

## ATTACHMENT 1

## FORWARD AUCTION CLOCK PHASE BIDDER DATA FILES

## Table of Contents

|  |    |
|--|----|
| 1. Introduction.....                     | 2  |
| 2. Bidder Download Files .....           | 2  |
| 2.1. My Bidder Markets .....             | 2  |
| 2.2. Sample Bids File .....              | 3  |
| 2.3. My Bids.....                        | 4  |
| 2.4. My Results .....                    | 6  |
| 2.5. My Product Status.....              | 8  |
| 2.6. My Bidder Status .....              | 9  |
| 2.7. My Split Transition .....           | 12 |
| 2.8. My Stage Transition.....            | 14 |
| 2.9. Block Transition.....               | 15 |
| 2.10. Market-Block Transition.....       | 16 |
| 3. Bidder Upload File.....               | 16 |
| 4. Appendix: Data Type Definitions ..... | 17 |

## 1. Introduction

This document provides the data file specifications for the bidding related upload and download files that will be available to bidders during the forward auction clock phase. Each file specification includes the format of the file and definitions of the data elements in the files including a name, description, data type, examples and notes.<sup>1</sup> Data type definitions and notation rules are explained in an appendix attached to this document.

In addition to the data file specifications, a sample data file for each file is available on the Auction 1002 website ([www.fcc.gov/auctions/1002](http://www.fcc.gov/auctions/1002)) under the Data tab.<sup>2</sup> The sample data files show a variety of bidding scenarios over the course of seven rounds. For illustrative purposes only, bids were entered in such a way so that the fourth round was an extended round that met the final stage rule, with sample data for the fifth round therefore reflecting implementation of the market-based spectrum reserve and the split of Category 1 blocks into reserved and unreserved blocks. In the sixth round, the bidder in the sample data did not place any bids. In the seventh round, bids were placed in such a way that the clock phase ends at the conclusion of the round. Sample download files related to a new stage are also provided for the same bidder in a new stage where, in a different scenario, the final stage rule was not met, and the clearing target has been reduced by two blocks. We emphasize that the scenarios and bidding examples provided are not meant to reflect any predictions or assumptions by the Commission regarding bidding activity, the number of rounds, or the outcome of the incentive auction.

## 2. Bidder Download Files

This section provides the specifications of the bidding related download files available to bidders during the forward clock phase. It also includes the specifications for three additional files that will be provided at the beginning of each additional stage of the forward clock phase.

### 2.1. My Bidder Markets

**File name:** my\_bidder\_markets-stage#.csv

The My Bidder Markets file provides information about each product (PEA and license category combinations) available in the forward auction. It indicates whether a bidder is eligible to bid on the product based on the PEAs selected on its Form 175 application. It also indicates if the bidder is eligible to bid on reserve spectrum in that PEA.

#### File Structure:

- CSV file (first row contains header).
- One record for each product available in the forward auction.

---

<sup>1</sup> We note that the terminology used in this Public Notice is defined in the technical appendices to the *Auction 1000 Application Procedures Public Notice*. See *Application Procedures for Broadcast Incentive Auction Scheduled to Begin on March 29, 2016; Technical Formulas for Competitive Bidding*, AU Docket No. 14-252, GN Docket No. 12-268, WT Docket No. 12-269, Public Notice, DA 15-1183 (WTB rel. Oct. 15, 2015) (*Auction 1000 Application Procedures Public Notice*).

<sup>2</sup> The Auction 1002 website provides a single ZIP file containing the individual CSV files. The Auction System provides each of the CSV files separately.

| Field            | Description  | Data Type                              | Examples/Notes             |
|------------------|--|--|----------------------------|
| auction_id       | The FCC auction number for the forward auction.                                | String                                 | 1002                       |
| market_number    | The PEA (Partial Economic Area) ID   | String<br>([“PEA”][0-9] [0-9][0-9]){6} | PEA001                     |
| market_name      | The PEA name   | String                                 | “New York, NY”             |
| bidder           | Bidder name  | String                                 | Company XYZ<br>“ABC, Inc.” |
| frn              | The bidder’s FCC Registration Number (FRN) which uniquely identifies a bidder. | Alpha-numeric<br>{10}                  | 0003645843                 |
| selected_market  | Indicates if the bidder selected the PEA on its application form.              | Character<br>[Y N]{1}                  | Y                          |
| reserve_eligible | Indicates if the bidder is eligible to bid on reserve blocks in the PEA.       | Character<br>[Y N]{1}                  | Y                          |

## 2.2. Sample Bids File

**File name:** sample\_bids\_file.csv

The Sample Bids file provides a sample template for a bidder that wants to upload its bids in the first round of the initial stage of the auction. For each product (PEA and license category) it wishes to bid on, the bidder indicates the desired quantity of blocks. This file is available only in the first round of the initial stage of the auction.

### File Structure:

- CSV file (first row contains header).
- One record for each product the bidder is eligible to bid on in the forward auction.

| Field         | Description   | Data Type                              | Examples/Notes  |
|---------------|---|--|---|
| market_number | The PEA (Partial Economic Area) ID                  | String<br>([“PEA”][0-9] [0-9][0-9]){6} | PEA001  |
| market_name   | The PEA name  | String                                 | “New York, NY”  |
| category      | License category                                    | String<br>[C1 C1-R C1-U C2]<br>{4}     | C1  |
| bidding_units | Number of bidding units associated with the product | Integer                                | 2300  |
| supply        | The supply of blocks associated with the product    | Integer                                | 8   |
| quantity      | Number of blocks requested                          | Integer                                | 0<br><br><i>The bidder must input its desired quantity before uploading the file.</i> |

### 2.3. My Bids

**File name:** my\_bids-stage#.csv

The My Bids file provides a list of all the bids considered by the Auction System for a bidder in a round, including bids that were submitted so far in an open round. Each bid pertains to a specific product (PEA and license category combination) being offered in the forward auction. Note that the file does not contain bids that were submitted and subsequently modified within the same round, rather the file contains the list of bids the Auction System is currently considering or did consider for that bidder in the associated round.

In addition to providing information about the bid and the authorized bidder who submitted the bid, the file provides information about the associated product in that round such as the opening price and clock price the supply, and the bidder's processed demand for that product.

#### File Structure:

- CSV file (first row contains header).
- The file contains one record per round and bid combination.
- After the results of a round have been posted, this file may also contain missing bids submitted by the Auction System. A missing bid is a simple bid for a quantity of 0 at the lowest possible price for the product in that round.
- The file contains cumulative data for all past rounds and the current round.
- The file contain two entries for each switch bid: one for the "from" category and one for the "to category". The "from" and "to" categories are listed in both records in switch\_from\_category and switch\_to\_category.
- The file contains two entries for each all-or-nothing bid with a backstop. The first entry, bid\_type = "AON+", contains the price, price point, and selection number of the all-or-nothing bid. The second entry, "bid\_type" = "Backstop", contains the price, price point, and selection number of the backstop bid.
- In an extended round, the file will contain a record for all products with processed demand from the previous round that are not biddable in the extended round. For non-biddable products a bid is automatically considered that maintains the bidder's processed demand and posted price from the previous round.

| Field         | Description   | Data Type                                 | Examples/Notes             |
|---------------|---|---|----------------------------|
| auction_id    | The FCC auction number for the forward auction      | String                                    | 1002                       |
| stage         | Stage number  | Integer                                   | 1                          |
| round         | Round number  | Integer                                   | 12                         |
| market_number | The PEA (Partial Economic Area) ID                  | String<br>(["PEA"] [0-9] [0-9] [0-9]) {6} | PEA001                     |
| market_name   | The PEA name  | String                                    | "New York, NY"             |
| category      | License category                                    | String<br>[C1 C1-R C1-U C2]               | C1                         |
| bidding_units | Number of bidding units associated with the product | Integer                                   | 2300                       |
| bidder        | Bidder name   | String                                    | Company XYZ<br>"ABC, Inc." |

| Field                | Description  | Data Type                                   | Examples/Notes   |
|----------------------|--|---|--|
| frn                  | The bidder's FCC Registration Number (FRN) which uniquely identifies a bidder  | Alpha-numeric<br>{10}                       | 0003645843   |
| bid_type             | Type of bid  | String<br>[Simple AON AON+ Switch Backstop] | Simple<br><br><i>AON = All-or-nothing<br/>AON+ = All-or-nothing with backstop<br/>Backstop = backstop bid associated with an AON+</i>  |
| quantity             | Number of blocks requested   | Integer                                     | 2<br><br><i>This value is the requested quantity for the product (not the number of blocks to be reduced or switched).</i>   |
| bid_amount           | Requested price for each block   | Integer                                     | 125000<br><br><i>For the "to" product in a switch bid, this value is the clock price associated with the product.</i>  |
| price_point          | The price point associated with the bid  | Decimal<br>[0-1] {12}                       | 0.7560548272<br><br><i>In round 1 this value is 1.0000000000.<br/><br/>For the "to" product in a switch bid, this value will always be 1.0000000000 regardless of the price point of the "from" product.</i> |
| switch_from_category | For the "to" product in a switch bid, this field indicates the license category of the "from" product in a switch bid. | String<br>[C1 C1-R C1-U C2]<br>{4}          | C1-U<br><br><i>NULL for Simple, AON, AON+ bid types, and the "from" product of a switch bid.</i>   |
| switch_to_category   | For the "from" product in a switch bid, this field indicates the license category of the "to" product in a switch bid. | String<br>[C1 C1-R C1-U C2]<br>{4}          | C1-R<br><br><i>NULL for Simple, AON, AON+ bid types and the "to" product of a switch bid.</i>  |
| supply               | The supply of blocks associated with the product   | Integer                                     | 8  |

| Field                       | Description   | Data Type                                      | Examples/Notes   |
|-----------------------------|---|--|--|
| prev_round_processed_demand | The bidder's processed demand for the product at the start of the round.  | Integer  | 4<br><br><i>NULL for Stage 1, Round 1.</i>   |
| prev_round_aggregate_demand | The aggregate demand for the product at the start of the round.   | Integer  | 12<br><br><i>NULL for Stage 1, Round 1.</i>  |
| round_opening_price         | The lowest price available for bidding on the associated product in the round.  | Integer  | 11500000<br><br><i>In Stage 1, Round 1 this is the opening price, for all other rounds it is the posted price from the previous round.</i>         |
| round_clock_price           | The clock price (highest price) of the associated product in the round.   | Integer  | 12650000   |
| entered_by                  | Name of authorized bidder or telephonic bid assistant who submitted the bid, or "System" if the Auction System submitted a missing bid. | String   | Karen Smith<br><br>Telephonic Bid Assistant<br><br>System  |
| entered_time                | The time the bid was submitted.   | String<br><br>MM/DD/YY<br>HH:MM:SS<br>AM/PM ET | 12/04/15 03:21:47 PM ET  |
| selection_number            | The pseudo-random number associated with the bid used for tie-breaking purposes.  | Integer<br>{15}                                | 123456789012345<br><br><i>This field is NULL until the round data is posted.</i><br><br><i>This field is NULL in round 1 of the initial stage.</i> |

#### 2.4. My Results

**File name:** my\_results-stage#.csv

The My Results file provides a list of the results of bid processing for a bidder in a given round for all products (PEA and license category combinations) in which the bidder had processed demand in the previous round. For each product the file gives the processed demand, posted price and the aggregate demand. Additionally, if a bid was not fully accepted, the file provides an indication of such and details about why one or more bids for the product were not accepted. The data pertaining to bidding results for a round is available in the file once the round results have been posted.

**File Structure:**

- CSV file (first row contains header).
- One record for each round and product combination where the bidder had processed demand for the product in the previous round.
- The file contains cumulative data for all past rounds.
- In an extended round, the file will contain a record for all products with processed demand at the start of the round that are not biddable in the extended round. For non-biddable products a bid is automatically considered that maintains the bidder's processed demand and posted price from the previous round.

| Field                 | Description   | Data Type                                 | Examples/Notes             |
|-----------------------|---|---|----------------------------|
| auction_id            | The FCC auction number for the forward auction                                | String                                    | 1002                       |
| stage                 | Stage number  | Integer                                   | 1                          |
| round                 | Round number  | Integer                                   | 12                         |
| market_number         | The PEA (Partial Economic Area) ID  | String<br>(["PEA"] [0-9] [0-9] [0-9]) {6} | PEA001                     |
| market_name           | The PEA name  | String                                    | "New York, NY"             |
| category              | License category  | String<br>[C1 C1-R C1-U C2] {4}           | C1                         |
| bidder                | Bidder name   | String                                    | Company XYZ<br>"ABC, Inc." |
| frn                   | The bidder's FCC Registration Number (FRN) which uniquely identifies a bidder | Alpha-numeric<br>{10}                     | 0003645843                 |
| processed_demand      | The bidder's demand for the product after processing.                         | Integer                                   | 2                          |
| processed_demand_flag | Indication if all bids for the product were fully processed.                  | Character<br>[Y N] {1}                    | Y                          |

| Field                   | Description   | Data Type       | Examples/Notes   |
|-------------------------|---|-----------------|--|
| processed_demand_detail | Details about why one or more bids for the product were not accepted or not fully accepted during bid processing. | String<br>{500} | <p>“Simple bid to increase demand to 11 @ \$147,000,555; 2 blocks were not applied due to insufficient eligibility.”</p> <p>“AON bid to decrease demand to 0 @ \$36,600,222; 3 blocks were not applied due to insufficient aggregate demand.”</p> <p><i>If more than one detail message is applicable (e.g. intra-round bids), then the messages are separated with semi-colons.</i></p> <p><i>NULL if all bid(s) for the product were fully accepted.</i></p> |
| aggregate_demand        | The aggregate demand for the product after processing.  | Integer         | 15   |
| posted_price            | The posted price for the product after processing.  | Integer         | 12650000   |

## 2.5. My Product Status

**File name:** my\_product\_status-stage#.csv

The My Product Status file provides the status of each product (PEA and license category combination) after bid processing in a round. For each product the file gives the posted price, aggregate demand and the clock price in the next round. Additionally the file provides supporting information about each product in that round such as the opening price and clock price, the supply, bidding units, and population.

The data pertaining to bidding results for a round is available in the file once the round results have been posted. Information pertaining to next round clock prices is available in the file once the information for the next round has been updated in the Auction System (usually at the same time or very soon after the results have been posted).

### File Structure:

- CSV file (first row contains header).
- One record for each round and product combination where the bidder is eligible to bid on the product based on the PEAs it selected on its Form175.
- The file contains cumulative data for all past rounds.

| Field                  | Description   | Data Type                                 | Example/Notes  |
|------------------------|---|---|--|
| auction_id             | The FCC auction number for the forward auction                      | String                                    | 1002   |
| stage                  | Stage number  | Integer<br>{1,3}                          | 1  |
| round                  | Round number  | Integer                                   | 12   |
| market_number          | The PEA (Partial Economic Area) ID                                  | String<br>(["PEA"] [0-9] [0-9] [0-9]) {6} | PEA001   |
| market_name            | The PEA name  | String                                    | "New York, NY"   |
| category               | License category  | String<br>[C1 C1-R C1-U C2] {4}           | C1   |
| round_opening_price    | The lowest price available for bidding on the product in the round. | Integer                                   | 11500000<br><br><i>In Stage 1, Round 1 this is the opening price, for all other rounds it is the posted price from the previous round.</i> |
| round_clock_price      | The clock price (highest price) of the product in the round.        | Integer                                   | 12650000   |
| aggregate_demand       | The aggregate demand for the product after processing.              | Integer                                   | 15   |
| posted_price           | The posted price for the product after processing.                  | Integer                                   | 12650000   |
| next_round_clock_price | The clock price (highest price) of the product in the next round.   | Integer                                   | 13915000<br><br><i>NULL if the next round has not yet been announced.</i>  |
| bidding_units          | Number of bidding units associated with the product                 | Integer                                   | 2300   |
| supply                 | The supply of blocks for the product                                | Integer                                   | 8  |
| population             | The population in the PEA associated with the product.              | Integer                                   | 25237061   |

## 2.6. My Bidder Status

**File name:** my\_bidder\_status-stage#.csv

The My Bidder Status file provides information related to a bidder for a round. For each round the file gives the bidder's eligibility, required activity and bidding activity in the round. The results of bid processing are also given for the round including the bidder's processed activity as well as the bidder's eligibility and required activity for the next round. Financial information for both a bidder's requested commitments and its processed commitments are also given.

The data pertaining to the bidder's results for a round is available in the file once the round results have been posted. Information pertaining to next round eligibility and required activity is available in the file

once the information for the next round has been updated in the Auction System (usually at the same time or very soon after the results have been posted).

**File Structure:**

- CSV file (first row contains header).
- One record for each round
- The file contains cumulative data for all past rounds.

| Field               | Description  | Data Type                          | Examples/Notes   |
|---------------------|--|------------------------------------|--|
| auction_id          | The FCC auction number for the forward auction.                                | String                             | 1002   |
| stage               | Stage number   | Integer<br>{1,3}                   | 1  |
| round               | Round number   | Integer                            | 12   |
| bidder              | Bidder name  | String                             | Company XYZ<br>"ABC, Inc."   |
| frn                 | The bidder's FCC Registration Number (FRN) which uniquely identifies a bidder. | Alpha-numeric<br>{10}              | 0003645843   |
| bidding_credit_pct  | The bidding credit percentage associated with the bidder                       | Integer                            | 15<br><br><i>0 = no bidding credit<br/>15 = 15% bidding credit</i>   |
| bidding_credit_type | Indicates the type of bidding credit that the bidder is eligible to receive.   | String<br>[Rural   Small Business] | Small Business<br><br><i>Rural = bidder is eligible for the rural service provider bidding credit</i><br><br><i>Small Business = bidder is eligible for the small business bidding credit</i><br><br><i>NULL if the bidder is not eligible for a bidding credit.</i> |
| eligibility         | The bidder's eligibility in bidding units at the start of round.               | Integer                            | 8000000  |
| required_activity   | The bidder's required activity in bidding units for the round.                 | Integer                            | 5000000  |
| activity            | The bidder's bidding activity in bidding units for the round.                  | Integer                            | 4000000  |
| req_commitment      | The bidder's requested commitment in dollars for the round.                    | Integer                            | 346000000  |

| Field                                  | Description   | Data Type | Examples/Notes   |
|--|---|-----------|--|
| req_commitment_discount_capped         | The bidder's requested discount in dollars for the round based on any bidding credits and applying any applicable bidding credit caps.                          | Integer   | 150000000<br><br><i>NULL if the bidder is not eligible for a bidding credit.</i>   |
| req_net_commitment                     | The bidder's requested net commitment in dollars for the round.   | Integer   | 296000000<br><br><i>NULL if the bidder is not eligible for a bidding credit.</i>   |
| req_commitment_discount_uncapped       | The bidder's requested discount in dollars for the round based on any bidding credits without applying any applicable bidding credit caps.                      | Integer   | 156000000<br><br><i>NULL if the bidder is not eligible for a bidding credit.</i>   |
| req_commitment_discount_uncapped_small | The bidder's requested discount in dollars for the round in the small markets based on any bidding credits without applying any applicable bidding credit caps. | Integer   | 11000000<br><br><i>Contains a value if the bidder is eligible for the small business bidding credit, NULL otherwise.</i> |
| processed_activity                     | The bidder's bidding activity in bidding units after processing.  | Integer   | 4100000<br><br><i>NULL if the round results have not yet been posted.</i>  |
| commitment                             | The bidder's commitment in dollars for the round.   | Integer   | 348500000  |
| commitment_discount_capped             | The bidder's discount in dollars for the round based on any bidding credits and applying any applicable bidding credit caps.                                    | Integer   | 150000000<br><br><i>NULL if the bidder is not eligible for a bidding credit.</i>   |
| net_commitment                         | The bidder's net commitment in dollars for the round.   | Integer   | 298500000<br><br><i>NULL if the bidder is not eligible for a bidding credit.</i>   |
| commitment_discount_uncapped           | The bidder's discount in dollars for the round based on any bidding credits without applying any applicable bidding credit caps.                                | Integer   | 156900000<br><br><i>NULL if the bidder is not eligible for a bidding credit.</i>   |

| Field                              | Description   | Data Type | Examples/Notes   |
|------------------------------------|---|-----------|--|
| commitment_discount_uncapped_small | The bidder's discount in dollars for the round in the small markets based on any bidding credits without applying any applicable bidding credit caps. | Integer   | 11900000<br><br><i>Contains a value if the bidder is eligible for the small business bidding credit, NULL otherwise.</i> |
| next_round_eligibility             | The bidder's eligibility in bidding units at the start of the next round.   | Integer   | 5125000<br><br><i>NULL if the next round has not been announced.</i>   |
| next_round_required_activity       | The bidder's required activity in bidding units for the next round.   | Integer   | 4100000<br><br><i>NULL if the next round has not been announced.</i>   |

## 2.7. My Split Transition

**File name:** my\_split\_transition-stage#.csv

The My Split Transition file provides a bidder with information about the supply of products (PEA and license category combinations) before and after implementation of the spectrum reserve — i.e., the split of Category 1 blocks into reserved and unreserved blocks by PEA — as well as information about how the bidder's demand for those products was allocated during the split. If the Auction System reduced the bidder's processed demand because of changes in the supply of the Category 1 product after the split, this file also provides detailed information about why. This file will be available after the round in which processing determined that the final stage rule was met, triggering the split.

### File Structure:

- CSV file (first row contains header).
- One record for each product the bidder is eligible to bid on based on the PEAs it selected on its Form175.

| Field         | Description   | Data Type                              | Examples/Notes             |
|---------------|---|--|----------------------------|
| auction_id    | The FCC auction number for the forward auction            | String                                 | 1002                       |
| stage         | Stage number  | Integer                                | 1                          |
| round         | Round number in which the reserve spectrum split occurred | Integer                                | 12                         |
| market_number | The PEA (Partial Economic Area) ID                        | String<br>([“PEA”][0-9] [0-9][0-9]){6} | PEA001                     |
| market_name   | The PEA name  | String                                 | “New York, NY”             |
| bidder        | Bidder name   | String                                 | Company XYZ<br>“ABC, Inc.” |

| Field                  | Description  | Data Type          | Examples/Notes   |
|------------------------|--|--------------------|--|
| frn                    | The bidder's FCC Registration Number (FRN) which uniquely identifies a bidder.   | Alpha-numeric {10} | 0003645843   |
| reserve_eligible       | Indicates if the bidder is eligible to bid on reserve blocks in the PEA.   | Character [Y N]{1} | Y  |
| supply_c1              | Number of Category 1 blocks available in the PEA before the reserve spectrum split.  | Integer            | 8  |
| supply_c2              | Number of Category 2 blocks available in the PEA.  | Integer            | 8  |
| processed_demand_c1    | The bidder's processed demand for Category 1 blocks in the PEA before the reserve spectrum split.  | Integer            | 2  |
| processed_demand_c2    | The bidder's processed demand for Category 2 blocks in the PEA.  | Integer            | 0  |
| supply_c1_r            | The supply of Category 1 reserved blocks in the PEA after the reserve spectrum split.  | Integer            | 3  |
| supply_c1_u            | The supply of Category 1 unreserved blocks in the PEA after the reserve spectrum split.  | Integer            | 5  |
| processed_demand_c1_r  | The allocation of the bidder's processed demand for Category 1 blocks in the PEA to the reserved spectrum category after the reserve spectrum split.   | Integer            | 2  |
| processed_demand_c1_u  | The allocation of the bidder's processed demand for Category 1 blocks in the PEA to the unreserved spectrum category after the reserve spectrum split. | Integer            | 0  |
| split_selection_number | The pseudo-random number used for tie-breaking purposes that is assigned to the bidder for the PEA.  | Integer {10}       | 1837562937<br><br><i>NULL when the bidder is reserve-eligible in the PEA but does not have any demand for Category 1 blocks.</i><br><br><i>NULL when the bidder is not reserve eligible in the associated PEA.</i> |

| Field        | Description  | Data Type | Examples/Notes  |
|--------------|--|-----------|---|
| split_detail | Details about why a bidder's bids for products in the PEA were not accepted or fully accepted during bid processing or why the bidder's processed demand for Category 1 blocks in the PEA was reduced at the time of the reserve spectrum split. | String    | <p>“Simple bid to reduce demand to 1 @ \$40,848,999: 1 block was not applied because the final stage rule was met.”</p> <p>“Your processed demand for C1-U (1) was reduced to the supply of C1-U (0).”</p> <p><i>NULL if there are no applicable details.</i></p> |

## 2.8. My Stage Transition

**File name:** my\_stage\_transition-stage#.csv

The My Stage Transition file provides a bidder with information about the change in aggregate demand and supply of products (PEA and license category combinations) from the previous stage after the auction transitions to a new stage. The file also provides a bidder with information about the change in its processed demand for those products. This file will be available at the beginning of a new stage.

### File Structure:

- CSV file (first row contains header).
- One record for each stage and product combination where the bidder is eligible to bid on the product.

| Field            | Description  | Data type                              | Example/Notes              |
|------------------|--|--|----------------------------|
| auction_id       | The FCC auction number for the forward auction                                 | String                                 | 1002                       |
| stage            | Stage number   | Integer                                | 1                          |
| market_number    | The PEA (Partial Economic Area) ID   | String<br>(["PEA"][0-9] [0-9][0-9]){6} | PEA001                     |
| market_name      | The PEA name   | String                                 | “New York, NY”             |
| category         | License category   | String<br>[C1 C2]                      | C1                         |
| bidder           | Bidder name  | String                                 | Company XYZ<br>“ABC, Inc.” |
| frn              | The bidder's FCC Registration Number (FRN) which uniquely identifies a bidder. | Alpha-numeric<br>{10}                  | 0003645843                 |
| supply           | The supply of blocks in the product and stage.                                 | Integer                                | 8                          |
| aggregate_demand | The aggregate demand for the product and stage.                                | Integer                                | 15                         |
| processed_demand | The bidder's processed demand for the product and stage.                       | Integer                                | 4                          |

## 2.9. Block Transition

**File name:** block\_transition -stage#.csv

The Block Transition file provides a bidder with information about the change in blocks from the previous stage after the auction transitions to a new stage. The block letter and associated frequencies for the band plan from the previous stage and the current stage are listed. This file will be available at the beginning of a new stage.

### File Structure:

- CSV file (first row contains header).
- One record for each stage

| Field         | Description  | Data type     | Example/Notes   |
|---------------|--|---------------|---|
| auction_id    | The FCC auction number for the forward auction               | String        | 1002  |
| stage         | Stage number   | Integer       | 1   |
| supply        | The maximum supply of blocks in the band plan for the stage. | Integer       | 8   |
| description_a | Frequency range for block A                                  | String {0,50} | 558-563 MHz + 640-645 MHz<br><i>NULL if this block is not being offered</i> |
| description_b | Frequency range for block B                                  | String {0,50} | 563-568 MHz + 645-650 MHz<br><i>NULL if this block is not being offered</i> |
| description_c | Frequency range for block C                                  | String {0,50} | 568-573 MHz + 650-655 MHz<br><i>NULL if this block is not being offered</i> |
| description_d | Frequency range for block D                                  | String {0,50} | 573-578 MHz + 655-660 MHz<br><i>NULL if this block is not being offered</i> |
| description_e | Frequency range for block E                                  | String {0,50} | 578-583 MHz + 660-665 MHz<br><i>NULL if this block is not being offered</i> |
| description_f | Frequency range for block F                                  | String {0,50} | 583-588 MHz + 665-670 MHz<br><i>NULL if this block is not being offered</i> |
| description_g | Frequency range for block G                                  | String {0,50} | 588-593 MHz + 670-675 MHz<br><i>NULL if this block is not being offered</i> |
| description_h | Frequency range for block H                                  | String {0,50} | 593-598 MHz + 675-680 MHz<br><i>NULL if this block is not being offered</i> |
| description_i | Frequency range for block I                                  | String {0,50} | 598-603 MHz + 680-685 MHz<br><i>NULL if this block is not being offered</i> |

| Field         | Description                 | Data type     | Example/Notes   |
|---------------|-----------------------------|---------------|---|
| description_j | Frequency range for block J | String {0,50} | 603-608 MHz + 685-690 MHz<br><i>NULL if this block is not being offered</i> |
| description_k | Frequency range for block K | String {0,50} | 619-624 MHz + 690-695 MHz<br><i>NULL if this block is not being offered</i> |
| description_l | Frequency range for block L | String {0,50} | 624-629 MHz + 695-700 MHz<br><i>NULL if this block is not being offered</i> |

### 2.10. Market-Block Transition

**File name:** market\_block\_transition-stage#.csv

The Market-Block Transition file provides a bidder with information about the change in impairment levels from the previous stage in each block of each PEA after the auction transitions to a new stage. The percent of impairment for each PEA-block combination from the previous stage and the current stage are listed. This file will be available at the beginning of a new stage.

#### File Structure:

- CSV file (first row contains header).
- One record for each stage and PEA-block combination

| Field            | Description   | Data type                           | Example/Notes  |
|------------------|---|-------------------------------------|----------------|
| auction_id       | The FCC auction number for the forward auction                  | String                              | 1002           |
| stage            | Stage number  | Integer                             | 1              |
| market_number    | The PEA (Partial Economic Area) ID                              | String ([“PEA”][0-9] [0-9][0-9]){6} | PEA001         |
| market_name      | The PEA name  | String                              | “New York, NY” |
| block            | The block identifier  | Character [A-L]{1}                  | A              |
| category         | License category  | Character [C1 C2]{2}                | C1             |
| percent_impaired | The percent of population in the PEA with predicted impairment. | Decimal [0.0-100.0]                 | 11.2           |

### 3. Bidder Upload File

During the first round of the initial stage of the auction when a bidder must input its initial demand for products, the bidder may utilize a bid upload feature in the Auction System. A sample template is provided to the bidder as a download (see *Sample Bids File* in the Bidder Downloads section). A bidder may simply download a sample file, enter the quantities requested for each product, and upload the file to the Auction System. The sample bids file contains all the products that the bidder is eligible to bid on. If a bidder does not want to bid on one of their eligible products it may either omit it from the file or enter a quantity of 0 for that product.

**File Requirements:**

- The upload file must be in CSV format. A particular file name is not required.
- The following fields are required, all others will be ignored:
  - PEA number (column header “market\_number”)
  - License category (column header “category”)
  - Quantity (column header “quantity”)
- A bid upload file will be rejected in its entirety if any of the following conditions occur:
  - A bid was submitted for an invalid product (a PEA-license category combination that is not available in the forward auction)
  - A bid was submitted for a product that is not on the bidder’s Form 175
  - A bid was submitted for a product with a quantity that is not a whole number greater than or equal to 0 and less than or equal to the supply of the product
  - The sum of the bidding units for the quantities bid exceed the bidder’s eligibility

| Field         | Description   | Data Type                              | Examples/Notes                                       |
|---------------|---|--|--|
| market_number | The PEA (Partial Economic Area) ID                  | String<br>([“PEA”][0-9] [0-9][0-9]){6} | PEA001   |
| market_name   | The PEA name  | String                                 | “New York, NY”<br><br><i>This field is optional.</i> |
| category      | License category                                    | String<br>[C1 C1-R C1-U C2] {4}        | C1   |
| bidding_units | Number of bidding units associated with the product | Integer                                | 2300<br><br><i>This field is optional.</i>           |
| supply        | The supply of blocks associated with the product    | Integer                                | 8<br><br><i>This field is optional.</i>              |
| quantity      | Number of blocks requested                          | Integer                                | 2  |

**4. Appendix: Data Type Definitions**

The following is a guide to interpreting data types defined in this document. This guide is based on regular expressions used in XML standards.

**Valid Data Types used in this Document**

**Character:** A character is a single standard ASCII character. The following list has examples of valid ASCII characters:

- a
- D
- 3
- %

**String:** A string contains one or more characters and can contain whitespace. The following list has examples of valid strings:

- PEA001
- 005
- 588.3-593.3 MHz + 628.3-633.3 MHz
- Huntsville-Decatur-Florence, AL

Note that strings containing a comma that are included in a CSV formatted file need to include quotation marks around them. In the above example, “Huntsville-Decatur-Florence, AL” would be the correct format for the string in a CSV file.

**Numeric:** Numeric is a generic data type that covers a number of different underlying data types. As a result, anything defined as numeric could be any of the following:

- Decimal
- Integer
- Long

**Integer:** The integer data type is used to specify a numeric value without a fractional component.

- It’s assumed that any Integers defined in this document are unsigned and never include a (+) plus or (-) minus sign. Any signed Integers containing a + or – are considered invalid.
- If the Integer is of defined length then curly brackets should be used. E.g., {3} indicates the integer should be exactly 3 numbers long.
- The maximum value of an unsigned Integer is  $2^{64}-1$  which is 4294967295

The following list has examples of valid Integers:

- 009
- 9
- 2147483647

The following list has examples of *invalid* Integers:

- -009
- +009
- 2147483648 (i.e. too large)

### Restricting values for a data type

Restrictions are used to define acceptable values for any given data type. The following lexicon is used when defining data types:

- Square brackets define the *pattern*.
  - e.g., [A-L] means only the uppercase letters A through L are allowed.
  - e.g., [U|D] means only the uppercase letters U or D are allowed.
  - e.g., [0-9] means only the numbers 0 through 9 are allowed

- Curly brackets define the *length* including whitespace.
  - e.g., {3} means the value has to be exactly 3 characters long.
  - e.g., {1,3} means the value has to be a minimum of 1 character and a maximum of 3 characters.
  - e.g., {0,50} means the value has to be a minimum of 0 characters and a maximum of 50 characters.

**Example 1:**

The Data Type is defined as follows:

**Integer**  
**{3}**

The curly brackets mean only a 3 digit integer is allowed.

Valid Values for example 1:

- 009
- 056
- 102

Invalid Values for example 1:

- 09
- 3502
- 1
- +12
- -35

**Example 2:**

The Data Type is defined as follows:

**String**  
**[A-L]{1}**

The square brackets mean only the uppercase letters A through L are allowed and the curly brackets mean it must be exactly 1 character long.

Valid Values for example 2:

- B
- L

Invalid Values for example 2:

- a
- M
- 6

**Example 3:**

The Data Type is defined as follows:

**String**  
**[0-9]{3}**

The square brackets mean only the numbers 0 through 9 are allowed and the curly brackets mean it must be 3 characters long.

Valid Values for example 3:

- 001
- 023
- 358

Invalid Values for example 3:

- 2
- 01
- 2026

**Example 4:**

The Data Type is defined as follows:

**String**  
**[0-9]{1,2}**

The square brackets mean only the numbers 0 through 9 are allowed and the curly brackets mean it must be a minimum of 1 character long and a maximum of 2 characters long.

Valid Values for example 4:

- 4
- 04
- 41

Invalid Values for example 4:

- 123
- Blank or null value

**Example 5:**

The Data Type is defined as follows:

**String**  
**[US|CA|MX]{2}**

The square brackets mean the pattern must be either US, CA or MX. The curly brackets mean it must be exactly 2 characters long.

Valid Values for example 5:

- US
- CA

Invalid Values for example 5:

- C
- USA

**Example 6:**

The Data Type is defined as follows:

**String**  
**(["PEA"] [0-9] [0-9] [0-9]){6}**

The square brackets inside the round brackets mean the pattern must be a concatenation of the text "PEA" followed by three single numbers, with each number ranging from 0 through 9. The curly brackets mean it must be exactly 6 characters long.

Valid Values for example 6:

- PEA002
- PEA356

Invalid Values for example 6:

- PEA0001
- PEA-005
- PEA-05
- PEA-0512
- PEA-2

**Example 7:**

The Data Type is defined as follows:

**String**

**{0,50}**

The absence of square brackets mean there are no restrictions to the characters in this string. The curly brackets mean it must be a minimum of 0 characters long (i.e., can be blank/null) and a maximum of 50 characters long.

Valid Values for example 7:

- 588.3-593.3 MHz + 628.3-633.3 MHz
- Albuquerque-Santa Fe, NM

Invalid Values for example 7:

- Greenville-Spartanburg, SC-Asheville, NC-Anderson, SC
- This is an invalid string which is longer than 50 characters including spaces.