Form Instructions
for public burden estimate

**Cellular Unserved Area Information**

1) Identify whether this is a New or Modification application for Unserved Area. ( ) Yes ( ) No

If claiming Unserved Area, complete Items 2 through 5, as applicable.

| 2) Market Designator | 3) Market Name | 4) Sub-Market Designator | 5) Channel Block |
|---|---|---|---|
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**Control Points**

| 6) Action **A/M/D** | 7) Control Point Number | 8) Location Street Address, City or Town, County/Borough/Parish, State | 9) Telephone Number |
|---|---|---|---|
| | | | |
| | | | |
| | | | |

**Commercial Air-ground Technical Parameters (Antenna Data)**

| 10) Action **A/M/D** | 11) Channel Block | 12) Location Number | 13) Antenna Number | 14) Height to Tip of Antenna AGL (meters) | 15) Maximum ERP (watts) |
|---|---|---|---|---|---|
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## Cellular Radial Data

| | |
|---|---|
| 16) Action: ( ) **A**dd **M**odify **D**elete | 17) Location Number: |

18) Identify whether this is a New or Modification application using the non-PSD methodology (in accordance with 47 CFR § 22.911(a) or (b)), or using the PSD methodology (in accordance with 47 CFR § 22.911(c)).
( ) Non-PSD
( ) PSD

19) Sector Number:

20) Provide the Maximum ERP in watts/MHz (per sector) if the PSD option for determining the CGSA was selected under Item 18 of this Schedule F.

Watts/MHz

21) If this location/PSD sector contributes to the CGSA, and you are requesting that the CGSA boundary be determined using the PSD methodology (in accordance with 47 CFR § 22.911(c)), have you attached the required exhibit? If "N/A", attach an exhibit explaining the circumstances.
( ) Yes
( ) No
( ) N/A – Not applicable

22) Antenna Number:

23) Provide the Maximum ERP in watts (per emission) if the Non-PSD option for determining the CGSA was selected under Item 18 of this Schedule F.

Watts

24) If this location/Non-PSD antenna contributes to the CGSA, are you requesting that the CGSA boundary be determined using an alternative methodology under 47 CFR § 22.911(b) (non-PSD)? If 'Yes', attach an exhibit explaining the circumstances.
( ) **Y**es **N**o

25-27) If this location contributes to the CGSA and you are requesting that the CGSA boundary be determined using the Non-PSD methodology (in accordance with 47 CFR § 22.911(a) or (b)), please provide the following information:

| Azimuth (degrees from true north) | 25) Antenna Height AAT (meters) | 26) Transmitting ERP (watts) | 27) Distance to CGSA (kilometers) |
|---|---|---|---|
| 0° | | | |
| 45° | | | |
| 90° | | | |
| 135° | | | |
| 180° | | | |
| 225° | | | |
| 270° | | | |
| 315° | | | |

I certify that the proposed Cellular base or repeater stations comply with the ERP limits and all other applicable requirements in the Commission's rules, including 47 CFR § 22.913.

**FCC 601**
**Schedule G**

# FEDERAL COMMUNICATIONS COMMISSION

Approved by OMB
3060 - 0798
See 601 Main Form Instructions
for public burden estimate

## Information and Instructions

## Technical Data Schedule for the Maritime and Aviation Services (Parts 80 and 87)

Form FCC 601, Schedule G, is a supplementary schedule for use with the FCC Application for Radio Service Authorization: Wireless Telecommunications Bureau and/or Public Safety and Homeland Security Bureau, FCC 601 Main Form. This schedule is used to apply for an authorization to operate a land station in the Maritime Service or a ground station in the Aviation Service, as defined in 47 CFR, Part 80 or Part 87, respectively. It is also used to amend a pending application or modify an existing license in these services. Additionally, this schedule is used by auction winners that must file site-specific technical data for international coordination or for an environmental assessment of a particular site. The FCC 601 Main Form must be filed in conjunction with this schedule.

You must file technical information for each fixed location, including the antenna structures and/or each hand held/mobile transmit location, temporary fixed station location, or itinerant station, using FCC 601, Schedule D, Schedule for Station Locations and Antenna Structures. It is recommended that you complete Schedule D prior to completing Schedule G.

The following instructions apply when filing Schedule D in tandem with this schedule:

Maritime coast and aviation ground stations may not submit an application that includes both fixed and mobile locations in the same application package (one application package being an FCC 601 Main Form and any associated schedules). Separate application packages must be submitted for fixed and mobile operations.

Schedule D Item 17 This item does not apply to Maritime Coast and Aviation Ground stations.

Schedule D Item 25 Each mobile location can contain only one occurrence of a unit type. For example, if a number of units are entered for 'Hand Held', then all other unit types should be blank. 'Hand Held', 'Mobile', and 'Temporary Fixed' unit types are applicable to any Maritime and Aviation service. 'Aircraft' and 'Itinerant' choices are only applicable to flight test stations.

**IMPORTANT INFORMATION REGARDING LOCATION, ANTENNA, AND CONTROL POINT NUMBERS**: To identify existing locations, antennas, or control points, you must use the location, antenna, and control point numbers assigned by the Universal Licensing System (ULS). These numbers may not be identical to the location, antenna, and control point numbers on your current authorization if that authorization was not issued by the Universal Licensing System. If you are unsure of the location, antenna, or control point number that corresponds to a particular location, antenna, or control point, you can query the ULS for the most up-to-date information regarding your authorization. To query the ULS license database for your call sign, point your web browser to http://wireless.fcc.gov/uls and click on Search - Licenses. Alternatively, you may call (877) 480-3201 (TTY 717-338-2824) for assistance.

# Schedule G
## Instructions

**Station Class**

Item 1 Enter the appropriate station class code from one of the following tables. There are separate tables for Maritime Service and Aviation Service Stations.

For **Maritime Service**, select the station class code from the following table:

**MC Service**

Marine Utility…….FCU
Maritime Receiver Test……...MRT
Maritime Support-Testing and Training……FCA
Private Coast……FCL
Public Coast……..FC
Shore Radar Test…….MSC
Shore Radiolocation Test……RLC

**MK Service**

Alaska Private ..... APX
Alaska Public..... APC

**MR Service**

Shore Radionavigation..... MSR
Shore Radionavigation/RACON ..... RLR

**MA Service**

Marine Operational Fixed..... MFX

**Note:** Where appropriate, follow each code with 1 for Hand Held/Mobile operations or 2 for Temporary operations.

For **Aviation Service**, select the station class code from the following tables:

**AF Service**

Aeronautical Advisory ..... (Unicom) FAA
Aeronautical Enroute..... FA
Aeronautical Fixed ..... AX
Aeronautical Multicom..... MFL
Aircraft (Flight Test Stations only) ..... FMA1
Aircraft Data Link Land Test……...DLT
Airport Control Tower ..... FAC
Automatic Weather Observation ..... FAB
Aviation Support Instructional ..... FAS
Aviation Support Service..... FLU
Flight Information Services..... FIS
Flight Information Services with Hand Held/Mobile Operations . FIS1
Flight Information Services for Temporary Operations..... FIS2
Flight Test ..... FAT
Remote Communications Outlet ..... RCO
Ground Communications Outlet..... GCO
Ramp Control..... RPC

**AA Service**

Aeronautical Search and Rescue..... SAR
Aeronautical Utility Mobile..... MOU1
Operational Fixed..... AOX

**AR Service**

Aeronautical Marker Beacon..... RLA
Aeronautical Radio Beacon..... RLB
Audio Visual Warning System……..AVW
Differential Global Positioning System (GPS) ..... DGP
ELT Test ..... ELT
Glide Path (Slope)..... RLG
Localizer..... RLL
Omnidirectional Radio Range ..... RLO

Radar/Radar Test..... RLD
Radionavigation Land ..... RNV
Radionavigation Land Test ..... RLT
Universal Access Transceiver.....UAT

**Note:** Where appropriate, follow each code with 1 for Mobile operations, 2 for Temporary operations, or (for flight test stations only) 3 for Itinerant operations.

Item 2 This item must be answered 'Y' for the following station classes:

Aeronautical Advisory
Aeronautical Enroute/Fixed
Airport Control Tower Stations, Remote Communications Outlet, and Ground Communications Outlets

For all other station classes, leave this item blank.

Item 3 This item must be answered by all Applicants for public coast and Alaska public fixed stations. Otherwise, leave this item blank.

Item 4 This item must be answered by Applicants for Aeronautical Radionavigation stations (AR Service, if applicable). Provide the FAA assigned station identifier of the Aeronautical Radionavigation station, if known.

Item 5 This item must be answered by all Applicants for Aeronautical Fixed stations (station class code = 'AX') and Aircraft Data Link Land Test stations (station class code = 'DLT'). AX applicants must provide the call sign of the Aeronautical Enroute station that is associated with the Aeronautical Fixed station for which they are applying (if the Aeronautical Enroute station application has not yet been granted enter "P" in this item). DLT applicants must provide the call sign(s) of the Aeronautical Enroute station(s) whose licensee provided written permission for co-channel operation in the same area.

## Control Points

This section must be completed only when a control point is to be added, modified, or deleted. If you are adding a new control point, complete all items in this section for each control point to be added. If you are modifying an existing control point, in addition to Items 6 and 7, complete only the items that have changed for each control point. If you are deleting a control point, only Items 6 and 7 are required. Control points 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 section.

Item 6 This item indicates the action the filer wants the FCC to take on the specified control point. Enter 'A' for Add, 'M' for Modify, or 'D' for Delete.

Item 7 Enter the FCC-assigned control point number (see Important Information Regarding Location, Antenna, and Control Point Numbers on page 1 of these instructions). For a new control point, assign a temporary code to represent the control point. The assigned code should begin with C to indicate it as a control point and end with a number to uniquely identify it (e.g., C1, C2, C3, etc.). The FCC will assign an official number to the control point, which will appear on the Authorization.

Item 8 Enter the street address, city or town, county/borough/parish or equivalent entity, and state of the control point. Refer to FCC 601 Main Form Instructions, Appendix II, for a list of valid state, jurisdiction, and area abbreviations.

Item 9 Enter the telephone number (including area code) where a person responsible for operation of the station or systems could be reached.

## Antenna Information

This section must be completed only when antennas are to be added, modified, or deleted. If you are adding a new antenna, complete all items for each antenna to be added. If you are modifying an existing antenna, in addition to Items 10, 11, and 12, complete only the items for the antenna that have changed. If you are deleting an antenna, only Items 10, 11, and 12 are required. Antennas 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 section.

Item 10 This item indicates the action the filer wants the FCC to take on the specified antenna. Enter 'A' for Add, 'M' for Modify, or 'D' for Delete.

Item 11 For each antenna, enter its corresponding location number, as entered on Schedule D Item 2. If the location has been previously licensed under this call sign by the FCC, enter the FCC-assigned location number (see Important Information Regarding Location, Antenna, and Control Point Numbers on page 1 of these instructions). Otherwise, enter the code assigned on Schedule D to represent the location. Refer to the instructions for Schedule D for more information on assigning location numbers.

Item 12 If the antenna has been previously licensed under this call sign by the FCC, enter the antenna's FCC-assigned number (see Important Information Regarding Location, Antenna, and Control Point Numbers on page 1 of these instructions). Otherwise, enter a temporary code to represent each antenna. The assigned code should begin with an A to indicate it is an antenna and end with a number to uniquely identify it (e.g., A1, A2, A3, etc.) A single location can have multiple antennas. Antenna numbers need only be unique within each location. The FCC will assign the new antenna an official number, which will appear on the Authorization. If using hand held transmitters, consider all hand held transmitters at a given location to be one antenna.

**Note:** Location number (Item 11) and antenna number (Item 12) are used to associate information in the Antenna Information Section with information in the Frequency Information Section. To do this, enter the necessary information into the Antenna Information Section using the appropriate location number and antenna number. Then, enter the necessary information in the Frequency Information Section for that antenna, using the same location number/antenna number pair. Each antenna specified must have corresponding frequency information.

Item 13 Enter the ratio (decibels) of the power required at the input of a loss-free reference antenna to the power supplied to the input of the given antenna to produce, in a given direction, the same field strength or the same power-flux density at the same distance. This information should be available from the specification sheet included with the antenna at the time of purchase.

Item 14 Enter the angle in the horizontal plane of the transmitting antenna main lobe measured clockwise with respect to True North in degrees, or enter '360' to indicate that the transmitting antenna is omni-directional.

Item 15 Enter the actual height from the ground to the tip of the antenna. Enter this item in meters, rounded to the nearest tenth.

Item 16 Enter the approximate attenuation, including any padding, to the nearest tenth of a dB, between the point at which the power output of the transmitter is measured for type-acceptance/notification approval and the input to the antenna. If this value is less than 1 dB, leave this item blank. For power splits, the power reduction for a particular path will be considered the loss.

Item 17 Enter the Half Power Beamwidth (Aeronautical Enroute HF and Public Coast HF stations only).

Item 18 Enter the Receive Zone (Aeronautical Enroute HF and Public Coast HF stations only).

## Frequency Information

This section must be completed only when frequencies are to be added, modified, or deleted. If you are adding new frequencies, complete all items for each frequency to be added. If you are modifying a frequency (i.e., changing from one operating frequency to a different operating frequency), enter the existing and new frequencies in the appropriate boxes in Item 22. If you are modifying existing attributes of frequencies, complete all items for each frequency to be modified. In order to modify an Emission Designator (Item 26), complete Items 19 - 22, specifying the appropriate location number, antenna number, and frequency, and list **all** active emission designators now associated with the specified location, antenna, and frequency (complete as many rows as necessary, listing emission designators in Item 26). If you are deleting frequencies, only Items 19 through 22 are required. Frequencies 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 section.

**Note:** If station class FAC (for Airport Control Tower) was entered in Item 1, complete Items 19, 20, 21, 22b, 22c, 23, 24, and 26 on page 4 of this schedule. All station classes except FAC complete Items 19, 20, 21, 22a, 23, 24, 25, and 26 on page 3 of this schedule. For multiple frequency lines, repeat the location number/antenna number combination for each frequency. For example:

| Location | Antenna | Frequency | Location | Antenna | Frequency (MHz) |
|---|---|---|---|---|---|
| F1 | A1 | XXXXX.XXXX | F1 | A2 | BBBBB.BBBB |
| F1 | A1 | YYYYY.YYYY | F2 | A1 | CCCCC.CCCC |
| F1 | A2 | AAAAA.AAAA | F2 | A1 | DDDDD.DDDD |

Item 19 This item indicates the action the filer wants the FCC to take on the specified antenna. Enter 'A' for Add, 'M' for Modify, or 'D' for Delete.

Item 20 For each antenna structure, enter its corresponding location number, as entered in Item 11 of the Antenna Information Section of this schedule.

Item 21 For each antenna, enter its corresponding antenna number, as entered in Item 12 of the Antenna Information Section of this schedule.

Item 22a **(All station classes except Airport Control Tower/FAC)** To add frequencies on an antenna at a location, enter the specific frequencies in Megahertz (MHz) in the row labeled 'New' of the column labeled 'Lower' for each location and antenna on which the frequency is to be located. The requested frequencies must be available in the Commission's rules governing the radio service in which you are seeking eligibility. If applying for a single-sideband frequency, show carrier frequency only. If applying for a frequency band, show the lower and upper frequencies in the row labeled 'New' of appropriate columns for each location and antenna on which the frequency is to be located. Use a separate line for each frequency or frequency band. For Aviation Ground Radionavigation (Navaids), Automatic Weather Observation/Automatic Surface Observation, Remote Communication Outlet, Ground Communications Outlet, Ramp Control stations or Audio Visual Warning Systems (frequency band 1300-1350): if frequency is not known, you may leave Item 22a blank. With the exception of Audio Visual Warning Systems Items 23, 24, and 26 **must** be completed..

If multiple frequencies are being added to one location, complete as many lines as necessary, repeating the location number in Item 20 and the antenna number in Item 21 for each frequency added. A separate line needs to be completed for each frequency if there are multiple emissions, multiple antenna tips, etc. To do this, complete as many lines for each frequency as necessary, repeating the location number in Item 20, the antenna number in Item 21, the frequency in the column labeled 'New" of Item 22a, and the remaining technical information for each frequency line, as appropriate.

To modify a frequency or frequency band on an antenna at a location, you must complete Items 19-21 and enter the existing frequency or frequency band in the frequency row of Item 22a labeled 'Existing' and enter the new frequency or frequency band in the frequency row of Item 22a labeled 'New'.

Item 22b **(Station Class Airport Control Tower/FAC only)** To add frequencies on an antenna at a location; enter the specific frequencies in Megahertz (MHz), if known in the column labeled 'New" of Item 22b. The requested frequencies must be available in the Commission's rules governing the radio service in which you are seeking eligibility. Use a separate line for each frequency.

If multiple frequencies are being added to one location, complete as many lines as necessary, repeating the location number in Item 20 and the antenna number in Item 21 for each frequency added. A separate line needs to be completed for each frequency if there are multiple emissions, multiple antenna tips, etc. To do this, complete as many lines as for each frequency as necessary, repeating the location number in Item 20, the antenna number in Item 21, the frequency in the column labeled 'New' of Item 22b, and the remaining technical information for each frequency line, as appropriate.

To modify a frequency on an antenna at a location, you must complete Items 19-21 and enter the existing frequency in the column of Item 22b labeled 'Existing' and enter the new frequency in the frequency column of Item 22b labeled 'New'.

Item 22c **(Station Class FAC only)** Enter one of the following frequency type codes for each requested frequency:

- **L** Local Control
- **G** Ground Control
- **E** Emergency (121.5 MHz) - List this frequency **only** if you wish to transmit on the frequency 121.5 MHz. Do not list the frequency if you intend to **monitor only**. If you wish to be exempt from the monitoring requirement, you must submit your exemption request as an attachment to this form.
- **O** Other - Use this code for ATIS (Automatic Terminal Information Service) and any other frequency not defined above.

If a Local Control, Ground Control, or Other frequency has not yet been reserved by FAA, you may leave Item 22b blank. However, you must complete a line for each requested frequency (Items 19, 20, 21, 22c, 23, 24, 25, 26).

Item 23 Enter the maximum transmitter output power in watts.

Item 24 Enter the Proposed Hours of Operation (Public Coast, Public Fixed, and Airport Control Tower stations only). The format of proposed hours of operation is hhmm – hhmm ("hh" is the number of complete hours which have passed since midnight (00 to 24) and "mm" is the number of complete minutes that have passed since the start of the hour (00 to 59)). (i.e., from 9:00am through 5:00pm would be 0900 – 1700)

Item 25 Enter the Operational Altitude (Aeronautical Enroute VHF stations only).

Item 26 Enter the emission designator for each station. The new ITU (International Telecommunications Union) emission designators may be used in place of the old designators. The following are samples of the corresponding new ITU designators for the most commonly used emission designators.

**Note:** These are samples only and do not necessarily represent an emission for which you should apply.

| | **Old** | **New** |
|---|---|---|
| Frequency modulated (FM) voice | 16F3 | 16K0F3E |
| Frequency modulated (FM) voice | 13.6F3 | 13K6F3E |
| Frequency modulated digitized voice | 20F3Y | 20K0F1E |

| | | |
|---|---|---|
| Frequency modulated digitized non-voice | 20F9Y | 20K0F1D |
| Amplitude modulated single sideband voice | 2.8A3J | 2K80J3E |
| Amplitude modulated (AM) voice | 6A3 | 6K00A3E |

**FAA Coordination Information**

Item 27 This item must be completed if the filer has specified any of the following station classes in Item 1 and is requesting a new or modified station license:

Aviation Support (121.950 MHz only)
Airport Control Tower
Radionavigation Land (all Navigational Aids)
Radionavigation Land Test (RLT)
AWOS/ASOS (Automatic Weather Observation/Automatic Surface Observation)
Remote Communications Outlet
Ground Communications Outlet
Ramp Control
Aeronautical Utility Mobile (1090 MHz)
Audio Visual Warning System (1300-1350 MHz)

Enter the FAA regional office to where the notification was sent and the date that the FAA was notified. The Federal Aviation Administration (FAA) must be notified that this application in is being submitted. Notification to the FAA must be made prior to filing of this application. Applications submitted without the required FAA notification will be returned to the Applicant without action.

**Certifications**

Indicate the certifications that pertain to the type of station for which this application is being filed. By signing the Main Form filed in conjunction with this schedule, the Applicant certifies that the statements listed in this section are true, complete, correct, and made in good faith.

**International Registration Information**

As a signatory party to international treaty agreements, the FCC performs certain actions regarding the use of radio. The technical details of your station parameters may be reported to the International Telecommunications Union, Geneva, Switzerland, and to countries that border on or in close proximity to the United States. This information along with data reported by other nations will be used to protect reported stations and aid in resolution of interference disputes between Licensees in different countries.

Certain marine coast stations, because of their geographic location, would be best protected by provision of additional information. Specifically, this includes any proposed station which is located in the region north of Line 'A', or in the State of Alaska east of Line 'C'. Refer to the Commission's rules for a detailed explanation of Lines A and C. Appendix I in FCC 601 Main Form Instructions contains a list of counties/boroughs, by state, having areas North of Line A and East of Line C.

Unless advised to the contrary, the FCC will make certain assumptions which reflect the typical fixed or temporary fixed VHF marine coast station. Carefully review the list below with respect to your particular situation. If you believe that these assumptions would leave your station insufficiently protected, provide the actual station parameters in Schedule G, Items 32 through 35, using Items 28 through 31 to identify the locations, antennas, and frequencies. If you do not provide the actual data and an interference problem arises involving another country's station, your station will be protected only to the limit of the FCC's assumptions.

**The following station parameters will be assumed unless otherwise stated:**

Item 32 **Antenna Azimuth of Main Lobe.** The FCC will report each fixed or temporary fixed VHF marine coast station as having an omnidirectional (360) azimuth.

Item 33 **Beamwidth.** Where an omnidirectional antenna is assumed, beamwidth has no relevance, and therefore, no assumed value will be used.

Item 34 **Antenna Polarization.** All stations will be reported as having antennas with vertical polarization.

Item 35 **Antenna Gain.** The antenna gain for all fixed and temporary fixed VHF marine coast stations will be assumed to be 6 dB.

**FCC 601**
**Schedule G**

# Technical Data Schedule for the Maritime and Aviation Services (Parts 80 and 87)

Approved by OMB
3060 - 0798
See 601 Main Form Instructions for public burden estimate

| |
|---|
| 1) Station Class: |
| 2) For Ground only, will the service of the station be available to any aircraft desiring to use it? ( )**Y**es **N**o |
| 3) For Coast only, will this station be open to Public Correspondence? ( )**Y**es **N**o |
| 4) For Aeronautical Radionavigation stations only, provide the Station Identifier (if you have one): |
| 5) For Aeronautical Fixed stations or Aircraft Data Link Land Test Stations, provide the call sign of the associated Aeronautical Enroute Station for Aeronautical Fixed stations or the call sign(s) of the consenting Aeronautical Enroute Station(s) in the area for Aircraft Data Link Land Test Stations: |

**Control Point(s) (Other than at the transmitter)**

| 6) Action **A/M/D** | 7) Control Point Number | 8) Location Street Address, City or Town, County/Borough/Parish, State | 9) Telephone Number |
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**Antenna Information**

| 10) Action **A/M/D** | 11) Location Number | 12) Antenna Number | 13) Antenna Gain (dBi) | 14) Azimuth of Major Lobe $^{o}$ East of True North (if directional antenna used) | 15) Antenna Ht to Tip (meters) | 16) Transmission Line Loss | 17) Half Power Beamwidth (degrees) | 18) Receive Zone |
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**Frequency Information**

**A) All Station Classes complete except: Airport Control Tower/FAC (See Frequency Information part B).**

| 19) Action **A/M/D** | 20) Location Number | 21) Antenna Number | 22a) Frequency (MHz) Lower / Upper (if band) | 23) Maximum Power Output (watts) | 24) Proposed Hours of Operation | 25) Operational Altitude | 26) Emission Designator |
|---|---|---|---|---|---|---|---|
| | | | Existing (if mod)<br>New | | | | |
| | | | Existing (if mod)<br>New | | | | |
| | | | Existing (if mod)<br>New | | | | |
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| | | | Existing (if mod)<br>New | | | | |
| | | | Existing (if mod)<br>New | | | | |
| | | | Existing (if mod)<br>New | | | | |

## FAA Coordination Information

27) Applicants for a new or modified Aviation Support (121.950 MHz), Control Tower, RCO, Radionavigation Land, Radionavigation Land Test, AWOS/ASOS, Aeronautical Utility Mobile (1090 MHz), or Audio Visual Warning System (1300-1350 MHz) must provide the following information:

FAA Regional Office Notified:_____Date Notified: _____

**B) Complete only if requested frequencies are for Airport Control Tower/FAC Station Class**

| 19) Action **A/M/D** | 20) Location Number | 21) Antenna Number | 22b) Frequency (MHz) | | 22c) Frequency Type **L/G/E/O** | 23) Maximum Power Output (watts) | 24) Proposed Hours of Operation | 26) Emission Designator |
|---|---|---|---|---|---|---|---|---|
| | | | Existing (if mod) | New | | | | |
| | | | Existing (if mod) | New | | | | |
| | | | Existing (if mod) | New | | | | |
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| | | | Existing (if mod) | New | | | | |

## FAA Coordination Information

27) Applicants for a new or modified Aviation Support (121.950 MHz), Control Tower, RCO, Radionavigation Land, Radionavigation Land Test, AWOS/ASOS, Aeronautical Utility Mobile (1090 MHz), or Audio Visual Warning System (1300-1350 MHz) must provide the following information:

FAA Regional Office Notified:_____Date Notified: _____

**International Registration Information - Additional Technical Information**

| 28) Action **A/M/D** | 29) Location Number | 30) Antenna Number | 31) Frequency (MHz) | 32) Azimuth (degrees) | 33) Beamwidth (degrees) | 34) Polarization | 35) Gain (dBi) |
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## Certifications

**Private Coast station and Marine Utility station certification. Check all that apply.**

I certify that I am:

( ) Seeking authorization in an area having a recognized frequency coordinating committee (Southern California Marine Radio Council, North Pacific Marine Radio Council) and the committee has endorsed the use of the frequency(ies) and location(s) requested.

( ) Regularly engaged in the operation, docking, direction, construction, repair, servicing or management of one or more commercial transport vessels or U.S., state or local government vessels; or, responsible for the operation, control, maintenance, or development of a harbor, port, or waterway used by commercial transport vessels; or responsible for the operation of bridges, structures, or other installations that are part of, or directly related to, a harbor, port, or waterway when the operation of such facilities requires radio communications with vessels for safety or navigation.

( ) Engaged in furnishing a ship arrival and departure service; or, a corporation furnishing a nonprofit radio communication service to its parent corporation, a subsidiary of the parent, or its own subsidiary, where the party to be served is eligible for a private coast or marine utility station license; or, a nonprofit corporation or association organized to furnish a maritime mobile service solely to persons who operate one or more commercial transport vessels.

( ) A person controlling public mooring facilities; or, a yacht club with moorage facilities.

( ) A person servicing or supplying vessels other than commercial transport vessels; or, a nonprofit organization providing noncommercial communications to vessels other than commercial transport vessels.

**Operational Fixed station certification.**

( ) I certify that I am the Licensee of a coast or ground station and no other suitable telecommunications facilities are available to satisfy coast or ground station requirements.

**Maritime Support station certification.**

( ) I certify that I intend to use this authorization to train personnel associated with the maritime service, or to test, demonstrate, or maintain ship or coast radio equipment.

**Aeronautical Fixed station certification**.

( ) I certify that I am the Licensee of an associated aeronautical enroute station and that adequate land line facilities are not available to fulfill this communications need.

**Aeronautical Advisory station (Unicom) certification.**

( ) I certify that the station will be located on the property of the airport to be served and, in cases where the airport does not have a control tower, RCO, or FAA flight service station, that I have notified the owner of the airport and all aviation service organizations located at the airport within ten days prior to application.

**Aeronautical Search and Rescue station certification.**

( ) I certify that I am a governmental entity or private organization chartered to perform aeronautical search and rescue functions.

**Flight Test station certification. Check all that apply.**

I certify that I am:

( ) Applying for UHF frequencies and request use of them in support of a contract with the U.S. Government.

( ) A manufacturer of aircraft or major aircraft components.

( ) A parent corporation or its subsidiary if either corporation is a manufacturer of aircraft or major aircraft components.

( ) An educational institution or person primarily engaged in the design, development, modification, and flight test evaluation of aircraft or major aircraft components.

**Aviation support station certification. Check all that apply.**

I certify that I am:

( ) The operator of a flight school.

( ) An operator of lighter than air aircraft.

( ) Engaged in soaring or free ballooning.

( ) The operator of an airport or aviation service organization located on an airport.

**Radiodetermination station certification. Check all that apply**.

( ) The FAA is not prepared to render the service for which I am applying.

( ) I am engaged in the development, manufacture, or maintenance of aircraft radionavigation equipment.

( ) I intend to establish the proposed facility at an airport for the use of the public.

( ) I am engaged in the testing, manufacture, or design of ELTs or I train personnel in the operation and location of ELTs.

**Civil Air Patrol station certification.**

( ) I certify that I represent Wings or the Headquarters of the Civil Air Patrol.

**Aeronautical Enroute/122.825 or 122.875 MHz Certification**.

( ) I certify that this station will provide communications only to aircraft with a maximum capacity of up to 56 passengers or carrying up to 18,000 lbs. of cargo.

**Aeronautical Utility Mobile certification. Check all that apply.**

( ) I certify that I have a need to routinely operate a ground vehicle on the airport movement area.

( ) I certify that I am the airport owner or operator, or a state of local governmental agency; or I have obtained permission from the airport owner/operator to operate a vehicle on the airport movement area.

( ) I certify that I have obtained an agreement from the Air Traffic Manager of the airport control tower that approves the requested use of the local control (tower) or RCO frequency.

**FCC 601**
**Schedule H**

# FEDERAL COMMUNICATIONS COMMISSION

Approved by OMB
3060 - 0798
See 601 Main Form Instructions
for public burden estimate

## Information and Instructions

## Technical Data Schedule for the Private Land Mobile and Land Mobile Broadcast Auxiliary Radio Services (Parts 90 and 74)

Form FCC 601, Schedule H, is a supplementary schedule for use with the FCC Application for Radio Service Authorization: Wireless Telecommunications Bureau and/or Public Safety and Homeland Security Bureau, FCC 601 Main Form. This schedule is used to apply for an authorization to operate a radio station in the Private Land Mobile and Land Mobile Broadcast Auxiliary Radio Services, as defined in 47 CFR, Parts 90 and 74. It is also used to amend a pending application or modify an existing license in these services. Additionally, this schedule is used by auction winners that must file site-specific technical data for international coordination or for an environmental assessment of a particular site. The FCC 601 Main Form must be filed in conjunction with this schedule.

You must file technical information for each fixed location, including the antenna structures and/or each hand held/mobile transmit location, temporary fixed station location, itinerant station, or 6.1 meter control station location using FCC 601, Schedule D, Schedule for Station Locations and Antenna Structures. It is recommended that you complete Schedule D prior to completing Schedule H.

**IMPORTANT INFORMATION REGARDING LOCATION, ANTENNA, AND CONTROL POINT NUMBERS:** To identify existing locations, antennas, or control points, you must use the location, antenna, and control point numbers assigned by the Universal Licensing System (ULS). These numbers may not be identical to the location, antenna, and control point numbers on your current authorization if that authorization was not issued by the Universal Licensing System. If you are unsure of the location, antenna, or control point number that corresponds to a particular location, antenna, or control point, you can query the ULS for the most up-to-date information regarding your authorization. To query the ULS license database for your call sign, point your web browser to http://wireless.fcc.gov/uls and click on Search - Licenses. Alternatively, you may call (877) 480-3201 (TTY 717-338-2824) for assistance.

## Schedule H
## Instructions

**Eligibility**

Item 1 Enter the number and paragraph of the FCC Rule Section that describes the eligibility for the radio service you specified in Item 1 of the FCC 601 Main Form.

Item 2 Provide a statement that clearly indicates your qualifications for the chosen service. This statement should include:

(1) A general description of your business or activity;
(2) A description of how the radio will be employed in this activity;
(3) Any other information you believe will aid in a determination of your eligibility for the service requested.

**Frequency Coordinator Information**

Items 3-6 These items will be completed by the appropriate certified frequency coordinators for those Applicants who are required to comply with the frequency coordination requirements. Broadcast Auxiliary Applicants who have notified their local frequency coordination committee should enter the name of the frequency coordinator, telephone number, including area code, of the person contacted, and date coordinated (Item 3 may be left blank).

Item 7 Enter 'Y' if this application has been successfully coordinated. Otherwise enter 'No'.

**Extended Implementation (Slow Growth)**

Item 8 If you are applying for an extended implementation period in which to construct and place a system in operation or requesting a modification to an existing extended implementation schedule, enter 'Y'. Otherwise enter 'N'. If you answer 'Y' to this question, you must submit an exhibit containing a justification for the extended implementation and a detailed implementation plan. Check applicable FCC rules for eligibility for extended implementation plans (e.g., 47 CFR §§ 90.155(b) and 90.629).

**Note:** To modify an authorization with a regular construction period to one with an extended implementation period, you should file FCC 601 Main Form with the purpose of MD - Modification and, enter 'Y' for Item 8 of FCC 601 Schedule H, and attach supporting documentation. Do not file FCC 601 Schedule L - Waiver Request for Extension of Time for Wireless Services to request an extended implementation period.

**Associated Call Signs**

Item 9 List any call signs that are part of the system and licensed separately.

**Broadcast Auxiliary Only**

Items 10-14 apply only to the Land Mobile Broadcast Auxiliary Radio Services, LP, LV and RP.

If there is an associated Broadcast Parent station, Items 10 through 12 must be completed. If there is more than one Parent station, select one for the purpose of filing this application. Actions taken on the Broadcast Parent station identified in Item 10 will similarly affect the Broadcast Auxiliary Station (i.e., renewal, assignment of authorization, cancellation, etc.).

Item 10 If there is an associated Broadcast Parent station, enter the Facility Identification Number. This identification number is typically a 5 digit number assigned by the FCC's Media Bureau. This is **not** the Call Sign of the Parent station.

Item 11 Enter the Radio Service Code of the Broadcast Parent station. The Parent Station Radio Service Code must be AM, FM or TV.

Item 12 Enter the City and State of the Parent Station's principal community.

Items 13-14 If there is no associated Broadcast parent station, enter the appropriate code for the Applicant and the State of primary operation.

A – Cable Network Entity
B - Broadcast Network Entity
C - Television Cable Operator
L - Large Venue Owner or Operator
M - Motion Picture Producer
P - Professional Sound Company
T - Television Producer

Note: If you enter L or P as the appropriate code, include on an attachment to your application the following certification and sign and date the certification: "The applicant hereby certifies that it routinely uses 50 or more low power auxiliary station devices, where the use of such devices is an integral part of major events or productions." *See* 47 CFR § 74.832(e).

**Control Points**

This section must be completed for a primary control point. If you are adding a new control point, complete all items in this section for each control point to be added. If you are modifying a control point, in addition to Items 15 and 16, complete only the items that have changed for each control point. If you are deleting a control point, only Items 15 and 16 are required. Control points 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 section.

Item 15 This item indicates the action the filer wants the FCC to take on the specified control point. Enter 'A' for Add, 'M' for Modify, or 'D' for Delete.

Item 16 Enter the FCC-assigned control point number (see Important Information Regarding Location, Antenna, and Control Point Numbers on page 1 of these instructions). For a new control point, assign a temporary code to represent the control point. The assigned code should begin with C to indicate it as a control point and end with a number to uniquely identify it (e.g., C1, C2, C3, etc.). The FCC will assign an official number to the new control point, which will appear on the Authorization and in the ULS database.

Item 17 Enter the street address, city or town, county/borough/parish or equivalent entity, and state of the control point. Refer to FCC Main Form Instructions, Appendix II, for a list of valid state, jurisdiction, and area codes.

Item 18 Enter the telephone number (including area code) where a person responsible for operation of the control point could be reached.

**Antenna Information**

This section is for fixed stations (Schedule D Item 3 = FX) and must be completed only when antenna information is to be added, modified, or deleted. If you are adding a new antenna, complete Items 19-23 for each antenna to be added. If you are modifying an existing antenna, in addition to Items 19, 20, and 21, complete only the items that have changed for the antenna. If you are deleting an antenna, only Items 19, 20, and 21 are required. Antennas 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 section. All stations proposing to operate on frequencies below 27.5 MHz **MUST** complete Items 19-27 if the filing is for a new Authorization. Failure to do so will result in the return of your application without further action. Land Mobile stations located near international borders that seek protection from interference should also complete Items 24-27 if you believe that the assumptions listed would leave your station insufficiently protected. If so, provide the actual data on which interference protection should be based. If you do not provide the actual data and an interference problem arises involving another country's station, your station will be protected only to the limit of the FCC's assumptions. This is especially important for stations proposed to be operated in any of the counties/boroughs listed in Appendix I of the FCC 601 Main Form instructions.

Item 19 This item indicates the action the filer wants the FCC to take on the specified antenna. Enter 'A' for Add, 'M' for Modify, or 'D' for Delete.

Item 20 For each antenna, enter its corresponding location number, as entered on Schedule D Item 2. If the location has been previously licensed under this call sign by the FCC, enter the FCC-assigned location number (see Important Information Regarding Location, Antenna, and Control Point Numbers on page 1 of these instructions). Otherwise, enter the code assigned on Schedule D to represent the location. Refer to the instructions for Schedule D for more information on assigning location numbers.

Item 21 If the antenna has been previously licensed under this call sign by the FCC, enter the antenna's FCC-assigned number (see Important Information Regarding Location, Antenna, and Control Point Numbers on page 1 of these instructions). Otherwise, enter a temporary code to represent each antenna. The assigned code should begin with an A to indicate it is an antenna and end with a number to uniquely identify it (e.g., A1, A2 and A3). A single location can have multiple antennas. Antenna numbers need only be unique within each location. The FCC will assign an official number to the new antenna, which will appear on the Authorization and in the ULS database.

> **Note:** Location number (Item 20) and antenna number (Item 21) are used to associate information in the Antenna Information Section with information in the Frequency Information Section. To do this, enter the necessary technical information into the Antenna Information Section using the appropriate location number and antenna number. Then, enter the necessary technical information in Frequency Information Section for that antenna, using the same location number/antenna number pair. Each antenna specified in the Frequency Information Section must have corresponding data in the Antenna Information Section.

Item 22 This is not required for Land Mobile Broadcast Auxiliary Radio Services. For operations in 150-174 MHz, 220-222 MHz, 450-512 MHz, 851-869 MHz and 935-940 MHz, enter the height of the antenna above ground elevation for the average terrain. Enter this item in meters, rounded to the nearest tenth. See the applicable rules for instructions for computing the height above average terrain for the antenna. Applicants applying on frequencies not mentioned in this paragraph may omit this item.

Item 23 Enter the overall height above ground of the highest part of your antenna (antenna structure plus the height of the antenna, if top mounted; the total height to the tip of the antenna, if side-mounted). Enter this item in meters, rounded to the nearest tenth.

Item 24 Enter the angle in the horizontal plane of the transmitting antenna main lobe measured clockwise with respect to True North (degrees) or enter '360' to indicate the transmitting antenna is omni-directional.

Item 25 For directional antennas, enter the total angle (degrees) measured horizontally in a plane containing the direction of maximum radiation within which the power radiated in any direction does not fall more than 3 dB below the power radiated in the direction of maximum radiation. For omnidirectional antennas, enter '360.0'. This information should be available from the specification sheet included with the antenna at time of purchase.

Item 26 Enter one of the following code letters to represent the polarization of the transmitting antenna:

E – Elliptical
F – 45 degrees
H – Horizontal
J – Linear
L – Left-hand circular
R – Right-hand circular
S – Horizontal and vertical
T – Right and left-hand circular
V – Vertical
X – Other (provide a description in an attachment)

Item 27 Enter the ratio (decibels) of the power required at the input of a loss-free reference antenna to the power supplied to the input of the given antenna to produce, in a given direction, the same field strength or the same power flux-density at the same distance. This information should be available from the specification sheet included with the antenna at time of purchase.

Unless advised to the contrary, the FCC will make certain assumptions which reflect the typical station in these services. Carefully review the list below with respect to your particular situation. If you believe that these assumptions would leave your station insufficiently protected, provide the correct data in the Antenna Section. If you do not provide the actual data and an interference problem arises involving another country's station, your station will be protected only to the limit of the FCC's assumptions.

**The following station parameters will be assumed by the FCC unless otherwise stated:**

Item 24 **Antenna Azimuth of Main Lobe.** The FCC will report each base or mobile relay station as having an omnidirectional ($360^0$) azimuth. It will also be assumed that each control station associated with a mobile relay station has a directional antenna with its azimuth of maximum radiation directed toward the mobile relay station.

Item 25 **Beamwidth.** Where an omnidirectional antenna is assumed, beamwidth has no relevance, and therefore, no assumed value will be used. For control stations, 20 percent will be assumed.

Item 26 **Antenna Polarization.** All stations will be reported as having antennas with vertical polarization.

Item 27 **Antenna Gain.** The antenna gain for all stations will be assumed to be 6 dB.

**Receiver Information.** All stations specified on the same application form are assumed to be communicating with each other as a system. Receivers will be assumed to operate at the same location as the transmitter. In other words, it is assumed that the receiver site for a mobile station transmission is the location of the associated base station. The receiver site for a base station transmission is assumed to be the area of operation of the associated mobile stations. For a control station transmission, it is assumed that the location of the associated mobile relay station is the location of the receiver.

As a signatory party to international treaty agreements, the FCC performs certain actions regarding the use of radio. The technical details of your station parameters may be reported to the International Telecommunications Union, Geneva, Switzerland, and to countries which border on or in close proximity to the United States. This information along with data reported by other nations will be used to protect reported stations and aid in resolution of interference disputes between Licensees in different countries.

Certain stations, because of their geographic location, would be best protected by provision of additional information. Specifically, this includes any proposed station which is located in the region north of Line 'A', or in the State of Alaska east of Line 'C'. Refer to the Commission's rules for a detailed explanation of Lines A and C. Appendix I in FCC 601 Main Form Instructions contains a list of counties/boroughs, by state, having areas North of Line A and East of Line C. If the desired station is to operate in the 806-821/851-866, 821-824/866-869, 896-901/935-940 MHz bands, please consult the applicable rules for available frequencies and use near the United States/Canada/Mexico borders.

**Note:** If you are adding a 6.1 Meter (20 foot) Control Station criteria that requires greater than 5 watts output power/ERP for operations in regions North of Line 'A' or in Alaska East of Line 'C', on Form 601 Schedule D, complete all required items for the control station as if adding a fixed station location.

## Frequency Information

This section must be completed only when frequencies are to be added, modified, or deleted. If you are adding a new frequency, complete all items for each frequency to be added. If you are modifying a frequency (i.e., changing from one operating frequency to a different operating frequency), enter the existing and new frequencies in the appropriate boxes in Item 31. If you are modifying attributes of an existing frequency, in addition to Items 28 through 32, complete only the items that have changed for the frequency.

In order to modify an Emission Designator (Item 37), complete Items 28-32, specifying the appropriate location number, antenna number, frequency, and station class code, and list **all** active emission designators now associated with the specified location, antenna, frequency, and station class (complete as many rows as necessary, listing emission designators in Item 37).

**NOTE: To add an emission designator, the purpose should be 'M' (MOD) in Item 28. List all existing emission designator(s) and any new emission designator(s) in Item 37 for that specific frequency.**

If you are deleting a frequency, only Items 28 through 31 are required. Deleting a frequency will delete all station classes for that frequency. To delete a station class from a frequency, complete Items 28-32. Frequencies and station classes 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 section.

Enter frequency information for each antenna specified in the Antenna Information Section. For multiple frequency lines, repeat the location number/antenna number combination for each frequency. For example:

| Location | Antenna | Frequency (MHz) |
|---|---|---|
| L1 | A1 | XXX.XXXX |
| L1 | A1 | YYY.YYYY |
| L1 | A1 | ZZZ.ZZZZ |
| L1 | A2 | AAA.AAAA |
| L1 | A2 | BBBBB.BBBB |
| L2 | A1 | CCCCC.CCCC |
| L2 | A1 | DDDDD.DDDD |

*(Note: Frequency bands should be shown in same block, for example 806 – 821, (carrier/assigned) 2326 – 2327.4.)*

ADDITIONAL NOTE: Radio Services in the 150-174 MHz and 421-512 MHz bands must provide a Narrowbanding type attachment stating the equipment meets the efficiency standard of one channel per 12.5 kHz (voice) or 4800 bits per second per 6.25 kHz (data).

Item 28 This item indicates the action the filer wants the FCC to take on the specified antenna. Enter ‘A’ for Add, ‘M’ for Modify, or ‘D’ for Delete.

Item 29 For each antenna, enter its corresponding location number, as entered in Item 20 of the Antenna Information Section of this Schedule.

Item 30 For each antenna, enter its corresponding antenna number, as entered in Item 21 of the Antenna Information Section of this Schedule.

Item 31 To add frequencies on an antenna at a location, enter the specific frequencies in Megahertz in the column labeled ‘New’. The requested frequencies must be available in the Commission’s rules governing the radio service in which you are seeking eligibility. Use a separate line for each frequency (the exceptions being that 800 MHz SMR mobile and control stations are now designated by frequency range 806-821 and 900 MHz SMR mobile and control stations are now designated by frequency range 896-901). Low Power Broadcast Auxiliary Applicants should refer to 47 CFR § 74.802 for a complete and accurate listing of the acceptable frequency ranges.

To modify a frequency on an antenna at a location, you must complete Items 28-30 and enter the existing frequency in the column labeled ‘Existing’ and enter the new frequency in the column labeled ‘New’.

Item 32 Enter the appropriate station class code from the following table. Definitions for most of these items are listed in the Commission’s rules.

**Note:** Where appropriate, follow each code with 'T' for Temporary, 'I' for Itinerant, 'S' for Standby, ‘A’ for Airport Terminal Use, 'C' for Interconnect, 'J' for Temporary Interconnect, 'K' for Standby Interconnect, or 'L' for Itinerant Interconnect. For example, FBT means Temporary Base. (NOTE: MO, MO3, MO6, MO7, MO8 & FXO use the alpha character “O”).

Base.....FB
Mobile Relay.....FB2
Community Repeater.....FB4
Private Carrier (Profit).....FB6
Private Carrier (Nonprofit).....FB7
Centralized Trunked Relay.....FB8
Control.....FX1*
Mobile.....MO
Mobile/Vehicular Repeater.....MO3
Private Carrier Mobile Operation (Profit).....MO6
Private Carrier Mobile Operation (Non-profit).....MO7
Centralized Trunked Mobile.....MO8
Operational Fixed.....FXO
Fixed Relay.....FX2
Fixed.....FX**
Primary Permanent Fixed Stations or Links……FXB
Radiolocation Land.....LR
Radiolocation Weather Radar.....WDX
Radiolocation Mobile.....MR
Secondary Fixed Signaling.....FX3

*Station associated with a mobile relay that employs the same frequency as the associated mobile station for control purposes.

**Station operating on frequencies available for fixed use for control purposes in accordance with applicable rules.

Item 33 Enter the number of actual transmitting units at each station.

Normally, only one transmitter (base, mobile relay, etc.) is associated with station classes that indicate operation at a permanent/fixed location. Therefore, for these station classes, the number 1 should usually be entered. However, if more than one transmitter is placed at the same location, then enter the appropriate number.

For transmitters associated with station classes that indicate mobile operation, enter the total number of mobile units. The total number of mobile units is normally the sum of vehicular, portable, aircraft, and marine units that will be placed in operation at the time of grant plus the units for which purchase orders have been signed and will be in use prior to the end of the station's construction period. Some exceptions are provided for in the rules, which should be noted.

**Note:** Paging receivers should not be counted as mobile units. These receivers should be listed separately in Item 34.

Item 34 Enter the number of paging receivers in this system.

Item 35 For operations using the emissions NON, A1A, A2D, A3E, A9W, F1B, F2D, F3E, and F9W -- enter the mean RF output power (watts) normally supplied by the transmitter to the antenna feedline. Enter Output Power for transmitter when operating with single sideband (A3J or new J3E) emission; enter the peak envelope power (watts). (See the applicable rules.)

**Note:** The power entered should be the minimum required for satisfactory operations.

Item 36 This information is required for operations above 10 MHz from Applicants requesting new station authorizations and for modifications as described in the applicable rules.

Enter the Effective Radiated Power (ERP). The ERP is the transmitted output power times the net gain of the antenna system. This is the gain of the antenna minus the transmission losses, which include losses attributable to the transmission line, duplexers, cavity filters, and isolators. The actual formula is:

ERP (watts) equals Power (watts) times Antilog of (net gain in dB divided by 10)

Item 37 Enter the emission designator for each station. Normally, land mobile operations are intended to provide voice communications. The new ITU (International Telecommunications Union) emission designators **must** be used in place of the old designators. The following provides samples of the corresponding new ITU designators for the most commonly used emission designators. These are samples only and do not necessarily represent an emission for which you should apply.

| | **Old** | **New** |
|---|---|---|
| Frequency modulated (FM) voice | 20F3 | 20K0F3E |
| Frequency modulated (FM) voice | 13.6F3 | 13K6F3E |
| Frequency modulated digitized voice | 20F3Y | 20K0F1E |
| Frequency modulated digitized non-voice | 20F9Y | 20K0F1D |
| Amplitude modulated single sideband voice | 3A3J | 3K00J3E |
| Amplitude modulated (AM) voice | 8A3 | 8K00A3E |
| Frequency modulated voice (12.5 KHz channel) | | 11K3F3E |

**FCC 601**
**Schedule H**

# Technical Data Schedule for the Private Land Mobile and Land Mobile Broadcast Auxil iry Radio Services (Parts 90 and 74)

Approved by OMB
3060 - 0798
See 601 Main Form instructions
for public burden estimate

**Eligibility**

| 1) Rule Section: | 2) Describe Activity: |
|---|---|
| | |

**Frequency Coordinator Information** (if not self-coordinated)

| 3) Frequency Coordination Number | 4) Name of Frequency Coordinator | 5) Telephone Number | 6) Coordination Date |
|---|---|---|---|
| | | | |
| 7) Has this application been successfully coordinated? | | | ( )**Y**es/**N**o |

**Extended Implementation (Slow Growth)**

| | |
|---|---|
| 8) Are you requesting a new or modified extended implementation plan?<br>If 'Yes', attach an exhibit with a justification and a proposed station construction schedule. | ( )**Y**es/**N**o |

**Associated Call Signs (Attach additional sheets if required)**

| | | | | |
|---|---|---|---|---|
| 9) | | | | |
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**Broadcast Auxiliary Only**

| | | | |
|---|---|---|---|
| **If there is an associated Parent Station, complete Items 10-12.** | 10) Facility Id of Parent Station: | 11) Radio Service of Parent Station: | 12) City and State of Parent Station Principal Community: |
| 13) If there is no associated parent station, this Applicant is a: ( )<br>C**a**ble Network Entity **B**roadcast Network Entity Television **C**able Operator<br>**L**arge Venue Owner or Operator **M**otion Picture Producer<br>**P**rofessional Sound Company **T**elevision Producer | | | 14) State of Primary Operation: |

**Control Point(s) (Other than at the transmitter) (Attach additional sheets if required)**

| 15) Action A/M/D | 16) Control Point Number | 17) Location<br>Street Address, City or Town, County/Borough/Parish, State | 18) Telephone Number |
|---|---|---|---|
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**Antenna Information**

| 19) Action ( ) A/M/D | 20) Location Number | 21) Antenna Number | 22) AAT (meters) | 23) Antenna Ht. (meters) | 24) Azimuth (degrees) | 25) Beamwidth (degrees) | 26) Polarization | 27) Gain (dB) |
|---|---|---|---|---|---|---|---|---|
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## Frequency Information

| 28) Action ( ) A/M/D | 29) Location Number | 30) Antenna Number | 31) Frequency (MHz) | | 32) Station Class | 33) No. of Units | 34) No. of Paging Receivers | 35) Output Power (watts) | 36) ERP (watts) | 37) Emission Designators |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | Existing (if mod) | New | | | | | | |
| | | | Existing (if mod) | New | | | | | | |
| | | | Existing (if mod) | New | | | | | | |
| | | | Existing (if mod) | New | | | | | | |
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**FCC 601**
**Schedule I**

# FEDERAL COMMUNICATIONS COMMISSION

Approved by OMB
3060 - 0798
See 601 Main Form Instructions
for public burden estimate

## Information and Instructions

## Instructions for Technical Data Schedule for the Fixed Microwave and Microwave Broadcast Auxiliary Services (Parts 101 and 74)

Form FCC 601, Schedule I, is a supplementary schedule for use with the FCC Application for Radio Service Authorization: Wireless Telecommunications Bureau and/or Public Safety and Homeland Security Bureau, FCC 601 Main Form. This schedule is used to apply for an authorization to operate a radio station in the Fixed Microwave and Microwave Broadcast Auxiliary Services, as defined in 47 CFR, Parts 101 and 74. It is also used to amend a pending application or modify an existing license in these services. Additionally, this schedule is used by auction winners that must file site-specific technical data for international coordination, for an environmental assessment of a particular site or for operation that would affect a radio quiet zone. The FCC 601 Main Form must be filed in conjunction with this schedule.

All site and technical information, whether pertaining to a fixed location or an area location**,** is filed on Schedule I. Do not file FCC 601, Schedule D - Schedule for Station Locations and Antenna Structures in conjunction with Schedule I.

**IMPORTANT INFORMATION REGARDING LOCATIONS, PATHS, or PASSIVE REPEATER NUMBERS:** To identify existing locations, paths, or passive repeater numbers, you must use the location, path, or passive repeater numbers assigned by the Universal Licensing System (ULS). These numbers may not be identical to the numbers on your current authorization if that authorization was not issued by the Universal Licensing System. If you are unsure of the location, path, or passive repeater number that corresponds to a particular location, path, or passive repeater, you can query the ULS for the most up-to-date information regarding your authorization. To query the ULS license database for your call sign, point your web browser to http://wireless.fcc.gov/uls and click on Search - Licenses. Alternatively, you may call (877) 480-3201 (TTY 717-338-2824) for assistance.

**Note:** The transmit location will always be assigned Location Number 1.

**IMPORTANT ANTENNA STRUCTURE REGISTRATION INFORMATION:** The Commission will evaluate your application for a fixed location based on the FCC Antenna Structure Registration Number or FCC 854 File Number you provide (if required). If you mistype your FCC Antenna Structure Registration Number or FCC 854 File Number, or provide location data (latitude, longitude, elevation, structure heights) that is inconsistent with the data found in the Commission's Antenna Structure Registration database, your application will be dismissed.

Inconsistent data is defined as follows:

1. Latitude and Longitude data provided on Schedule I, Supplement 1, differs from the data in the Antenna Structure Registration database by more than 1 second; or
2. The height or elevation reported on Schedule I is more than 0.5 meters (1.5 feet) greater than the data in the Antenna Structure Registration Database; or elevation is more than 3 meters (9.8 feet) less than the elevation listed in the Antenna Structure Registration Database.

# Schedule I
# Instructions

Schedule I must be submitted for every Fixed Microwave and Microwave Broadcast Auxiliary application (Parts 101 and 74) filed for a purpose of New (NE), Modification (MD), Renew/Modification (RM) and Amendment (AM).

**Administrative Information**

Item 1 If this application is being filed as part of a pack, either simultaneously with the pack or as a late addition to the pack, enter 'Y'. Otherwise enter 'N'.

**Note:** A pack is a set of applications requesting a system or subsystem of microwave links which are related to the extent that they cannot or must not operate independently and so must all have the same grant date and construction deadline. All applications intended to be part of a pack should be filed together with the other applications in the pack, on the same day (the initial filing date of the pack). Applications that are part of a pack may also be filed singly, as a late addition to the pack.

In order to incorporate new paper-filed applications into a new pack, all the paper-filed applications for the new pack must be filed together on the same day; it is recommended that they also be filed in the same envelope.

Item 2 Complete this item only if the answer to Item 1 is 'Y'. If this application is being filed on the initial filing date of the pack and the Pack Registration Number has already been obtained on-line, or this application is being filed as a late addition to the pack, the Pack Registration Number must be entered in Item 2a. Otherwise, *(*i.e., if this application is being filed on the initial filing date of the pack and the Pack Registration Number has not been obtained on-line), enter in Item 2b a descriptive and unique pack name, not exceeding 50 characters, which the FCC will use to relate this application to other applications filed for the pack on the same day. The FCC will assign a new Pack Registration Number to the pack.

**Note:** It is recommended that a Pack Registration Number be obtained on-line prior to the initial filing of the pack, and entered in Item 2a, to facilitate pack identification and aggregation, and to avoid confusion.

Item 3 Enter the type of operation code. Select only one code per application. A separate license is needed for each type of operation. Valid types of operation codes are:

F - Permanent Fixed Point to Point
M - Multiple Address System (MAS)
T - Temporary Fixed/Mobile
D - Digital Electronic Message Service (DEMS)
18 - 18 GHz Low Power (*See* 47 CFR § 101.147(r)(10) for definition of Low Power (EIRP less than 1watt))
31 - 31 GHz Systems
38 - 38 GHz Systems

Item 4 Enter the station class code that identifies the transmitter class. Refer to Table 1, located on page 16 of these instructions. The station class codes are as follows:

Fixed ..... FXO
Temporary Fixed ..... FX5
Mobile ..... MO
Mobile & Temporary Fixed ..... MO5

Item 5 For Digital Electronic Message Services (DEMS) only: Enter the Standard Metropolitan Statistical Area (SMSA) for the license.

Item 6 This question must be answered if filing an application for a NEW station, a Modification, a Renewal/Modification, or an Amendment to a pending application. Enter 'Y' if you are filing:

a. An application for a New Station authorization;
b. An application for a Major Modification of an existing authorization;
c. An application for a Renewal and Major Modification of an existing authorization;
d. An application for Major Amendment of any of the above;
e. An application for Minor Modification or Minor Amendment when this application, along with all other minor Modification or amendment requests filed since you applied for a new authorization, or since the last Major action was granted by the Commission, produces a cumulative effect that would equal or exceed the criteria for a Major filing.

Otherwise, enter 'N' if the cumulative effect would be considered a Minor filing.

*See* 47 CFR § 1.929 for specific details on Classification of filings as Major or Minor. For your convenience, you will find 47 CFR § 1.929 listed on Pages 12, 13 and 14 of the FCC 601 Main Form Instructions.

Item 7 Enter 'Y' if frequency coordination has been completed for this application. Otherwise enter 'N'.

**Frequency Coordinator Information**

This section must be completed if the station is not self-coordinated.

Item 8 Enter the frequency coordination number issued by the frequency coordinator for this application.

Item 9 Enter the name of the frequency coordinator.

Item 10 Enter the telephone number (including area code) of the frequency coordinator.

Item 11 Enter the month, day and year on which frequency coordination was completed.

**Broadcast Auxiliary Only**

This item applies to Microwave Broadcast Auxiliary Stations only. Complete either Item 12 or Item 13.

If there is an associated Broadcast Parent station, all parts of Item 12 must be completed. If there is more than one Parent station, select one for the purpose of filing this application. Actions taken on the Broadcast Parent station entered in Item 12 will similarly affect the Broadcast Auxiliary Station (i.e., renewal, assignment of authorization, cancellation, etc.).

Item 12a If there is an associated Broadcast Parent station, enter the **Facility Identification Number.** This is typically a 5 digit number assigned by the FCC's Media Bureau. This is **not** the Call Sign of the Parent station.

Item 12b Enter the Radio Service Code of the Broadcast Parent station. The type of traffic, TV or Aural, indicated by the Radio Service of the Parent station must be consistent with that indicated by the Radio Service Code of the Broadcast Auxiliary station requested under this application:

> If filing for Broadcast Auxiliary Radio Service Code of TB, TI, TS, TT, or TP, the Parent station Radio Service Code must be TV or TX.
>
> If filing for a Broadcast Auxiliary Radio Service Code of AB, AI, or AS, the Parent station Radio Service Code must be AM, FM or FX.

Item 12c Enter the City and State of the Parent station's principal community.

Item 13 If there is no associated Parent station, certify that the Applicant is a Broadcast Network Entity and enter the State of primary operation. By signing the FCC 601 Main Form filed in conjunction with this Schedule, the Applicant certifies that the statement listed in Item 13 is true, complete, correct, and made in good faith. Note that a Broadcast Network Entity must have entered TV Pick-up, radio service code 'TP', in Item 1 of the FCC 601 Main Form.

**Control Point (Technical Point of Contact)**

Fixed Microwave and Microwave Broadcast Auxiliary Services authorize only one control point per license. Therefore, this section must be completed only when a control point is to be added or modified. If you are adding a new control point (for a new license only), complete all items in this section. If you are modifying an existing control point, in addition to Item 14, complete only the items that have changed for the control point. The control point that is 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 section.

Item 14 This item indicates the action the filer wants the FCC to take on the specified control point. Enter 'A' for Add or 'M' for Modify.

Item 15 Enter the street address, city or town, county/borough/parish or equivalent entity, and state of the control point. Refer to FCC 601 Main Form Instructions, Appendix II, for a list of valid state, jurisdiction, and area abbreviations.

Item 16 Enter the telephone number, including area code, where a person responsible for operation of the station or system can be reached.

## 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 Number or FCC 854 File Number), 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 or for Broadcast Auxiliary TV Pickup stations. 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 Broadcast Auxiliary TV Pickup Receiver locations, you must complete items 1, 2, 3, 5-16 and 22. For all other Receiver locations, you must complete Items 1, 2, 3, 5, 7, 8, and 13.

> **Note:** For Passive Repeater locations, Items 1, 2, 3, 5, 6-8, 13-16, 22, 23a, 23b, and 24 must be completed.

> **Note:** If filing a modification that effects the Path, Frequency or Passive Repeater data at an existing licensed location, then items 22,23, and 24 (if applicable) must also be completed.

<u>Item 1</u> 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, 23, and 24. 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 24.

> **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 Number or FCC 854 File Number), 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 locations, passive repeater locations, and receive locations in the Broadcast Auxiliary TV Pickup radio service 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 854R) or FCC 854 File Number. 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 854. The use of this FCC 601 to supply antenna structure information does not replace the requirement to register antenna structures on the FCC 854. For more information, see our web site at http://wireless.fcc.gov/antenna, call (877) 480-3201 (TTY 717-338-2824), or visit the web at http://esupport.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 an 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 FCC Antenna Structure

Structure Registration Number or an FCC 854 File 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 72, 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 64 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 or for a Broadcast Auxiliary TV Pickup receive location, you must complete Items 9 through 12. If you provided an FCC Antenna Registration Number or FCC Form 854 File Number in Item 6 for a Transmit Location or for a Broadcast Auxiliary TV Pickup receive 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 or for a Broadcast Auxiliary TV Pickup receive location. Enter a complete description of the 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 Station is located.

Item 11 This item must be completed with the State code in which the Station is located. Refer to FCC 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 or equivalent entity in which the Station is located unless any of the following pertain:

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 is GM, Gulf of Mexico

**NOTE:** If the nearest City, County/Borough/Parish or equivalent entity and State are located in a bordering county/borough/parish or equivalent entity 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 Station's County/Borough/Parish or equivalent entity is nearby and complete Items 11 and 12 with the County/Borough/Parish or equivalent entity 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 or equivalent entity 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), or (b) 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, Passive Repeater, or Broadcast Auxiliary TV Pickup Receive Location, you must complete Items 13-16. If you provided an FCC Antenna Structure Registration Number or FCC 854 File Number in Item 6 for a Transmit, Passive Repeater, or Broadcast Auxiliary TV Pickup Receive 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 |
| BANT | Building with Antenna on Top |
| BMAST | Building with Mast |
| BPIPE | Building with Pipe |
| BPOLE | Building with Pole |
| BRIDG | Bridge |
| BTWR | Building with Tower |
| GTOWER | Guyed structure used for communication purposes |
| LTOWER | Lattice Tower |
| MAST | Mast |
| MTOWER | Monopole |
| NNGTANN* | Guyed Tower Array |
| NNLTANN* | Lattice Tower Array |
| NNMTANN* | Monopole Array |
| PIPE | Any type of Pipe |
| POLE | Any type of Pole |
| 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.) |
| 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., 3GTA2 would identify the second tower in a three tower array).

** 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 System 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 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 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 Canada and your area of operation will be excluded from these border areas. Appendix I in FCC 601 Main Form Instructions contains a link to current agreements with Canada by frequency, and also contains a list of counties/boroughs, by state, having areas within the various coordination zones.

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. 47 CFR § 1.1307 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 47 CFR § 1.1310.

Item 23a Applicants filing for a new or modified fixed station located in one of the Quiet Zone areas listed below must notify the proper authority and indicate the date such notification was sent in Item 23a.
Those applications who are proposing to modify other technical parameters (including, but not limited to frequency, power, antenna height, etc.) of their system operations where the station is currently authorized to operate within the quiet zone area, must also notify the proper authority and indicate the date such notification was sent in Item 23a.
*See* Part 1, Subpart F of the FCC Rules (47 CFR § 1.924)

Item 23b If the Applicant has obtained prior written consent from the Quiet Zone entity for the technical parameters specified in the application, enter "Y" and include a copy of the consent as a Quiet Zone Consent attachment. If prior written consent has not been obtained, enter "N".

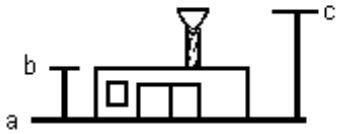
Quiet Zone areas:

2. National Radio Astronomy Observatory, Green Bank, Pocohontas County, West Virginia. The quiet zone is located within Virginia, West Virginia, and Garrett County, Maryland and bounded by N 39 degrees 15' 0.4" on the north, W 78 degrees 29' 59.0" on the east, N 37 degrees 30' 0.4" on the south, and W 80 degrees 29' 59.2" on the west. Contact the Director, National Radio Astronomy Observatory, P. O. Box 2, Green Bank, WV 24944.

3. Arecibo Observatory, Puerto Rico. The quiet zone consists of the Puerto Rico, Desecheo, Mona, Vieques, and Culebra islands. Contact the Interference Office, Arecibo Observatory, Post Office Box 53995, Arecibo, Puerto Rico 00612, or electronically at prcz@naic.edu.

Item 24 (Not applicable at this time) Enter 'Y' if you propose to operate in a Mexican border area. Otherwise, enter 'N'.

**Antenna Structure Figure Examples:**



## Instructions for Schedule I Supplement 2 - Path Data

This Supplement must be completed only when a transmission path is to be added, modified, or deleted. For purposes of filing this application, a 'path' is defined as the transmitting antennas (along with their height, orientation, and polarization); the final receiver (if present) and any associated passive repeaters. File as many copies of Supplement 4 (Frequency Data) as necessary to describe all transmitters and frequencies associated with each transmission path. Transmission paths are linked on Supplement 2 and Supplement 4 by Item 2, path number, located respectively on each supplement (see Important Information Regarding Location and Path Numbers on page 1 of Schedule I instructions).

A Supplement 2 must be completed for each transmission path added, modified, or deleted. If you are adding a new transmission path, complete a Supplement 2 for each transmission path to be added, and a Supplement 4 (Frequency Data) for all transmitters and frequencies on the new path. If you are modifying a transmission path, in addition to Items 1 through 3, complete only the items that have changed for each transmission path. If you are deleting a transmission path, only Items 1 through 3 are required. Transmission paths 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:** If a path is deleted, the transmitter and frequency data that is linked to the path will automatically be deleted and will no longer be part of your authorization.

Refer to Table 2 on pages 17 & 18 of Schedule I instructions for assistance in filling out Supplements 2 and 4. Table 2 indicates the fields and their values that are applicable for various path types. For Permanent Fixed Point-to-Point paths, enter the actual value used for each item on Supplement 2, or leave blank if not applicable.

### Transmit Location

This section identifies the transmit location and path number of the transmission paths. Transmit location information is entered on Supplement 1 of Schedule I. Path information is entered in the remaining sections of Supplement 2.

Item 1 Enter the transmit location name as entered in Item 5 of Supplement 1.

Item 2 Enter the path number. If the path has been previously licensed under this call sign by the Commission, enter its FCC-assigned path number (see Important Information Regarding Location and Path Numbers on page 1 of Schedule I instructions). If you are adding a new path to the transmit location as part of this filing, assign a code to represent the path. Number each new path consecutively, beginning each assigned path number with 'P' to indicate it is a path and end with a number to uniquely identify it (e.g., P1, P2, P3, etc.). A single transmitter can have multiple paths. Path numbers need only be unique for each transmitting antenna and final receiver (if present). The FCC will assign an official number to the new path, which will appear on the Authorization.

Item 3 This item indicates the action the Applicant wants the FCC to take on the path specified in Item 2. Enter only one action per copy of Supplement 2. Enter 'A' to Add a New Path, 'M' to Modify an Existing Path, or 'D' to Delete an Existing Path.

If 'A' is entered, complete all remaining items on this supplement (Items 4 through 32). Also complete as many copies of Supplement 4 (Frequency Data) as necessary to describe all transmitters and frequencies associated with the new path. If 'M' is entered, in addition to completing Items 1 through 3, complete only those Items of 4 through 32 that are being modified (enter new data only). If the modification also affects transmitters or frequencies, also complete as many copies of Supplement 4 as necessary to describe the transmitter or frequency modifications (enter new data only). Modification of a path will affect all parameters of that path. If 'D' is entered, only complete Items 1 through 3. Deletion of a path will delete the entire path, including all frequencies.

> **Note:** To add one path and modify another, complete two Supplement 2 forms.

Item 4a This item is to be completed for MAS (Multiple Address System) and DEMS (Digital Electronic Message Service) stations only, as entered in Item 3 on main Schedule I. This item further classifies various MAS and DEMS operations. Enter the sub-type of operation codes for the path. Enter only one sub-type of operation code for each path.

Fixed Two-way MAS Master-Remote or DEMS Nodal-User
Normal fixed MAS master-remote or DEMS nodal-user two-way operation, with single fixed master/nodal, located at the coordinates stated in Items 7 and 8 of Supplement 1, transmitting to MAS remotes or DEMS users, and remotes/users transmitting back to master/nodal. Two of Supplement 2 must be filed for this sub-type, one for the master/nodal-to-remotes/user path, and one for the remotes/user-to-master/nodal path.

Fixed One-way Outbound MAS Master
A fixed MAS master, located at the coordinates stated in Items 7 and 8 of Supplement 1, transmitting to receive-only remotes. Only one Supplement 2 must be filed for this sub-type for the master-to-remote path.

Fixed One-way Inbound MAS Master
Remotes transmitting to a receive-only fixed master, located at the coordinates stated in Items 7 and 8 of Supplement 1. Only one Supplement 2 must be filed for this sub-type for the remote-to-user path.

Multiple Two-way MAS Master-Remote or DEMS Nodal-User (DEMS only permitted under waiver)
Multiple MAS masters or DEMS nodals at unspecified locations within an area around the coordinates stated in Items 7 and 8 of Supplement 1, transmitting to multiple receive-only MAS remotes or DEMS users and remotes/users transmitting back to multiple masters/nodals. Two of Supplement 2 must be filed for this sub-type, one for the master/nodal-to-remote/ user path, and one for the remote/user-to-master/nodal path.

Multiple One-way Outbound MAS Master
Multiple MAS masters at unspecified locations within an area around the coordinates stated in Items 7 and 8 of Supplement 1. Only one Supplement 2 must be filed for this sub-type for the master-to-remote path.

Mobile MAS Master (Mobile-only)
Mobile master(s) at unspecified locations within an area described in items 7, 8, and 17 of Supplement 1. A path code should not be filed for this subtype (see Note in Item 4b).

Mobile MAS Master (Non-Mobile-only)
Mobile master(s) added to the authorization of an existing MAS station and associated with the fixed location of that existing MAS station. A path code should not be filed for this subtype (see the Note in Item 4b).

**Notes:** For MAS, sub-types of operation Fixed Two-way MAS Master-Remote, Fixed One-way Outbound MAS Master, and Fixed One-way Inbound MAS Master, each must be licensed separately from each other. Do not enter these sub-types of operation together on the same license. Multiple Two-way MAS Master-Remote, Multiple One-way Outbound MAS Master, and Mobile MAS Master sub-types of operation may be licensed by themselves or in conjunction with any valid MAS sub-type of operation code. A Mobile MAS Master Sub-type can only be used in conjunction with other sub-types if they operate on the same frequency.

For DEMS, Fixed Two-way DEMS Nodal-User or Multiple Two-way DEMS Nodal-User sub-types of operation may be licensed either by themselves or in combination with each other.

Item 4b Enter the path code (only one for each path) for the MAS/DEMS type of operation. See Table 1 on page 16 of Schedule I instructions for a list of path codes.

**Note:** Path codes are not collected for the following types of operation, as their path codes are predefined and shown within the parentheses: Permanent Fixed Point to Point (PP), Temporary Fixed/Mobile (MM), Multiple Address System Mobile Only (MM), 18 GHz Low Power (MM), 31 GHz (MM), 38 GHz (MM).

**Transmit Antenna**

Items 5 and 6 Enter the name of the manufacturer and model number of the transmit antenna.

Item 7 Enter the height above ground to the center of the final radiating element. Enter this item in meters, rounded to the nearest tenth. For a parabolic dish antenna, this is the height to the center of the dish. For a periscope antenna system, this is the height to the center of the reflector. In all cases, the height should not exceed the overall height of the structure with appurtenances.

Item 8 Enter the beamwidth (degrees, rounded to one decimal place) of the transmitting antenna. That is, enter the angular distance between the half power points of the antenna's main lobe in the horizontal plane. For omnidirectional antennas, enter '360'.

Item 9 Enter the gain of the transmitting antenna over an isotropic radiator in dBi, rounded to one decimal place.

Items 10-12 If a diversity antenna is used, complete Items 10 through 12 with the antenna height above ground level, beamwidth, and gain for the diversity antenna. See instructions for Items 7 through 9.

Item 13 For fixed stations only, enter the elevation angle of the antenna (rounded to the nearest tenth of a degree), measured in degrees from the horizontal up to the center line of radiation of the antenna. If the antenna tilts down (depression angle), indicate with a minus sign.

Item 14 Indicate polarization with the following codes:

V – Vertical
H – Horizontal
R – Right-hand circular
L – Left-hand circular
S - Variable

For linear polarization other than horizontal or vertical, the polarization should be stated in degrees measured from the vertical, with angles between 1 and +89 degrees denoting the outgoing electric field vector displacement in the clockwise direction, and angles between -1 and -89 degrees denoting the outgoing electric field vector displacement in the counterclockwise direction. For a periscope antenna system, enter the expected polarization of the signal radiated off the reflector.

Item 15 Enter the azimuth, clockwise from True North (degrees, rounded to one decimal place), from the station to the receive site or to the first passive repeater, if any, on this transmission path.

For omnidirectional antennas, enter '360'. For a directional antenna without a fixed azimuth -- as with temporary, mobile, Multiple Address Remote, or Digital Electronic Message stations -- enter 999.

Item 16 Enter the height and width of the periscope reflector, if used. Enter this item in meters, rounded to the nearest tenth.

Item 17 Enter the separation distance between the transmit antenna and the periscope reflector, if used. Enter this item in meters, rounded to the nearest tenth.

Item 18 If the final receiver is located outside of the United States, enter the name of the country and attach an exhibit explaining the circumstances.

Item 19 If this path includes a passive repeater, enter 'Y'. Supplement 3 requests information about passive repeaters. If none, enter 'N'.

Item 20 If the application proposes installation or reorientation of a transmitting antenna that aims within 2 degrees of the Geostationary Satellite Arc with EIRP greater than 65 dBm on a frequency in the 5925 - 7075 MHz band or aims within 1.5 degrees of the Geostationary Satellite Arc with EIRP greater than 75 dBm on a frequency in the 12700 - 13250 MHz band, enter "Y" and submit, as an exhibit, a justification for waiver. Otherwise, enter 'N'.

Answers to Items 20a, b and c are only required if the answer to question 20 is 'Y', otherwise skip to question 21.

Item 20a Enter the angular separation between the main transmit beam for this path and the geostationary satellite arc to the nearest tenth of a degree. Methods for calculating the azimuths to be avoided may be found in CCIR Report No. 393 (Green Books), New Delhi, 1970; in ''Radio-Relay Antenna Pointing for controlled Interference With Geostationary-Satellites'' by C. W. Lundgren and A. S. May, Bell System Technical Journal, Vol. 48, No. 10, pp. 3387–3422, December 1969; and in ''Geostationary Orbit Avoidance Computer Program'' by Richard G. Gould, Common Carrier Bureau Report CC–7201, FCC, Washington, DC, 1972. This latter report is available through the National Technical Information Service, U.S. Department of Commerce, Springfield, VA 22151, in printed form (PB–211 500) or source card deck (PB–211 501). Include a copy of the orbital calculations in the waiver exhibit.

Item 20b If the Applicant has examined and exhausted all other alternatives to the proposed path, including the use of other sites and other frequency bands if appropriate then enter 'Y'. If not enter 'N'. In either case include an explanation in the waiver exhibit.

Item 20c If the Applicant certifies that the proposed operation will not cause interference to an existing satellite system, enter 'Y'. Otherwise enter 'N'.

**Final Receiver**

Item 21 Enter the receiver location name as entered in Supplement 1, Item 5 of this application for the station at the far end of the transmission path. For a receive only station, enter a name that relates to its location. For example, the name of a city, town, or geographic feature may be used.

Items 22 and 23 Enter the name of the manufacturer and model number of the receiving antenna.

Item 24 Enter the call sign of the station at the far end of the transmission path. This is the station that will receive the transmissions of this path on the frequencies entered in Item 4 and 5 of Supplement 4. For a receive-only station or a new station, leave this item blank.

Item 25 Enter the height above ground level to the center of the receiving antenna. Enter this item in meters, rounded to the nearest tenth. For a parabolic dish antenna, this is the height to the center of the dish. For a periscope antenna system, this is the height to the center of its reflector.

Item 26 Enter the beamwidth (degrees, rounded to one decimal place) of the receiving antenna. That is, enter the angular distance between the half power points of the antenna's major lobe in the horizontal plane. For omnidirectional antennas, enter '360'.

Item 27 Enter the gain of the receiving antenna over an isotropic radiator in dBi, rounded to one decimal place.

Item 28 Enter the height above ground level to the center of the diversity receiving antenna. Enter this item in meters, rounded to the nearest tenth. For a parabolic dish antenna, this is the height to the center of the dish. For a periscope antenna system, this is the height to the center of its reflector.

Item 29 Enter the beamwidth (degrees, rounded to one decimal place) of the diversity receiving antenna. That is, enter the angular distance between the half power points of the antenna's major lobe in the horizontal plane. For omnidirectional antennas, enter '360'.

Item 30 Enter the gain of the diversity receiving antenna over an isotropic radiator in dBi, rounded to one decimal place.

Item 31 Enter the height and width of the receiving periscope reflector, if used. Enter this item in meters, rounded to the nearest tenth.

Item 32 Enter the separation distance between the receive antenna and the periscope reflector, if used. Enter this item in meters, rounded to the nearest tenth.

## Instructions for Schedule I Supplement 3 - Passive Repeaters (PR)

This Supplement must be completed only when a passive repeater is to be added, modified, or deleted. Each transmission path may have one or more passive repeaters. Each Supplement 3 describes one passive repeater. If you have more than one passive repeater, submit an additional Supplement 3 for each. If you are adding a new passive repeater, complete a Supplement 3 for each passive repeater to be added. If you are modifying an existing passive repeater, in addition to Items 1 through 5, complete only the items that have changed for each passive repeater. If you are deleting a passive repeater, only Items 1 through 5 are required. Passive repeaters 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.

**Transmit Location**

This section identifies the transmit location and path numbers on which the passive repeater is located. Transmit location information is entered on Supplement 1 of Schedule I. Path information is entered on Supplement 2 of Schedule I.

Item 1 Enter the transmit location name as entered in Item 5 of Supplement 1.

Item 2 Enter the path number on which the passive repeater is located, as entered on Supplement 2, Item 2.

Item 3 This item indicates the action the Applicant wants the FCC to take on the specified passive repeater. Enter 'A' for Add, 'M' for Modify, or 'D' for Delete.

Enter only one action per copy of Supplement 3. To add one passive repeater and modify another, complete two Supplement 3 forms. At least one Supplement 2, Path Data, must be filed if you add or modify a passive repeater. Deletion of a path (Supplement 2) will delete the entire path, including all passive repeaters on that path.

**Passive Repeater Information**

Item 4 If the passive repeater has been previously licensed under this call sign by the FCC, enter its FCC-assigned passive repeater identification number (see Important Information Regarding Location and Path Numbers on page 1 of Schedule I instructions).

Item 5 The passive repeater sequence number is used to identify the sequence of passive repeaters on a specific path (see Important Information Regarding Location and Path Numbers on page 1 of Schedule I instructions). Passive Repeater Sequence #1 would receive the signal from the transmitter and Passive Repeater Sequence #2 would receive the signal from Passive Repeater Sequence #1, and so forth. For a new passive repeater, or to reassign the sequence number of an existing passive repeater, enter the new passive repeater sequence number.

> **Note:** If a passive repeater sequence is reassigned, a Supplement 3 must be completed and attached for every passive repeater on the path that is being assigned a new passive repeater sequence number.

Item 6 Enter the passive repeater location name as entered on Supplement 1, Item 5.

Items 7 and 8 Enter the name of the manufacturer and model number of the passive repeater antenna.

Item 9 Enter the height above ground level to the center of the reflector or back-to-back dishes. Enter this item in meters, rounded to the nearest tenth.

Items 10 and 11 For back-to-back dishes, enter the gain of the receiving (RX) and transmitting (TX) antennas, over an isotropic radiator in dBi, rounded to one decimal place.

Item 12 Enter the height and width of the periscope reflector, if used. Enter this item in meters, rounded to the nearest tenth.

Item 13 Indicate polarization with the following codes:

V - Vertical
H - Horizontal
R - Right-hand circular
L - Left-hand circular
S - Variable

For linear polarization other than horizontal or vertical, the polarization should be stated in degrees measured from the vertical, with angles between 0 and +89 degrees denoting the outgoing electric field vector displacement in the clockwise direction, and angles between 0 and -89 degrees denoting the outgoing electric field vector displacement in the counterclockwise direction. For a periscope antenna system, enter the expected polarization of the signal radiated off the reflector.

Item 14 Enter the azimuth, clockwise from True North (degrees, rounded to one decimal place), from this passive repeater to the receive site or to the next passive repeater, if any, on this transmission path.

## Instructions for Schedule I Supplement 4 - Frequency Data

If the application purpose indicated on the FCC 601 Main Form is New, file as many Supplement 4's (Frequency Data) as necessary to describe all transmitters and frequencies associated with each transmission path represented by a Supplement 2 (Path Data). Frequency data for each transmission path must be listed on a separate Supplement 4 (refer to the instructions on Supplement 2 for information about entering and assigning paths and path numbers).

If the application purpose indicated on the FCC 601 Main Form is Amendment, Modification, or Renewal/Modification, complete as many Supplement 4's (Frequency Data) as necessary to describe all frequency data being amended, added, modified, or deleted. Transmitters and frequency data for each transmission path must be listed on a separate Supplement 4. If the proposed amendment or modification does not affect any transmitter or frequency data, it is not necessary to complete Supplement 4. Similarly, if the proposed amendment or modification changes transmitter or frequency data but does not affect any transmit path data, it is not necessary to complete Supplement 2.

> **Note:** Deletion of a path using Supplement 2 (Path Data) will delete the entire path, including all the transmitters and frequencies on that path. Modification of a path using Supplement 2 (Path Data) will affect all transmitters and frequencies associated with that path.

Refer to Table 2 on pages 17 & 18 of these instructions for assistance in filling out Supplement 4. Table 2 indicates the fields and their values that are applicable for various path types.

### Transmitter Location Information

This section identifies the transmit location and path for the listed transmitters and frequency data. Transmit location information is entered on Supplement 1 of Schedule I. Path data information is entered on Supplement 2 of Schedule I.

Item 1 Enter the transmit location name as entered in Item 5 of Supplement 1.

Item 2 Enter the path number, as entered in Item 2 of the corresponding Supplement 2 (Path Data). Paths are defined in the instructions for Supplement 2. Refer to those instructions for information about entering and assigning path numbers.

### Frequency Information

This section must be completed only when frequencies or transmitters are to be added, modified, or deleted. If you are adding new frequencies, complete all items in this section for each frequency to be added. If you are modifying a frequency (i.e., changing from one operating frequency to a different operating frequency), enter the existing and new frequencies in the appropriate boxes in Items 4 and 5. If you are modifying attributes of existing frequencies, in addition to Items 3, 4, and 5 (if applicable), complete only the items that have changed for each listed frequency. If you are deleting a frequency, only Items 3, 4, and 5 (if applicable) are required.

Frequencies 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 section.

Item 3 This item indicates the action the Applicant wants the FCC to take on the specified frequency(ies). Enter 'A' for Add, 'M' for Modify, or 'D' for Delete.

Items 4 and 5 Enter one frequency or one frequency band per line (e.g., 952.00625 or 1990-2110, as listed in the rules). Enter frequencies in MHz. To request more than 4 frequencies or frequency bands on a given path, file multiple copies of Supplement 4.

To add frequencies on a path, enter the specific frequencies in Megahertz (MHz) in the box labeled 'New' in Item 4. If applying for a frequency band, show the lower and upper frequencies in the box labeled 'New' in Items 4 and 5.

To modify a frequency or frequency band on a path, enter the existing frequency or frequency band in Items 4 and 5 labeled 'Existing' and enter the new frequency or frequency band in Items 4 and 5 labeled 'New'.

> **Note:** For Subfrequency operation of a Multiple Address System (MAS) (as entered in Item 3 on Schedule I), enter only the assignable center frequency of the 12.5 kHz or 25.0 kHz MAS channel requested, and explain the details of subfrequency use on a supplemental showing. For multiple contiguous 6 MHz channels in the 18142-18580 MHz band, enter the frequency band spanning from 3 MHz below the center frequency of the lowest assignable channel to 3 MHz above the center frequency of the highest assignable channel of each contiguous band of channels (e.g., if all 73 channels are desired, enter 18142-18580).

**Note:** For Broadcast Auxiliary applications, specify the requested channel by its center frequency for single channel operation or specify the specific frequency bands for band-wide operation. (For example, an application for an STL station operating in the 6875-7125 MHz band should list 6887.5 MHz for the first channel, while a TV Pickup could list 6875-7125 if requesting authority for all 10 channels.)

Item 6 Enter the tolerance or frequency stability (in percent) of the transmitter under the conditions in which it will be operated. Normally, this is the same as the type accepted/notification value.

Item 7 Enter the Effective Isotropic Radiated Power (EIRP), in dBm rounded to one decimal place, radiated off the transmitting antenna. For a periscope antenna system, this is the anticipated EIRP radiated off its reflector. If Automatic Transmitter Power Control transmitters are used, specify the maximum EIRP. Do not enter the coordinated or nominal transmit power.

Item 8 Enter the full emission designator of the transmitter, composed of its necessary bandwidth and emission type. (*See* 47 CFR §§ 2.201 and 2.202 for further information on emission and bandwidth designation.)

> **Note:** In order to modify an Emission Designator (Item 8), and its associated Baseband Digital Rate (Item 9) and Digital Modulation Type (Item 10), complete Items 3, 4, and if necessary, 5. Provide **all** existing and all new emission designators that will be in use for the frequency shown in Items 4 and 5, for which you intend to be licensed. If necessary, also provide the associated baseband digital rate and type for each emission designator. Do not provide emission designators that are no longer to be used. Emission designators not listed will be deleted from the listed frequency.

> **Note:** For Subfrequency operation of a Multiple Address System (MAS) (as entered in Item 3 on Schedule I), enter an assignable channel emission designator comprising the full assignable channel bandwidth and the subfrequency emission type, and an additional emission designator for each emission actually used on subfrequencies within the assignable channel (e.g., for a 1K20D1D emission operating on a subfrequency of an assignable 12.5 kHz MAS channel, enter 12K5D1D and 1K20D1D), and explain the details of subfrequency use on a supplemental showing. For multiple contiguous 6 MHz channels in the 18142-18580 MHz band, enter all emission designators to be used on any of the 6 MHz channels in the band, regardless of specific frequency/emission block plans.

Item 9 For digital systems, enter the baseband digital rate in kbps (kilobits per second).

Item 10 For digital systems, enter the digital modulation type.

Item 11 Enter the transmitter manufacturer.

Item 12 Enter the transmitter model number.

Item 13 Automatic Transmitter Power Control (ATPC) is a feature that automatically adjusts transmitter output power based on path fading detected at the far-end receivers. Enter 'Y' or 'N' to indicate use of ATPC.

**Table 1 - Type of Operation Codes/Station Classes/Transmit Location Types/Path Codes**

| Type of Operation Code | Station Class | Transmit Location Type | Sub-Type of Operation | Description | Path Type | Path Code | Radio Services* |
|---|---|---|---|---|---|---|---|
| F | FXO | Fixed | N/A | Permanent Fixed Point-to-Point | N/A | PP | OFS, CF, BAF, CT |
| M | FXO | Fixed | FT | Fixed Two-way Master-Remote | Master to Remote | MR | OFS |
| | | | | | Remote to Master | RM | OFS |
| M | FXO | Fixed | FO | Fixed One-way Outbound Master | Master to Remote | MR | OFS |
| M | FXO | Fixed | FI | Fixed One-way Inbound Master | Remote to Master | RM | OFS |
| M | MO | Area | MM | Mobile (mobile-only) | Mobile | MM | OFS |
| M | FXO | Fixed | MM | Mobile Master (with other MAS types) | Mobile | MM | OFS |
| M | FXO | Fixed | MT | Multiple Two-way Master-Remote | Master to Remote | MR | OFS |
| | | | | | Remote to Master | RM | OFS |
| M | FXO | Fixed | MO | Multiple One-way Outbound Master | Master to Remote | MR | OFS |
| D | FXO | Fixed | FD | Fixed Two-way Nodal-User | Nodal to User | NU | CE, PE |
| | | | | | User to Nodal | UN | CE, PE |
| D | FXO | Fixed | MD | Multiple Two-way Nodal-User | Nodal to User | NU | CE, PE |
| | | | | | User to Nodal | UN | CE, PE |
| T | FX5 | Area | N/A | Temporary Fixed | N/A | MM | OFS, CF, CT, TP |
| T | MO | Area | N/A | Mobile | N/A | MM | OFS, CF, CT, TP |
| T | MO5 | Area | N/A | Temporary Fixed/Mobile | N/A | MM | OFS, CF, CT, TP |
| 18 | FXO | Area | N/A | 18 GHz Low Power | N/A | MM | OFS |
| 31 | FXO | Area | N/A | 31 GHZ | N/A | MM | OFS |
| 38 | FXO | Area | N/A | 38 GHz | N/A | MM | OFS, CF |

*Radio Service
OFS = MW, MG, WR, WA, WM
BAF = TS, TI, TB, TT, AS, AI, AB

**Table 2 - Path Codes**

* = Required items
- = Optional items, based on your particular system

| SUPPLEMENT AND ITEM | PATH CODE | | |
|---|---|---|---|
| **Supplement 2 - Path Data** | **MR or NU** | **RM or UN** | **MM** |
| 5) Antenna Manufacturer* | Enter the Actual Value: except paths for MAS or DEMS Sub-Type of Operation Multiple Two-way Master-Remote/Nodal-User and Multiple One-way Outbound Master, enter the Typical Value | Enter the Typical Value | Enter the Typical Value |
| 6) Antenna Model Number* | Enter the Actual Value: except paths for MAS or DEMS Sub-Type of Operation Multiple Two-way Master-Remote/Nodal-User and Multiple One-way Outbound Master, enter the Typical Value | Enter the Typical Value | Enter the Typical Value |
| 7) Height to Center of Antenna* | Enter the Actual Value: except paths for MAS or DEMS Sub-Type of Operation Multiple Two-way Master-Remote/Nodal-User and Multiple One-way Outbound Master, enter 6.1 meters | Enter 6.1 meters | Enter 6.1 meters |
| 8) Beamwidth* | 360 degrees | Enter the Typical Value | Enter the Typical Value |
| 9) Antenna Gain* | Enter the Actual Value | Enter the Typical Value | Enter the Typical Value |
| 10) Diversity Antenna Height | N/A | N/A | N/A |
| 11) Diversity Beamwidth | N/A | N/A | N/A |
| 12) Diversity Antenna Gain | N/A | N/A | N/A |
| 13) Elevation (Tilt) Angle | N/A | N/A | N/A |
| 14) Polarization* | Enter the Actual Value | Enter the Actual Value | Enter the Actual Value |
| 15) Azimuth* | Enter 360 degrees | Enter 999: except if beamwidth = 360 degrees, then azimuth = 360 degrees | Enter 999: except if beamwidth = 360 degrees, then azimuth = 360 degrees |
| 16) Periscope Dimensions-Hgt/Width | N/A | N/A | N/A |
| 17) Periscope Separation | N/A | N/A | N/A |
| 18) Is final receiver located outside US? | - | - | - |
| 19) Passive Repeater on Path? | N/A | N/A | N/A |
| 20) Geostationary ARC? | N/A | N/A | N/A |
| 21) Receiver Location Name | N/A | N/A | >N/A – Except for Broadcast Auxiliary TV Pickup Receive locations, enter receive location name. |
| 22) Receiver Antenna Manufacturer* | Enter the Typical Value | Enter the Actual Value: except paths for MAS or DEMS Sub-Type of Operation Multiple Two-way Master-Remote/Nodal-User, enter the Typical Value | >Enter the Typical Value – Except for Broadcast Auxiliary TV Pickup Receive locations, enter the actual value. |
| 23) Receiver Antenna Model Number* | Enter the Typical Value | Enter the Actual Value: except paths for MAS or DEMS Sub-Type of Operation Multiple Two-way Master-Remote/Nodal-User, enter the Typical Value | >Enter the Typical Value – Except for Broadcast Auxiliary TV Pickup Receive locations, enter the actual value. |
| 24) Receiver Call Sign | N/A | N/A | N/A |

**Table 2 - Path Codes** (continued)

| SUPPLEMENT AND ITEM | PATH CODE | | |
|---|---|---|---|
| **Supplement 2 - Path Data** | **MR or NU** | **RM or UN** | **MM** |
| 25) Height to Center of Rx Antenna* | Enter 6.1 meters | Enter the Actual Value: except paths for MAS or DEMS Sub-Type of Operation Multiple Two-way Master-Remote/Nodal-User, enter 6.1 meters | >Enter 6.1 meters – Except for Broadcast Auxiliary TV Pickup Receive locations, enter the actual value. |
| 26) Rx Antenna Beamwidth* | Enter the Typical Value | Enter 360 degrees | Enter the Typical Value |
| 27) Rx Antenna Gain* | Enter the Typical Value | Enter the Actual Value | Enter the Typical Value |
| 28) Diversity Rx Antenna Height | N/A | N/A | N/A |
| 29) Diversity Rx Antenna Beamwidth | N/A | N/A | N/A |
| 30) Diversity Rx Antenna Gain | N/A | N/A | N/A |
| 31) RX Periscope Dimensions | N/A | N/A | N/A |
| 32) RX Periscope Separation | N/A | N/A | N/A |

| **Supplement 4 - Frequency Data** | **MR or NU** | **RM or UN** | **MM** |
|---|---|---|---|
| 6) Tolerance* | Enter the Actual Value | Enter the Actual Value | Enter Highest Used Value |
| 7) EIRP | Enter Highest Used Value | Enter Highest Used Value | Enter Highest Used Value |
| 8) Emission Designator* | Enter the Actual Value | Enter the Actual Value | Enter Highest Used Value[1] |
| 11) Transmitter Manufacturer* | Enter the Actual Value: except paths for MAS or DEMS Sub-Type of Operation Multiple Two-way Master-Remote/Nodal-User and Multiple One-way Outbound Master, enter the Typical Value | Enter the Typical Value | Enter the Typical Value |
| 12) Transmitter Model Number* | Enter the Actual Value: except Multiple Two-way Master-Remote, enter the Typical Value | Enter the Typical Value | Enter the Typical Value |
| 13) Automatic Tx Power Control | Enter the Actual Value | Enter the Actual Value | Enter the Actual Value |

[1] For Emission Designators for Type of Operation MAS and Sup-Type Mobile Master, those with the widest bandwidths and most general emission types are the highest used values; for band-wide requests, do not enter more than 4 such emission designators to satisfy this requirement.

**FCC 601**
**Schedule I**

# Technical Data Schedule for the Fixed Microwave and Microwave Broadcast Auxiliary Services (Parts 101 and 74)

Approved by OMB
3060 - 0798

See 601 Main Form Instructions for public burden estimate

## Administrative Information

| | | |
|---|---|---|
| 1) Is this application being filed as part of a pack? | | ( )**Y**es/**N**o |
| 2a) If the answer to Item 1 is 'Yes', enter the pack identification number (required if the pack identification number has already been assigned by the FCC): | | |
| 2b) Pack Name: | | |
| 3) Type of Operation (refer to instructions) Check One Only:<br>( )Permanent Fixed Point to Point<br>( )Multiple Address System (MAS)<br>( )Temporary Fixed/Mobile<br>( )Digital Electronic Message Service (DEMS)<br>( )18 GHz Low Power<br>( )31 GHz<br>( )38 GHz | 4) Station Class**:** | 5) DEMS only: SMSA: |
| 6) If this request is for a Modification, Renewal/Modification, or Amendment of a currently pending application, does it, along with all minor Modification or Amendment requests filed since you applied for a new authorization or since the last major action was granted by the Commission, produce a cumulative effect that would equal or exceed the criteria for a major filing? | | ( )**Y**es/**N**o |
| 7) Has frequency coordination been completed for this application? | | ( )**Y**es/**N**o |

## Frequency Coordinator Information

Complete Items 8 through 11 if not self-coordinated

| 8) Frequency Coordination Number | 9) Name of Frequency Coordinator | 10) Telephone Number | 11) Coordination Date |
|---|---|---|---|
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |

## Broadcast Auxiliary Only

| | | | |
|---|---|---|---|
| If there is an associated Parent Station, provide: | 12a) Facility Id of Parent Station: | 12b) Radio Service of Parent Station: | |
| If there is no associated parent station, Applicant certifies that it is a Broadcast Network Entity and completes Item 13. | | 13) State of Primary Operation: | |

## Control Point (Technical Point of Contact)

| 14) Action **A/M** | 15) Location Street Address, City or Town, County/Borough/Parish, State | 16) Telephone Number |
|---|---|---|
| | | |

**FCC 601**
**Schedule I**
**Supplement 1**

# Location Data

| | | |
|---|---|---|
| 1) Action Requested: ( ) **A**dd **M**od **D**el | 2) Location Number**:** | |
| 3) Location Description**:** | 4) Area of Operation Code**:** | 5) Location Name**:** |
| 6) FCC Antenna Structure Registration Number, FCC 854 File Number or N/A: | | |
| 7) Latitude (DD-MM-SS.S): **NAD83** ( ) N or S | 8) Longitude (DDD-MM-SS.S)**:** **NAD83** ( ) E or W | |
| 9) Street Address, Name of Landing Area, or Other Location Description: | | |
| 10) City: | 11) State**:** | 12) County/Borough/Parish: |
| 13) Elevation of Site AMSL (meters) ('a' in antenna structure example)**:** | 14) Overall Ht AGL Without Appurtenances (meters) ('b' in antenna structure example)**:** | 15) Overall Ht AGL With Appurtenances (meters) ('c' in antenna structure example)**:** |
| 16) Support Structure Type: | | |
| 17) Radius (km)**:** | | |
| 18) Maximum Latitude (DD-MM-SS.S): **NAD83** **Use for rectangle only (Northwest corner)** ( ) N or S | 19) Maximum Longitude (DDD-MM-SS.S)**:** **NAD83** **Use for rectangle only (Northwest corner)** ( ) E or W | |
| 20) Do you propose to operate in an area that requires frequency coordination with Canada? ( ) **Y**es **N**o | | |
| 21) Description: (only for Area of Operation Code 'O') | | |
| 22) Would Commission grant of Authorization for this location be an action which may have a significant environmental effect? *See* 47 CFR § 1.1307. If 'Yes', submit an environmental assessment as required by 47 CFR §§ 1.1308 and 1.1311. ( ) **Y**es **N**o | | |
| 23a) If the site is located in one of the Quiet Zones listed in Item 23b of the Instructions, provide the date (mm/dd/yyyy) that the proper Quiet Zone entity was notified:_____/____/_____ 23b) Has the Applicant obtained prior written consent from the proper Quiet Zone entity for the same technical parameters that are specified in this application? ( ) **Y**es **N**o | | |
| 24) Do you propose to operate in an area that requires frequency coordination with Mexico? ( ) **Y**es **N**o | | |

# FCC 601
# Schedule I
**Supplement 2** **Path Data**

## Transmit Location

| | |
|---|---|
| 1) Transmit location name: | 2) Path number: |
| 3) Action Requested: ( ) **A**dd New Path **M**odify Existing Path **D**elete Existing Path | |
| 4a) For MAS or DEMS only, MAS or DEMS Sub-Type of Operation (Enter only one per path):<br>**MAS or DEMS**<br>( )Fixed Two-way Master-Remote/Nodal-User ( )Multiple Two-way Master-Remote/Nodal-Us er<br>**MAS ONLY**<br>( )Fixed One-way Outbound Master ( )Multiple One-way Outbou nd Master<br>( )Fixed One-way Inbound Master ( )Mobile Master | 4b) Path code (Enter only one per path):<br>**MAS**<br>( ) Master to Remote<br>( ) Remote to Master<br>**DEMS**<br>( )Nodal to User<br>( )User to Nodal |

## Transmit Antenna

| | | |
|---|---|---|
| 5) Antenna Manufacturer: | 6) Antenna Model Number: | |
| 7) Height to Center of Antenna AGL (meters): | 8) Beamwidth (degrees): | 9) Antenna Gain (dBi): |
| 10) Diversity Antenna Height AGL (meters): | 11) Diversity Beamwidth (degrees): | 12) Diversity Antenna Gain (dBi): |
| 13) Elevation (Tilt) Angle (degrees): | 14) Polarization: | 15) Azimuth to RX Location or Passive Repeater (degrees): |
| 16) Periscope Reflector Dimensions (meters):<br>Height: Width: | 17) Periscope Reflector Separation (meters): | |
| 18) If the final receiver is located outside of the United States, enter the country in the space provided and attach an exhibit explaining circumstances. | | |
| 19) Does this path include passive repeater? ( )**Y**es **N**o | | |
| 20) Does this filing add or modify emanations in the 5925 - 7075 MHz band pointing within 2 degrees of the Geostationary Satellite Arc with EIRP greater than 65 dBm, or in the 12700 - 13250 MHz band pointing within 1.5 degrees of the Geostationary Satellite Arc with EIRP greater than 75 dBm? ( )**Y**es **N**o<br><br>If 'Yes', answer the following questions below and attach waiver request explaining circumstances.<br><br>20a) Angular Separation between main beam and Geostationary Satellite Arc (degrees). Include Orbital Calculations in the wavier exhibit. __<br><br>20b) Does the Applicant certify that there is no alternative to the proposed transmission path? ( )**Y**es **N**o<br><br>20c) Does the Applicant certify that the proposed operation will not cause interference to an authorized satellite system? ( )**Y**es **N**o | | |

## Final Receiver

| | | |
|---|---|---|
| 21) Receiver Location Name: | | |
| 22) Receiver antenna manufacturer: | 23) Receiver antenna model number: | |
| 24) Receiver Call Sign: | | |
| 25) Height to Center of RX Antenna AGL (meters): | 26) RX Antenna Beamwidth (degrees): | 27) RX Antenna Gain (dBi): |
| 28) Diversity RX Antenna Height AGL (meters): | 29) Diversity RX Antenna Beamwidth (degrees): | 30) Diversity RX Antenna Gain (dBi): |
| 31) RX Periscope Reflector Dimensions (meters):<br>Height: Width: | 32) RX Periscope Reflector Separation (meters): | |

**FCC 601**
**Schedule I**
**Supplement 3**

# Passive Repeaters (PR)

**Transmit Location**

| | |
|---|---|
| 1) Transmit Location Name: | 2) Path Number: |

| |
|---|
| 3) Action Requested: ( ) **A**dd New Passive Repeater **M**odify Existing Passive Repeater **D**elete Existing Passive Repeater |

**Passive Repeater Information**

| | | |
|---|---|---|
| 4) Passive Repeater Id: ( ) | 5) Passive Repeater Sequence Number: ( ) | |
| 6) Passive Repeater Location Name: | | |
| 7) Passive Repeater Antenna Manufacturer: | 8) Passive Repeater Antenna Model Number: | |
| 9) Height to Center of Passive Repeater Antenna AGL (meters): | 10) Back-to-Back RX Dish Gain (dBi): | 11) Back-to-Back TX Dish Gain (dBi): |
| 12) Reflector Dimensions (meters): Height: Width: | 13) Transmit Polarization: | 14) Azimuth to RX Location or Next Passive Repeater: |

**FCC 601**
**Schedule I**

**Supplement 4**

## Frequency Data

# Transmitter Location Information

| 1) Transmit Location Name: | 2) Path Number: |
|---|---|
| | |

**Frequency Information**

| 3) Action A/M/D | 4) Lower or Center Frequency (MHZ) | 5) Upper Frequency (MHZ) | 6) Tolerance (%) | 7) EIRP (dBm) | 8) Emission Designator | 9) Baseband Digital Rate (kbps) | 10) Digital Modulation Type |
|---|---|---|---|---|---|---|---|
| | Existing (if mod) | | | | | | |
| | New | | | | | | |
| | 11) Transmitter Manufacturer | | 12) Transmitter Model | 13) Automatic Transmitter Power Control | | | |
| | | | | | | | |

| 3) Action A/M/D | 4) Lower or Center Frequency (MHz) | 5) Upper Frequency (MHz) | 6) Tolerance (%) | 7) EIRP (dBm) | 8) Emission Designator | 9) Baseband Digital Rate (kbps) | 10) Digital Modulation Type |
|---|---|---|---|---|---|---|---|
| | Existing (if mod) | | | | | | |
| | New | | | | | | |
| | 11) Transmitter Manufacturer | | 12) Transmitter Model | 13) Automatic Transmitter Power Control | | | |
| | | | | | | | |

| 3) Action A/M/D | 4) Lower or Center Frequency (MHz) | 5) Upper Frequency (MHz) | 6) Tolerance (%) | 7) EIRP (dBm) | 8) Emission Designator | 9) Baseband Digital Rate (kbps) | 10) Digital Modulation Type |
|---|---|---|---|---|---|---|---|
| | Existing (if mod) | | | | | | |
| | New | | | | | | |
| | 11) Transmitter Manufacturer | | 12) Transmitter Model | 13) Automatic Transmitter Power Control | | | |
| | | | | | | | |

| 3) Action A/M/D | 4) Lower or Center Frequency (MHz) | 5) Upper Frequency (MHz) | 6) Tolerance (%) | 7) EIRP (dBm) | 8) Emission Designator | 9) Baseband Digital Rate (kbps) | 10) Digital Modulation Type |
|---|---|---|---|---|---|---|---|
| | Existing (if mod) | | | | | | |
| | New | | | | | | |
| | 11) Transmitter Manufacturer | | 12) Transmitter Model | 13) Automatic Transmitter Power Control | | | |
| | | | | | | | |

**FCC 601**
**Schedule J**

# FEDERAL COMMUNICATIONS COMMISSION

Approved by OMB
3060 - 0798
See 601 Main Form Instructions
for public burden estimate

## Information and Instructions

## Technical Data Schedule for the Paging, Rural, Air-ground (General Aviation), and Offshore Radiotelephone Services (Part 22)

Form FCC 601, Schedule J, is a supplementary schedule for use with the FCC Application for Radio Service Authorization: Wireless Telecommunications Bureau and/or Public Safety and Homeland Security Bureau, FCC 601 Main Form. This schedule is used to apply for an authorization to operate a radio station in the Paging, Rural, Air-ground (General Aviation), and Offshore Radiotelephone Services, as defined in 47 CFR, Part 22. It is also used to amend a pending application or modify an existing license in these services. Additionally, this schedule is used by auction winners that must file site-specific technical data for international coordination or for an environmental assessment of a particular site. The FCC 601 Main Form must be filed in conjunction with this schedule.

You must file technical information for each fixed location, including the antenna structures and/or each mobile transmit location or each temporary fixed station location using FCC 601, Schedule D, Schedule for Station Locations and Antenna Structures. Mobile and temporary fixed station locations only apply to Rural Radio (CR), Offshore (CO), and BETRS (CB) radio services. It is recommended that you complete Schedule D prior to completing Schedule J.

**IMPORTANT INFORMATION REGARDING LOCATION, ANTENNA, AND CONTROL POINT NUMBERS:** To identify existing locations, antennas, or control points, you must use the location, antenna, and control point numbers assigned by the Universal Licensing System (ULS). These numbers may not be identical to the location, antenna, and control point numbers on your current authorization if that authorization was not issued by the Universal Licensing System. If you are unsure of the location, antenna, or control point number that corresponds to a particular location, antenna, or control point, you can query the ULS for the most up-to-date information regarding your authorization. To query the ULS license database for your call sign, point your web browser to http://wireless.fcc.gov/uls and click on Search - Licenses. Alternatively, you may call (877) 480-3201 (TTY 717-338-2824) for assistance.

## Schedule J
## Instructions

**Control Points**

This section must be completed only when a control point is to be added, modified, or deleted. If you are adding a new control point, complete all items in this section for each control point to be added. If you are modifying an existing control point, in addition to Items 1 and 2, complete only the items that have changed for the control point. If you are deleting a control point, only Items 1 and 2 are required. Control points 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 section.

Item 1 This item indicates the action the filer wants the FCC to take on the specified control point. Enter 'A' for Add, 'M' for Modify, or 'D' for Delete.

Item 2 If the control point has been previously licensed under this call sign to the Applicant by the FCC, enter its FCC-assigned control point number (see Important Information Regarding Location, Antenna, and Control Point Numbers on page 1 of these instructions). For a new control point, assign a temporary code to represent the control point. The assigned code should begin with C to indicate it is a control point and end with a number to uniquely identify it (*e.g.*, C1, C2, C3, etc.). The FCC will assign an official number to the new control point, which will appear on the Authorization.

Item 3 Enter the street address, city or town, county/borough/parish or equivalent entity, and state of the control point. Refer to FCC 601 Main Form Instructions, Appendix II, for a list of valid state, jurisdiction, and area abbreviations.

Item 4 Enter the telephone number, including area code, where a person responsible for operation of the station or systems can be reached.

**Antenna Information**

This section must be completed only when antenna information is to be added, modified, or deleted. If you are adding a new antenna, complete all items for each antenna to be added. If you are modifying an existing antenna, in addition to Items 5, 6, and 7, complete only the items that have changed for the antenna. If you are deleting an antenna, only Items 5, 6, and 7 are required. Antennas 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 section.

Item 5 This item indicates the action the filer wants the FCC to take on the specified antenna. Enter 'A' for Add, 'M' for Modify, or 'D' for Delete.

Item 6 For each antenna, enter its corresponding location number, as entered on Schedule D Item 2. If the location has been previously licensed under this call sign by the FCC, enter the FCC-assigned location number (see Important Information Regarding Location, Antenna, and Control Point Numbers on page 1 of these instructions). Otherwise, enter the code assigned on Schedule D to represent the location. Refer to the instructions for Schedule D for more information on assigning location numbers.

Item 7 If the antenna has been previously licensed under this call sign by the FCC, enter the antenna's FCC-assigned number (see Important Information Regarding Location, Antenna, and Control Point Numbers on page 1 of these instructions). Otherwise, enter a temporary code to represent each antenna. The assigned code should begin with an A to indicate it is an antenna and end with a number to uniquely identify it (e.g., A1, A2 and A3). A single location can have multiple antennas. Antenna numbers need only be unique within each location. The FCC will assign an official number to the new antenna, which will appear on the Authorization.

**Note:** Location number (Item 6) and antenna number (Item 7) are used to associate information in the Antenna Information Section with information in the following sections: Frequency Information, Radial Data for Antennas, and Points of Communication for Transmitters. To do this, enter the necessary technical information into the Antenna Information Section using the appropriate location number and antenna number. Then, enter the necessary technical information in each of the related sections for that antenna, using the same location number/antenna number pair. Each antenna specified in the Frequency Information, Radial Data for Antennas, and Points of Communication for Transmitters Sections must have corresponding data in the Antenna Information Section.

Item 8 Enter the actual height above ground level to the tip of the antenna. Enter this item in meters, rounded to the nearest tenth.

Item 9 Enter the average radiation center height above average terrain (AAT) of the eight cardinal radials. Enter this item in meters, rounded to the nearest tenth. See the rules for your radio service for instructions on calculating AAT.

Item 10 Enter the beamwidth of the main lobe of a directional antenna used with a fixed station. Complete this item for fixed stations only. Enter '360' for an omni-directional antenna.

Item 11 Enter the ratio (decibels) of the power required at the input of loss-free reference antenna to the power supplied to the input of the given antenna to produce, in a given direction, the same field strength or the same power-flux density at the same distance. This information should be available from the specification sheet included with the antenna at the time of purchase.

Item 12 Enter the angle in the horizontal plane of the transmitting antenna main lobe measured clockwise with respect to True North in degrees, or enter '360' to indicate that the transmitting antenna is omni-directional.

**Frequency Information**

This section must be completed only when frequencies are to be added, modified, or deleted. If you are adding a new frequency, complete all items for each frequency to be added. If you are modifying a frequency (i.e., changing from one operating frequency to a different operating frequency), enter the existing and new frequencies in the appropriate boxes in Item 16. If you are modifying attributes of an existing frequency, in addition to Items 13 and 14, complete only the items that have changed for the frequency. If you are deleting a frequency, only Items 13 through 17 are required. Frequencies 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 section.

Enter frequency information for each antenna specified in the Antenna Information Section. For multiple frequency lines, repeat the location number/antenna number combination for each frequency. For example:

| Location | Antenna | Frequency (MHz) |
|---|---|---|
| F1 | A1 | XXX.XXXX |
| F1 | A1 | YYY.YYYY |
| F1 | A1 | ZZZ.ZZZZ |
| F1 | A2 | AAA.AAAA |
| F1 | A2 | BBBBB.BBBB |
| F2 | A1 | CCCCC.CCCC |
| F2 | A1 | DDDDD.DDDD |

Item 13 This item indicates the action the filer wants the FCC to take on the specified antenna. Enter 'A' for Add, 'M' for Modify, or 'D' for Delete.

Item 14 For each antenna, enter its corresponding location number, as entered in Item 6 of the Antenna Information Section of this Schedule.

Item 15 For each antenna, enter its corresponding antenna number, as entered in Item 7 of the Antenna Information Section of this Schedule.

> **Note:** Each location number (Item 14) and antenna number (Item 15) pair specified in the Frequency Information Section must have corresponding data in the Antenna Information Section.

Item 16 To add frequencies on an antenna at a location, enter in the column labeled 'New', the specific center frequencies in Megahertz (MHz), of the channels on which the transmitters are proposed to operate.

To modify a frequency on an antenna at a location, you must complete Items 13-15 and enter the existing center frequency in the column labeled 'Existing' and enter the proposed new center frequency in the column labeled 'New'.

Item 17 Enter the appropriate station class code from the following table. Definitions for most of these items are listed in the Commission's rules.

| | |
|---|---|
| Air-ground Signaling | FBSI |
| Auxiliary Test | FXTS |
| Base | FBBS |
| Central Office | FXCO |
| Control | FXCT |
| Dispatch | FXDI |
| Fixed Relay | FXRX |
| Fixed Subscriber | FXSB |
| Ground | FBGS |
| Inter-Office | FXIO |
| Mobile Subscriber | MLSB |
| Repeater | FXRP |
| Standby | FBST |
| Temporary Fixed | FX5 |

Item 18 This item reports the maximum effective radiated power (ERP) in any direction on the specified channel. The answer must be stated in watts.

Item 19 Enter the actual transmitter output power in watts.

Item 20 Complete this item only if the filing requests authority to use an emission type that is not already authorized in the FCC rules for use by all stations in the pertinent radio service.

**Radial Data for Antennas**

This section must be completed only when radial data for antennas is to be added, modified, or deleted. If you are adding new radial data, complete all items for each radial data block to be added. If you are modifying existing radial data, complete all items for the radial data block to be modified. If you are deleting radial data, only Items 21 through 24 are required. Radial data that is 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 section.

Item 21 Indicate the action the filer wants the FCC on the radial data of the specified antenna. Enter 'A' for Add, 'M' for Modify, or 'D' for Delete.

Items 22-24 Enter the location number, antenna number, and channel center frequency, as specified in the Antenna Information and Frequency Information Sections.

> **Note:** Each location number, antenna number, and channel center frequency specified in the Radial Data for Antennas Section must have corresponding data in the Antenna Information and Frequency Information Sections.

Item 25 Enter the height of the antenna center of radiation above the average terrain elevation (RCHAAT) along each of the eight cardinal radials. Enter this item in meters, rounded to the nearest tenth.

Item 26 Enter the effective radiated power (ERP) for each of the eight cardinal radials. See the Commission's Rules for your radio service for instructions on calculating RCHAAT.

**Points of Communication for Transmitters**

These items describe fixed points of communication for: (1) stations in the Rural Radiotelephone Services serving individually licensed subscribers; (2) point to point transmitters; and (3) point-to-multipoint transmitters operating on channels that are assigned only to stations that communicate with four or more points. These items should not be completed by filers for any other purpose. In the Rural Radiotelephone Services (radio service code CR) only those stations operating under station class code FXCT (fixed control station) may complete this section.

This section must be completed only when points of communication are to be added, modified, or deleted. If you are adding new points of communication, complete all items for each point of communication to be added. If you are modifying existing points of communication, complete all items for the point of communication to be modified. If you are deleting points of communication, only Items 27 through 30 are required. Points of communication 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 section.

Item 27 This item indicates the action the filer wants the FCC to take on the specified point of communication. Enter 'A' for Add, 'M' for Modify, or 'D' for Delete.

Item 28 Enter the corresponding transmit location number, as entered in Item 14 of this schedule.

Item 29 Enter the corresponding transmitting antenna number, as entered in Item 15 of this schedule.

Item 30 Enter the corresponding transmitting channel center frequency, as entered in Item 16 of this schedule.

Item 31 Enter the name of the city or town of the point of communication.

Item 32 Enter the state of the point of communication. Refer to FCC 601 Main Form Instructions, Appendix II, for a list of valid state, jurisdiction, and area abbreviations.

Item 33 Enter in Megahertz (MHz), the center frequencies of the point of communication.

Items 34 and 35 Enter the geographic coordinates of the location, 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.

Enter the latitude using the format *DD-MM-SS*, where the degrees (*DD*) term can have a value in the range of 0 to 72, minutes (*MM*) can range from 0 to 59, and seconds (*SS*) can range from 0 to 59.9. If desired, seconds may be expressed to the nearest tenth of a second (in which case, use the format DD-MM-SS.S). 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*, where the degrees (*DDD*) term can have a value in the range of 64 to 180, minutes (*MM*) can range from 0 to 59, and seconds (*SS*) can range from 0 to 59.9. If desired, seconds may be expressed to the nearest tenth of a second (in which case, use the format DDD-MM-SS.S). In the lower right corner, specify the direction as either E for East or W for West.

Item 36 Enter the subscriber call sign of the point of communication.

**FCC 601**
**Schedule J**

# Technical Data Schedule for the Paging, Rural, Air-ground (General Aviation), and Offshore Radiotelephone Services (Part 22)

Approved by OMB
3060 - 0798
See 601 Main Form Instructions
for public burden estimate

**Control Points**

| 1) Action **A/M/D** | 2) Control Point Number | 3) Location Street Address, City or Town, County/Borough/Parish, State | 4) Telephone Number |
|---|---|---|---|
| | | | |
| | | | |

**Antenna Information**

| 5) Action **A/M/D** | 6) Location Number | 7) Antenna Number | 8) Height to Tip AGL (meters) | 9) Height of Center of Radiation AAT (meters) | 10) Beamwidth of Main Lobe (degrees) | 11) Gain (dB) | 12) Azimuth (degrees) |
|---|---|---|---|---|---|---|---|
| | | | | | | | |
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**Frequency Information**

| 13) Action **A/M/D** | 14) Location Number | 15) Antenna Number | 16) Channel Center Frequency (MHz) | | 17) Station Class | 18) Maximum Transmitting ERP (watts) | 19) Transmitter Output Power (watts) | 20) Nonstandard Emission Designator |
|---|---|---|---|---|---|---|---|---|
| | | | Existing (if mod) | New | | | | |
| | | | Existing (if mod) | New | | | | |
| | | | Existing (if mod) | New | | | | |
| | | | Existing (if mod) | New | | | | |
| | | | Existing (if mod) | New | | | | |
| | | | Existing (if mod) | New | | | | |
| | | | Existing (if mod) | New | | | | |

**Radial Data for Antennas**

| | | | | | 0º | 45º | 90º | 135º | 180º | 225º | 270º | 315º |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 21) Action **A/M/D** | 22) Location Number | 23) Antenna Number | 24) Frequency (MHz) | 25) RCHAAT (meters) | | | | | | | | |
| | | | | 26) ERP (watts) | | | | | | | | |

| | | | | | 0º | 45º | 90º | 135º | 180º | 225º | 270º | 315º |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 21) Action **A/M/D** | 22) Location Number | 23) Antenna Number | 24) Frequency (MHz) | 25) RCHAAT (meters) | | | | | | | | |
| | | | | 26) ERP (watts) | | | | | | | | |

| | | | | | 0º | 45º | 90º | 135º | 180º | 225º | 270º | 315º |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 21) Action **A/M/D** | 22) Location Number | 23) Antenna Number | 24) Frequency (MHz) | 25) RCHAAT (meters) | | | | | | | | |
| | | | | 26) ERP (watts) | | | | | | | | |

| | | | | | 0º | 45º | 90º | 135º | 180º | 225º | 270º | 315º |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 21) Action **A/M/D** | 22) Location Number | 23) Antenna Number | 24) Frequency (MHz) | 25) RCHAAT (meters) | | | | | | | | |
| | | | | 26) ERP (watts) | | | | | | | | |

| | | | | | 0º | 45º | 90º | 135º | 180º | 225º | 270º | 315º |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 21) Action **A/M/D** | 22) Location Number | 23) Antenna Number | 24) Frequency (MHz) | 25) RCHAAT (meters) | | | | | | | | |
| | | | | 26) ERP (watts) | | | | | | | | |

**Points of Communication for Transmitters**

| 27) Action **A/M/D** | 28) Location Number | 29) Antenna Number | 30) Frequency | 31) City or Town | 32) State | 33) Channel Center Frequency (MHz) | 34) North Latitude (DD-MM-SS-D**)** | 35) West Longitude (DDD-MM-SS-D**)** | 36) Subscriber Call Sign |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | |
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**FCC 601**
**Schedule K**

# FEDERAL COMMUNICATIONS COMMISSION

Approved by OMB
3060 – 0798
See 601 Main Form Instructions
for public burden estimate

## Information and Instructions

## Schedule for Required Notifications for Wireless Services

Form FCC 601, Schedule K, is a supplementary schedule for use with the FCC Application for Radio Service Authorization: Wireless Telecommunications Bureau and/or Public Safety and Homeland Security Bureau, FCC 601 Main Form. The FCC 601 Main Form must be filed in conjunction with this schedule. Complete this schedule to notify the FCC that, within the required time period:

- Either buildout/coverage or construction requirements have been satisfied;
- Compliance with yearly station construction commitments for Licensees with approved extended implementation plans has been met;

**Item 1 – Purpose**

Enter the one-letter abbreviation that indicates the purpose for which the application is being filed (1, 2, 3, 4, T, S, D, G, or H).

**Note:** Only one Notification purpose code may be selected per FCC 601 Main Form/Schedule K filing.

**Note:** Cellular Radiotelephone Services (CL) should use the Construction Requirements portion of this schedule.

**Satisfaction of Buildout/Coverage Requirements (Market-based services and State License Radio Service (SL) only)**

**Purpose Codes 1, 2, 3, 4 or T -** Choose from these purpose codes if this notification is for satisfaction of buildout/coverage requirements. Typically, buildout/coverage requirements apply when a specific portion of a geographic area and a specific portion of the population contained within that geographic area must be provided service by a specific date. Not all radio services use all buildout/coverage requirements. Refer to the Commission's rules for more information on buildout/coverage requirements and how they may apply to your service.

Enter one of the following Notification Purpose Codes in Item 1:

Enter '1' if 1st buildout/coverage requirement has been satisfied.

Enter '2' if 2nd buildout/coverage requirement has been satisfied.

Enter '3' if 3rd buildout/coverage requirement has been satisfied.

Enter '4' if 4th buildout/coverage requirement has been satisfied.

Enter 'T' if the tribal lands buildout/coverage requirement has been satisfied. A 'T' in this field indicates that the requirement has been met for all tribal lands in the market for which bidding credit was awarded.

**Note:** In instances where both the first and the second buildout/coverage requirements have been satisfied at the time when the first notification requirement is due, use the highest level purpose of submission code to file the Required Notification. For example: If the first coverage deadline is March 1, 2001 and the second is March 1, 2006 and you met your 2006 coverage requirements by March 1, 2001, use the purpose of submission code '2' and submit the require documentation. You do not need a separate application for each coverage deadline.

**Satisfaction of Construction Requirements (Site-licensed services only)**

**Purpose Code 'S'-** Choose this purpose code if this notification is for satisfaction of construction requirements. Typically, construction requirements apply when specific authorized components of a license must be constructed and service commenced by a specific date. Refer to the Commission's rules for more information on construction requirements and how they may apply to your service.

**Request for Regular Authorization for Facilities Previously Operating under Developmental Authority**

## Extended Implementation (Slow Growth)

**Purpose Codes 'G' or 'H' –** Choose from one of these purpose codes if this is a notification of compliance with station construction commitments for Land Mobile Licensees with approved extended implementation plans. Refer to 47 CFR §§ 90.629 and 90.155 for more information on Extended Implementation.

Enter purpose code 'G' in Item 1 for yearly notification compliance.

Enter purpose code 'H' in Item 1 for final notification compliance.

**Note:** This is for Land Mobile Radio Services only.

**Item 2 - Call Signs/Locations or Paths/Frequencies**

**IMPORTANT INFORMATION REGARDING LOCATION AND PATH NUMBERS:** To identify existing locations or paths, you must use the location and path numbers assigned by the Universal Licensing System (ULS). These numbers may not be identical to the location and path numbers on your current authorization if that authorization was not issued by the Universal Licensing System. If you are unsure of the location or path number that corresponds to a particular location or path, you can query the ULS for the most up-to-date information regarding your authorization. To query the ULS license database for your call sign, point your web browser to http://wireless.fcc.gov/uls and click on Search - Licenses. Alternatively, you may call (877) 480-3201 (TTY 717-338-2824) for assistance.

For notification of buildout/coverage requirements (purpose codes 1, 2, 3, 4 or T), only complete Item 2a.

For notification of construction requirements (purpose code 'S'), complete Items 2a through 2g, as required. Only complete those items necessary to describe what has been constructed. For example, to notify of construction of a location under a call sign, only complete Items 2a and 2b.

For notification of a request for regular paging authorization for facilities previously operating under developmental authority (purpose code 'D'), only complete those items necessary to describe what has been constructed. For example, to notify of construction of a site under a call sign, only complete Items 2a and 2b.

For notification of compliance with yearly station construction commitments for Licensees with approved extended implementation plans (purpose code 'G'), only complete Item 2a.

For notification of compliance for final station construction commitments for Licensees with approved extended implementation plans (purpose code 'H'), complete Item 2, as applicable.

**Item 2a** In this item, list the call signs. Call signs are located on FCC Authorizations.

**Item 2b** In this item list the location numbers where construction requirements have been satisfied. Location numbers are listed on FCC Authorizations and are used in the following radio services: Aviation Ground, Maritime Coast, Cellular, Land Mobile, and Paging Services.

**Item 2c** In this item list the path numbers where construction requirements have been satisfied. Path numbers are located on FCC Authorizations and are only used in the Microwave Radio Services.

**Items 2d and 2e** In this item list the frequencies, in Megahertz (MHz), where construction requirements have been satisfied. Enter the center (assigned) frequency, or the lower frequency of a frequency band, in Item 2d. If applicable, enter the upper frequency of a frequency band in Item 2e. Authorized frequencies are located on FCC Authorizations.

**Item 2f** In this item enter the actual date of construction for site based licenses only (mm/dd/yyyy).

**Item 2g** In this item list number of operational mobiles. This item only applies to Land Mobile Radio Services operating in the 470 - 512 MHz band and non-SMR conventional systems operating above 800 MHz only.

**Item 3 - Certification**

By signing the FCC 601 Main Form, the Applicant certifies that the statement listed in this section is true, complete and correct, and made in good faith.

**FCC 601**
**Schedule K**

# Schedule for Required Notifications for Wireless Services

Approved by OMB
3060 – 0798
See 601 Main Form Instructions
For public burden estimate

## 1) Purpose

The purpose of this submission: Enter one purpose only - **1**, **2**, **3**, **4**, **T**, **S**, **D**, **G** or **H** ( ) *See below and refer to instructions*.

**Satisfaction of Buildout/Coverage Requirements (Market-based services and State License Radio Service (SL) only)**

1 1st buildout/coverage requirements for the referenced system have been met. (List call signs in 2a)

2 2nd buildout/coverage requirements for the referenced system have been met. (List call signs in 2a)

3 3rd buildout/coverage requirements for the referenced system have been met. (List call signs in 2a)

4 4th buildout/coverage requirements for the referenced system have been met. (List call signs in 2a)

**T** Tribal lands buildout/coverage requirements for the referenced system have been met. (List call signs in 2a)

**Satisfaction of Construction Requirements (Site-licensed services only)**

**S** Construction requirements for the referenced parameters have been met. (List, as applicable, call signs, locations or paths, frequencies, actual date of construction and mobile units in Item 2.)

**Extended Implementation (Slow Growth) (Land Mobile Services only)**

G Notification of compliance with yearly station construction commitments for Licensees with approved extended implementation plans. (List call signs in Item 2a.)

H Final notification that construction requirements have been met for the referenced system with approved extended implementation plan. (List, as applicable, call signs, locations, frequencies, actual date of construction and mobile units in Item 2.)

## 2) Call Signs/Locations or Paths/Frequencies

| 2a) Call Sign | 2b) Location Number | 2c) Path Number (Microwave only) | 2d) Center (Assigned) or Lower Frequency (MHz) | 2e) Upper Frequency (MHz) | 2f) Actual Date of Construction (mm/dd/yyyy) | 2g) Number of Operational Mobiles (see instructions) |
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## 3) Certification

By signing the Main Form, the Applicant certifies, as set forth in 47 CFR § 1.946(c) of the Commission's Rules, that it has commenced service or operations by the expiration of its construction period, or met its coverage or substantial service obligations by the expiration of its coverage period.

**FCC 601**
**Schedule L**

# FEDERAL COMMUNICATIONS COMMISSION

Approved by OMB
3060 - 0798
See 601 Main Form Instructions
for public burden estimate

## Information and Instructions

## Schedule for Waiver Request for Extension of Time for Wireless Services

Form FCC 601, Schedule L, is a supplementary schedule for use with the FCC Application for Radio Service Authorization: Wireless Telecommunications Bureau and/or Public Safety and Homeland Security Bureau, FCC 601 Main Form. Complete this schedule to request a waiver of FCC rules for additional time to satisfy buildout/coverage or construction requirements or to request an extension of the permissible period of discontinuance of service or operations. The FCC 601 Main Form must be filed in conjunction with this schedule.

**Note:** The appropriate waiver fee must accompany requests for a waiver of FCC rules for additional time to construct and place a station in operation or to request an extension of the permissible period of discontinuance of service or operations (if applicable).

**Item 1 - Purpose**

Enter the one-letter abbreviation that indicates the purpose for which the application is being filed (1, 2, 3, 4, T, S, or P).

**Note:** Only one Extension of Time Request purpose code may be selected per FCC 601 Main Form/Schedule L filing.

**Note:** Cellular Radiotelephone Services (CL) should use the Construction Requirements portion of this schedule.

**Buildout/Coverage Requirements (Market-based services and State License Radio Service (SL) only)**

**Purpose code 1, 2, 3, 4 or T -** Choose one of these codes if this is a request for an extension of time to complete buildout/coverage requirements. Typically, buildout/coverage requirements apply when a specific portion of a geographic area and a specific portion of the population contained within that geographic area must be provided service by a specific date. Not all radio services use all buildout/coverage requirements. Refer to the Commission's Rules for more information on buildout/coverage requirements and how they may apply to your service.

Enter one of the following Extension Request Purpose Codes in Item 1:

Enter '1' if an extension is being requested for 1st buildout/coverage requirements.

Enter '2' if an extension is being requested for 2nd buildout/coverage requirements.

Enter '3' if an extension is being requested for 3rd buildout/coverage requirements.

Enter '4' if an extension is being requested for 4th buildout/coverage requirements.

Enter 'T' if an extension is being requested for the tribal lands buildout/coverage requirements. A 'T' in this field indicates that the extension request is for all tribal lands in the market for which a bidding credit was awarded.

**Construction Requirements (Site-licensed services only)**

**Note:** Do not use FCC 601 Schedule L to request an extended implementation period for Private Land Mobile Radio Services. To modify a license for an extended implementation period file FCC 601 Main Form with the purpose of MD - Modification and enter 'Y' for Item 8 of FCC 601 Schedule H, and attach supporting documentation.

**Purpose code 'S' -** Choose this purpose code if this is a request for an extension of time to complete construction requirements. Typically, construction requirements apply when specific authorized components of a license must be constructed and service commenced by a specific date. Refer to the Commission's Rules for more information on construction requirements and how they may apply to your service.

Enter 'S' in Item 1 to request an extension to meet construction requirements for a site-licensed service. An extension of time may be requested for the entire license or specific portions of the license.

**Permissible Period of Discontinuance of Service or Operations (All services)**

**Purpose code 'P' -** Choose this purpose code if this is a request for an extension of time of the permissible period of discontinuance of service or operations. The permissible period of time of discontinuance of service or operations, after which a license automatically terminates if not extended, varies by the type of license, See Section 1.953 of the Commission's Rules for more information on discontinuance of service or operations and the filing of an extension request,

Enter 'P' in Item 1 to request an extension of the period of permissible discontinuance of service or operations. The extension request must be accompanied by an exhibit demonstrating the grounds and justification for the requested extension of time.

A request for an extension of the period of permissible discontinuance of service or operations must be filed at least 30 days before the end of the existing applicable discontinuance period. When a licensee files a request for extension of the permissible discontinuance period, the permissible discontinuance period will be automatically extended by the minimum of the later of an additional 30 days or the date upon which the Wireless Telecommunications Bureau acts on the request.

**Item 2 - Buildout/Coverage/Construction Requirements or Termination of Permissible Period of Discontinuance**

Enter the new buildout/coverage/construction or termination of permissible period of discontinuance expiration date you are requesting in Item 2. You must also attach an exhibit describing the circumstances and justification for the waiver/extension request.

**Item 3 - Call Signs/Locations or Paths/Frequencies**

**IMPORTANT INFORMATION REGARDING LOCATION AND PATH NUMBERS:** To identify existing locations or paths, you must use the location or path numbers assigned by the Universal Licensing System (ULS). These numbers may not be identical to the location or path numbers on your current authorization if that authorization was not issued by the Universal Licensing System. If you are unsure of the location or path number that corresponds to a particular location or path, you can query the ULS for the most up-to-date information regarding your authorization. To query the ULS license database for your call sign, point your web browser to http://wireless.fcc.gov/uls and click on Search - Licenses. Alternatively, you may call (877) 480-3201 (TTY 717-338-2824) for assistance.

To request an extension of time to meet buildout/coverage requirements (purpose codes 1,2,3,4 or T), complete only Item 3a.

To request an extension of time to meet construction requirements (purpose code S), complete Items 3a through 3e, as required. Only complete those items necessary to describe the extension of time being requested. For example, to request an extension of time to construct a location under a call sign, only complete Items 3a and 3b.

**Item 3a** In this item list the call signs where an extension of time to meet buildout/coverage or construction requirements is being requested. Call signs are located on FCC Authorizations.

**Item 3b** In this item list the location numbers where an extension of time to meet construction requirements is being requested. Location numbers are listed on FCC Authorizations and are used in the following radio services: Aviation Ground, Maritime Coast, Cellular, Land Mobile, and Paging Services.

**Item 3c** In this item list the path numbers where an extension of time to meet construction requirements is being requested. Path numbers are located on FCC Authorizations and are only used in the Microwave Radio Services.

**Items 3d and 3e** In this item list the frequencies, in Megahertz (MHz), where an extension of time to meet construction requirements is being requested. Enter the center (assigned) frequency, or the lower frequency of a frequency band, in Item 3d. If applicable, enter the upper frequency of a frequency band in Item 3e. Authorized frequencies are located on FCC Authorizations.

To request an extension of the period of permissible discontinuance of service or operations (purpose code P), complete Item 3a. Only complete those items necessary to describe the extension of the period of permissible discontinuance of service or operation being requested. For example, to request an extension of time of the period of permissible discontinuance of service or operation under a call sign, only complete Item 3a.

Item 3a In this item list the call signs where an extension of the period of permissible discontinuance of service or operations is being requested. Call signs are located on FCC Authorizations.

Item 3b In this item list the location numbers where an extension of the period of permissible discontinuance of service or operations is being requested. Location numbers are listed on FCC Authorizations and are used in the following radio services: Aviation Ground, Maritime Coast, Cellular, Land Mobile, and Paging Services.

Item 3c In this item list the path numbers where an extension of the period of permissible discontinuance of service or operations is being requested. Path numbers are located on FCC Authorizations and are only used in the Microwave Radio Services.

Items 3d and 3e In this item list the frequencies, in Megahertz (MHz), where an extension of the period of permissible discontinuance of service or operations is being requested. Enter the center (assigned) frequency, or the lower frequency of a frequency band, in Item 3d. If applicable, enter the upper frequency of a frequency band in Item 3e. Authorized frequencies are located on FCC Authorizations.

**FCC 601**
**Schedule L**

# Schedule for Waiver Request for Extension of Time for Wireless Services

Approved by OMB
3060 - 0798
See 601 Main Form Instructions
for public burden estimate

## 1) Purpose

The purpose of this submission: Enter one purpose only - **1**, **2**, **3**, **4**, **T**, **S, or P** ( ) *See below and refer to instructions.*

### Buildout/Coverage Requirements (Market-based services and State License Radio Service (SL) only)

1 Extension of Time to meet 1st buildout/coverage requirements. (List call signs in 3a)

2 Extension of Time to meet 2nd buildout/coverage requirements. (List call signs in 3a)

3 Extension of Time to meet 3rd buildout/coverage requirements. (List call signs in 3a)

4 Extension of Time to meet 4th buildout/coverage requirements. (List call signs in 3a)

**T** Extension of Time to meet tribal lands buildout/coverage requirements. (List call signs in 3a)

### Construction Requirements (Site-licensed services only)

**S** Extension of Time to meet construction requirements (List, as applicable, call signs, locations or paths, and frequencies in Item 3.)

### Permissible Period of Discontinuance of Service or Operations (All services)

P Extension of Time for permissible discontinuance of service or operations (List, as applicable, call signs, locations or paths, and frequencies in Item 3.

## 2) New Buildout/Coverage/Construction Expiration or Termination of Permissible Period of Discontinuance Date

Enter date (mm/dd/yy) requested: Attach exhibit describing circumstances/justification.

## 3) Call Signs/Locations or Paths/Frequencies

| 3a) Call Sign | 3b) Location Number | 3c) Path Number (Microwave only) | 3d) Center (Assigned) or Lower Frequency (MHz) | 3e) Upper Frequency (MHz) |
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**FCC 601**
**Schedule M**

# FEDERAL COMMUNICATIONS COMMISSION

## Information and Instructions

## Schedule for Registration (Parts 90 & 101)

Approved by OMB
3060 – 0798
See 601 Main Form Instructions
for public burden estimate

Form FCC 601, Schedule M, is a supplementary schedule for use with the FCC Application for Radio Service Authorization: Wireless Telecommunications Bureau and/or Public Safety and Homeland Security Bureau, FCC 601 Main Form. Schedule M is not used with initial license applications. Complete this schedule to register a link in radio service MM - Millimeter Wave 70/80/90 GHz Service (70/80/90 GHz), transmitter location for radio service IQ or QQ – Dedicated Short Range Communications Service/Intelligent Transportation Service (ITS), or register a location in the radio service NN – 3650 – 3700 MHz Service. You must have a license (call sign) prior to filing a registration for a location/link.

Each Schedule M or groups of Schedule M must be filed with the FCC 601 Main Form. The main form must designate the purpose as 'RL' when this schedule is included. For 70/80/90 GHz and 3650 – 3700 MHz, Schedule M (link registrations) must be filed electronically.

Item 1 It indicates the action the Licensee wants the FCC to take on the specified registered location/link. Enter 'A' to Add, 'M' to Modify, or 'D' to delete.

Item 2 If response to Item 1 is 'M' (modify), or 'D' (delete), enter the previously registered location/link number. If response to Item 1 is 'A' (add), the FCC will assign an official number to the new location/link, which will appear on the registration.

For 70/80/90 GHz, enter the link registration number provided by the third party database manager, or leave blank and the FCC will assign.

Item 3 This item is required for fixed locations if the action requested in Item 1 is 'A' or 'M' and if antenna structure registration is required (see notes below), enter the seven digit FCC Antenna Structure Registration Number (shown on the structure's registration, FCC 854R) or FCC 854 File Number. 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 854. The use of this FCC 601 to supply antenna structure information does not replace the requirement to register antenna structures on the FCC 854. For more information, see our web site at http://wireless.fcc.gov/antenna, call (877) 480-3201 (TTY 717-338-2824), or visit http://esupport.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 an attachment to your application.

Item 4 This item is optional. Enter a site name that describes the location (up to 20 characters maximum).

Items 5 and 6 Enter the geographic coordinates of the transmit location referenced to NAD83.

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 72, minutes (*MM*) can range from 0 to 59, and seconds (*SS.S*) can range from 0 to 59.9. In the 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 64 to 180, minutes (*MM*) can range from 0 to 59, and seconds (*SS.S*) can range from 0 to 59.9. In the 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 or equivalent entity 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 datum. 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.

Item 7 This item must be completed with the City in which the Transmitter is located.

Item 8 (Not required for ITS) This item must be completed with the County/Borough/Parish or equivalent entity in which the Transmitter is located unless any of the following pertain to the Transmit Station location:

a) the city entered in Item 7 is an Independent City that is not affiliated with a County/Borough/Parish (i.e., Baltimore, MD)
b) the State code entered in Item 9 is GM, Gulf of Mexico

Item 9 This item must be completed with the State code in which the Transmitter is located. Refer to FCC 601 Main Form Instructions, Appendix II, for a list of valid state, jurisdiction and area codes.

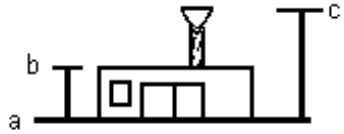
Item 10 Enter the elevation above mean sea level (AMSL) of the ground at the antenna location. Enter this item in meters, rounded to the nearest tenth. Refer to letter 'a' in the antenna structure figure examples on page 2 of these instructions. This information can be determined in many ways, including a GPS receiver, 7.5 minute topographical quadrangle map of the area, or you may consult the city or county/borough/parish or equivalent entity 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.

Item 11 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, flag pole, 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 below.

Item 12 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 below.

**Antenna Structure Figure Examples:**




Item 13 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 |
| BANT | Building with Antenna on Top |
| BMAST | Building with Mast |
| BPIPE | Building with Pipe |
| BPOLE | Building with Pole |
| BRIDG | Bridge |
| BTWR | Building with Tower |
| GTOWER | Guyed structure used for communication purposes |
| LTOWER | Lattice Tower |
| MAST | Mast |
| MTOWER | Monopole |
| NNGTANN* | Guyed Tower Array |
| NNLTANN* | Lattice Tower Array |
| NNMTANN* | Monopole Array |
| PIPE | Any type of Pipe |
| POLE | Any type of Pole |
| 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.) |
| 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., 3GTA2 would identify the second tower in a three tower array).

Item 14 and 15 Not required for ITS and 3650 – 3700 MHz. Enter the geographic coordinates of the receiver location referenced to NAD83.

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 72, minutes (*MM*) can range from 0 to 59, and seconds (*SS*) can range from 0 to 59.9. In the 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 64 to 180, minutes (*MM*) can range from 0 to 59, and seconds (*SS*) can range from 0 to 59.9. In the 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 or equivalent entity 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 datum. 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.

Item 16 Enter the name of the manufacturer of the transmitting antenna.

Item 17 Enter the model number of the transmitting antenna.

Item 18 Enter the gain of the transmitting antenna in decibels referenced to an isotropic radiator (dBi).

Item 19 Enter the beamwidth (degrees, rounded to one decimal place) of the transmitting antenna. That is, enter the angular distance between the half power points of the antenna's major lobe in the horizontal plane. For omnidirectional antennas, enter '360'.

Item 20 Enter the height above ground level to the center of the transmitting antenna. Enter this item in meters, rounded to the nearest tenth. For a parabolic dish antenna, this is the height to the center of the dish.

Item 21 Enter the azimuth of the transmit antenna in degrees (rounded to one decimal place) clockwise from True North. For omnidirectional antennas, enter '360'.

Item 22 Enter the elevation angle of the transmitting antenna (rounded to the nearest degree), measured from the horizontal up to the center line of the main beam of the antenna. If the antenna tilts down (depression angle), indicate with a minus sign.

Item 23 Not required for ITS. Indicate polarization with the following codes:

Acceptable polarizations for 70/80/90 GHz:

V – Vertical
H – Horizontal
R – Right-hand circular
L – Left-hand circular
S – Variable

Acceptable polarizations for 3650-3700 MHz:

D-Dual Plus/Minus 45 Degrees
E-Elliptical
F-45 degrees
H-Horizontal
L-Left-hand circular
R-Right-hand circular
S-Horizontal and vertical
T-Right and left-hand circular
V-Vertical
X-Other (provide a description in an attachment)

For linear polarization other than horizontal or vertical, the polarization should be stated in degrees measured from the vertical, with angles between 1 and +89 degrees denoting the outgoing electric field vector displacement in the clockwise direction, and angles between -1 and -89 degrees denoting the outgoing electric field vector displacement in the counterclockwise direction.

Item 24 Not required for ITS and 3650 – 3700 MHz. Enter the name of the manufacturer of the receiving antenna.

Item 25 Not required for ITS and 3650 – 3700 MHz. Enter the model number of the receiving antenna.

Item 26 Not required for ITS and 3650 – 3700 MHz. Enter the gain of the receiving antenna in decibels referenced to an isotropic radiator (dBi).

Item 27 Not required for ITS and 3650 – 3700 MHz. Enter the beamwidth (degrees, rounded to one decimal place) of the receiving antenna. That is, enter the angular distance between the half power points of the antenna's major lobe in the horizontal plane. For omnidirectional antennas, enter '360'.

Item 28 Not required for ITS and 3650 – 3700 MHz. Enter the height above ground level to the center of the receiving antenna. Enter this item in meters, rounded to the nearest tenth. For a parabolic dish antenna, this is the height to the center of the dish.

Item 29 Not required for ITS and 3650 – 3700 MHz. Enter the azimuth of the receive antenna in degrees (rounded to one decimal place), clockwise from True North.

Item 30 Not required for ITS and 3650 – 3700 MHz. Enter the elevation angle of the receiving antenna (rounded to the nearest degree), measured from the horizontal up to the center line of the main beam of the antenna. If the antenna tilts down (depression angle), indicate with a minus sign.

Item 31 Not required for ITS and 3650 – 3700 MHz. Enter the name of the manufacturer of the transmitter.

Item 32 Not required for ITS. Enter the model number/FCC ID number of the transmitter.

Item 33 ITS operations only. Enter the class (A, B, C or D) of the equipment used. The equipment class is based on the communication zone (A-15m, B-100m, C-400m, D-1000m) of the roadside unit.

Item 34 Not required for ITS and 3650 – 3700 MHz. Enter the transmitter stability (percentage).

Item 35 Not required for 3650 – 3700 MHz. Enter the appropriate station class code. For 70/80/90 GHz, the only valid station class is FXO. For ITS, the only valid station class is FB.

Item 36 Not required for ITS. For 70/80/90 GHz enter the center frequency in MHz. For 3650 – 3700 MHz enter the center frequency or lower and upper frequency band edge in MHz.

Item 37 For ITS operations only. Check all service channel numbers that the Roadside Unit will be using. The service channel numbers are 170 (reserved), 172, 174, 175, 176, 180, 181, 182, and 184. Checking 'All' will select channels 174, 175, 176, 180, 181 and 182. If more than one channel is selected, the EIRP, Item 40, must be identical for all channels. (Note: Control Channel 178 will be given to all users; Channel 172 is designated for public safety applications; and Channel 184 is restricted to government entities.)

Item 38 Not required for ITS and 3650 – 3700 MHz. Enter the minimum transmitter output power in dBm if automatic transmitter power control is employed.

Item 39 Not required for 3650 – 3700 MHz. Enter the maximum transmitter output power in dBm.

Item 40 Enter the Effective Isotropic Radiated Power (EIRP), in dBm rounded to one decimal place, radiated off the transmitting antenna. For 70/80/90 GHz, if Automatic Transmitter Power Control is employed, specify the maximum EIRP.

Item 41 Not required for ITS. Enter the transmitter emission designator, composed of its necessary bandwidth and emission type. (*See* 47 CFR §§ 2.201 - 2.202 for further information on emission and bandwidth designation.

Item 42 Not required for ITS. Enter the appropriate Modulation Scheme (e.g., AM, FM, OFDM, QAM, etc.).

Item 43 Not required for ITS and 3650 – 3700 MHz. Enter the name of the manufacturer of the receiver.

Item 44 Not required for ITS and 3650 – 3700 MHz. Enter the model number of the receiver.

Item 45 Not required for ITS and 3650 – 3700 MHz. Enter the receiver stability (percentage).

Item 46 Not required for ITS and 3650 – 3700 MHz. Enter the receiver noise figure (dB).

Item 47 For 70/80/90 GHz, refer to 47 CFR § 1.928(f). For ITS operations that require coordination with Canada, answer 'Y' only if operation is north of Line A (or east of Line C) and the station is operating with a power (ERP) greater than 5 watts. Refer to 47 CFR § 1.928(e) for a definition of Line A (or Line C).

Item 48 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). This item must be answered, either 'Y' or 'N'.

Enter 'Y' if an FCC grant of this application will have a significant environmental effect. 47 CFR § 1.1307 lists categories of environmental effects for which Applicants must file an environment 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 (not otherwise excluded) that would cause non-compliance with the limits specified in 47 CFR § 1.1310

Item 49a Applicants filing for a new or modified fixed station located in one of the Quiet Zone areas listed below must notify the proper authority and indicate the date such notification was sent in Item 49a. Those applications who are proposing to modify other technical parameters (including, but not limited to frequency, power, antenna height, etc.) of their system operations where the station is currently authorized to operate within the quiet zone area, must also notify the proper authority and indicate the date such notification was sent in Item 49a. *See* Part 1, Subpart F of the FCC Rules (47 CFR § 1.924)

Item 49b If the Applicant has obtained prior written consent from the Quiet Zone entity for the technical parameters specified in the application, enter "Y" and include a copy of the consent as a Quiet Zone Consent attachment. If prior written consent has not been obtained, enter "N".

Quiet Zone areas:

1. National Radio Astronomy Observatory, Green Bank, Pocohontas County, West Virginia. The quiet zone is located within Virginia, West Virginia, and Garrett County, Maryland and bounded by N 39 degrees 15' 0.4" on the north, W 78 degrees 29' 59.0" on the east, N 37 degrees 30' 0.4" on the south, and W 80 degrees 29' 59.2" on the west. Contact the Director, National Radio Astronomy Observatory, P.O. Box 2, Green Bank, WV 24944.

2. Arecibo Observatory, Puerto Rico. The quiet zone consists of the Puerto Rico, Desecheo, Mona, Vieques, and Culebra islands. Contact the Interference Office, Arecibo Observatory, Post Office Box 53995, Arecibo, Puerto Rico 00612, or electronically at prcz@naic.edu.

Item 50 For ITS operations. Enter 'Y' if the registration location requires coordination with NTIA otherwise enter 'N'. See rule 90.371(b) to determine if NTIA coordination is required.

For 70/80/90 GHz. Enter 'Y' if the link requires coordination with NTIA due to a "yellow light" response from NTIA's automated system, otherwise, enter 'N'.

Item 51 For 3650 – 3700 MHz Service Operations. Enter 'Y' if you certify that you have negotiated an agreement with the grandfathered satellite earth station Licensee to operate within 150 km of the grandfathered satellite earth station. Otherwise, enter 'N'.

Item 52a For 3650 – 3700 MHz Service Operations. In accordance with 47 CFR §§ 90.7 and 90.1305 stations in the 3650 - 3700 MHz service must employ a transmission method or protocol that allows multiple users to share the spectrum. Transmission methods or protocols may fall into two categories, unrestricted or restricted. Unrestricted protocols are broadly compatible and function to prevent interference even with other, dissimilar contention technologies on the market (e.g. listen before talk). Restricted contention protocols can prevent interference only with other devices incorporating the same protocol (e.g. scheduling protocols). Enter "R" if you employ a restricted transmission method or protocol, or "U" if you employ an unrestricted transmission method or protocol.

Item 52b For 3650 – 3700 MHz Service Operations. Enter or specify what transmission methods or protocols you will employ.

**FCC 601**
**Schedule M**

# Schedule for Registration (Parts 90 & 101)

Approved by OMB
3060 - 0798
See 601 Main Form
for public burden estimate

| | |
|---|---|
| 1) Action: (  ) Add, Modify **or** Delete | 2) Location/Link Registration Number: _____ |

**Site Data**

| | | |
|---|---|---|
| 3) FCC Antenna Structure Registration, FCC 854 File Number or N/A: | | 4) Site Name: |
| 5) Transmitter Latitude (DD-MM-SS.S): **NAD83** (  ) N or S | | 6) Transmitter Longitude (DDD-MM-SS.S): **NAD83** (  ) E or W |
| 7) City: | 8) County/Borough/Parish: | 9) State: |
| 10) Elevation of Site AMSL (meters) ('a' in antenna structure example): | 11) Overall Ht AGL Without Appurtenances (meters) ('b' in antenna structure example): | 12) Overall Ht AGL With Appurtenances (meters) ('c' in antenna structure example): |
| 13) Support Structure Type: | | |
| 14) Receiver Latitude (DD-MM-SS.S): **NAD83** (  ) N or S | | 15) Receiver Longitude (DDD-MM-SS.S): **NAD83** (  ) E or W |

**Antenna Data**

| | | |
|---|---|---|
| 16) Transmitter Antenna Manufacturer: | | 17) Transmitter Antenna Model Number: |
| 18) Transmitter Antenna Gain (dBi): | 19) Transmitter Antenna Beamwidth (Degrees): | 20) Transmitter Antenna Center Line (meters-AGL): |
| 21) Transmitter Antenna Azimuth (Degrees): | | 22) Transmitter Antenna Elevation Angle (Degrees): |
| 23) Polarization: | | |
| 24) Receiver Antenna Manufacturer: | | 25) Receiver Antenna Model Number: |
| 26) Receiver Antenna Gain (dBi): | | 27) Receiver Antenna Beamwidth (Degrees): |
| 28) Receiver Antenna Center Line (meters-AGL): | 29) Receiver Antenna Azimuth (Degrees): | 30) Receiver Antenna Elevation Angle (Degrees): |

**Equipment Data**

| | | |
|---|---|---|
| 31) Transmitter Manufacturer: | 32) Transmitter Model Number/FCC ID Number: | |
| 33) Equipment Class: ☐A ☐B ☐C ☐D | 34) Transmitter Stability (%): | |

| | | | |
|---|---|---|---|
| 35) Transmitter Station Class: | 36) Transmitter Center Frequency or Lower Frequency Band Edge (MHz): | Upper Frequency Band Edge (MHz): | 37) Channel Number (Channel 170 is reserved for future use): (Reserved) 170 ( ) 172 ( ) 174 ( ) 175 ( ) 176 ( ) 180 ( ) 181 ( ) 182 ( ) 184 ( ) All |

| | | |
|---|---|---|
| 38) Minimum Transmitter Output Power (if Automatic Transmitter Power Control is employed) (dBm): | 39) Maximum Transmitter Output Power (dBm): | 40) EIRP (dBm): |

| |
|---|
| 41) Transmitter Emission Designator: |
| 42) Modulation Scheme: |

| | | |
|---|---|---|
| 43) Receiver Manufacturer: | | |
| 45) Receiver Stability (%): | | ): |

47) Do you propose to operate in an area that requires frequency coordination with Canada or Mexico? ( ) **Y**es **N**o

48) Would a Commission grant of Authorization for this location be an action which may have a significant environmental effect? *See* 47 CFR § 1.1307. If 'Yes', submit an environmental assessment as required by 47 CFR §§ 1.1308 and 1.1311. ( ) **Y**es **N**o

49a) If the site is located in one of the Quiet Zones listed in Item 49b of the Instructions, provide the date (mm/dd/yyyy) that the proper Quiet Zone entity was notified:_____/_____/_____

49b) Has the Applicant obtained prior written consent from the proper Quiet Zone entity for the same technical parameters that are specified in this application? ( ) **Y**es **N**o

50) Does the registration location/link require coordination with NTIA? ( ) **Y**es **N**o

For 70/80/90 GHz. Enter 'Y' if the link requires coordination with NTIA due to a yellow light from NTIA's automated system, otherwise, enter 'N'.

51) If your base or fixed station is located within 150 km of a grandfathered satellite earth station, do you certify that you have negotiated an agreement with the grandfathered satellite earth station Licensee to operate the station that you are registering within that protected zone? ( ) **Y**es **N**o

52a) Do you employ a transmission method or protocol that is categorized as restricted or unrestricted? ( ) Restricted or Unrestricted

52b) Enter the name or description of the transmission methods or protocols you will employ.