AUCTION OF LICENSES IN THE 747–762 AND 777–792 MHz BANDS SCHEDULED FOR MAY 10, 2000

COMMENT SOUGHT ON RESERVE PRICES OR MINIMUM OPENING BIDS AND OTHER AUCTION PROCEDURAL ISSUES

Report No. AUC-99-31-A (Auction No. 31)

I. Introduction

By this public notice, the Wireless Telecommunications Bureau ("Bureau") announces the auction of licenses for Fixed, Mobile, and Broadcasting services in the 747-762 and 777-792 MHz bands ("Auction No. 31"), scheduled to commence on May 10, 2000. Auction No. 31 will consist of 12 licenses in the 747-762 and 777-792 MHz bands. One 20 megahertz license (consisting of paired 10 megahertz blocks) and one 10 megahertz license (consisting of paired 5 megahertz blocks) will be offered in each of six regions to be known as the 700 MHz band economic area groupings (700 MHz band EAGs).

The following table contains the Block / Frequency Band Limits Cross Reference List for each region in Auction No. 31:

<table>
<thead>
<tr>
<th>License Suffix</th>
<th>Frequencies</th>
</tr>
</thead>
<tbody>
<tr>
<td>C</td>
<td>747 – 752, 777 – 782</td>
</tr>
<tr>
<td>D</td>
<td>752 – 762, 782 – 792</td>
</tr>
</tbody>
</table>

The Balanced Budget Act of 1997 requires the Commission to "ensure that, in the scheduling of any competitive bidding under this subsection, an adequate period is allowed . . . before issuance of bidding rules, to permit notice and comment on proposed auction procedures . . .". Consistent with the provisions of the Balanced Budget Act and to ensure that potential bidders have adequate time to familiarize themselves with the specific rules that will govern the day-to-day conduct of an auction, the Commission directed the Bureau, under its existing delegated authority, to seek comment on a variety of auction-specific procedures prior to the start of each auction. We therefore seek comment on the following issues relating to Auction No. 31.

II. Auction Structure

A. Simultaneous Multiple Round Auction Design

We propose to award the licenses in a single, simultaneous multiple-round auction to allow bidders to take advantage of any synergies that exist among licenses. We seek comment on this proposal.

B. Upfront Payments and Initial Maximum Eligibility

The Bureau has delegated authority and discretion to determine an appropriate upfront payment for each license being auctioned. Upfront payments related to the specific spectrum subject to auction protect against frivolous or insincere bidding and provide the Commission with a source of funds from which to collect payments owed at the close of the auction. In this case, we have information available in the form of a Congressional

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3 See Amendment of Part 1 of the Commission's Rules—Competitive Bidding Proceeding, WT Docket No. 97-82, Order, Memorandum Opinion and Order, and Notice of Proposed Rule Making, 12 FCC Rcd 5686, 5697, ¶ 16 (1997) ("Part 1 Order") ("We also clarify that pursuant to Section 0.131 of our rules, the Chief, Wireless Telecommunications Bureau, has delegated authority to implement all of the Commission's rules pertaining to auctions procedures").

4 See Amendment of Part 1 of the Commission's Rules -- Competitive Bidding Procedures, Allocation of Spectrum Below 5 GHz Transferred from Federal Government Use, 4660-4685 MHz, WT Docket No. 97-82, ET Docket No. 94-32, Third Report and Order and Second Further Notice of Proposed Rule Making, 13 FCC Rcd 374, 448, ¶ 124 (1998) ("Part 1 Third Report and Order"). The Commission directed the Bureau to seek comment on specific mechanisms related to day-to-day auction conduct including, for example, the structure of bidding rounds and stages, establishment of minimum opening bids or reserve prices, minimum accepted bids, initial maximum eligibility for each bidder, activity requirements for each stage of the auction, activity rule waivers, criteria for determining reductions in eligibility, information regarding bid withdrawal and bid removal, stopping rules, and information relating to auction delay, suspension or cancellation. Id. at ¶ 125.

5 See 700 MHz First Report and Order at ¶ 31, 39.


estimate of the value of the spectrum. Accordingly, we list all licenses, including the related populations and proposed upfront payments, in Attachment A. We seek comment on this proposal.

We further propose that the amount of the upfront payment submitted by a bidder will determine the initial maximum eligibility (as measured in bidding units) for each bidder. Upfront payments will not be attributed to specific licenses, but instead will be translated into bidding units to define a bidder's initial maximum eligibility, which cannot be increased during the auction. The maximum eligibility will determine the licenses on which a bidder may bid in each round of the auction. Thus, in calculating its upfront payment amount, an applicant must determine the maximum number of bidding units it may wish to bid on (or hold high bids on) in any single round, and submit an upfront payment covering that number of bidding units. We seek comment on this proposal.

C. Activity Rules

In order to ensure that the auction closes within a reasonable period of time, an activity rule requires bidders to bid actively on a percentage of their maximum bidding eligibility during each round of the auction rather than waiting until the end to participate. A bidder that does not satisfy the activity rule will either lose bidding eligibility in the next round or use an activity rule waiver.

We propose to divide the auction into three stages: Stage One, Stage Two and Stage Three, each characterized by an increased activity requirement. The auction will start in Stage One. We propose that the auction will generally advance to the next stage (i.e., from Stage One to Stage Two, and from Stage Two to Stage Three) when the auction activity level, as measured by the percentage of bidding units receiving new high bids, is approximately ten percent or below for three consecutive rounds of bidding in each stage. However, we further propose that the Bureau retain the discretion to change stages unilaterally by announcement during the auction. In exercising this discretion, the Bureau will consider a variety of measures of bidder activity, including, but not limited to, the auction activity level, the percentage of licenses (as measured in bidding units) on which there are new bids, the number of new bids, and the percentage increase in revenue. We seek comment on these proposals.

We propose that in each round of Stage One, a bidder desiring to maintain its current eligibility be required to be active on licenses encompassing at least 50 percent of its current bidding eligibility. Failure to maintain the requisite activity level will result in a reduction in the bidder's bidding eligibility in the next round of bidding (unless an activity rule waiver is used). During Stage One, reduced eligibility for the next round will be calculated by multiplying the current round activity by two. In each round of the second stage of the auction, a bidder desiring to maintain its current eligibility is required to be active on at least 80 percent of its current bidding eligibility. During Stage Two, reduced eligibility for the next round will be calculated by multiplying the current round activity by five-fourths (5/4). In each round of Stage Three, a bidder desiring to maintain its current eligibility is required to be active on 100 percent of its current bidding eligibility.
eligibility. In this final stage, reduced eligibility for the next round will be set at current round activity. We seek comment on these proposals.

D. Activity Rule Waivers and Reducing Eligibility

Use of an activity rule waiver preserves the bidder's current bidding eligibility despite the bidder's activity in the current round being below the required minimum level. An activity rule waiver applies to an entire round of bidding and not to a particular license. Activity waivers are principally a mechanism for auction participants to avoid the loss of auction eligibility in the event that exigent circumstances prevent them from placing a bid in a particular round.

The FCC auction system assumes that bidders with insufficient activity would prefer to use an activity rule waiver (if available) rather than lose bidding eligibility. Therefore, the system will automatically apply a waiver (known as an "automatic waiver") at the end of any bidding period where a bidder's activity level is below the minimum required unless: (1) there are no activity rule waivers available; or (2) the bidder overrides the automatic application of a waiver by reducing eligibility, thereby meeting the minimum requirements.

A bidder with insufficient activity may wish to reduce its bidding eligibility rather than use an activity rule waiver. If so, the bidder must affirmatively override the automatic waiver mechanism during the bidding period by using the reduce eligibility function in the software. In this case, the bidder's eligibility is permanently reduced to bring the bidder into compliance with the activity rules as described above. Once eligibility has been reduced, a bidder will not be permitted to regain its lost bidding eligibility.

A bidder may proactively use an activity rule waiver as a means to keep the auction open without placing a bid. If a bidder submits a proactive waiver (using the proactive waiver function in the bidding software) during a bidding period in which no bids are submitted, the auction will remain open and the bidder's eligibility will be preserved. An automatic waiver invoked in a round in which there are no new valid bids will not keep the auction open.

We propose that each bidder in Auction No. 31 be provided with five activity rule waivers that may be used at the bidder’s discretion during the course of the auction as set forth above. We seek comment on this proposal.

E. Information Relating to Auction Delay, Suspension or Cancellation

For Auction No. 31, we propose that, by public notice or by announcement during the auction, the Bureau may delay, suspend or cancel the auction in the event of natural disaster, technical obstacle, evidence of an auction security breach, unlawful bidding activity, administrative or weather necessity, or for any other reason that affects the fair
and competitive conduct of competitive bidding. In such cases, the Bureau, in its sole discretion, may elect to: resume the auction starting from the beginning of the current round; resume the auction starting from some previous round; or cancel the auction in its entirety. Network interruption may cause the Bureau to delay or suspend the auction. We emphasize that exercise of this authority is solely within the discretion of the Bureau, and its use is not intended to be a substitute for situations in which bidders may wish to apply their activity rule waivers. We seek comment on this proposal.

III. Bidding Procedures

A. Round Structure

The Commission will use its Automated Auction System to conduct the electronic simultaneous multiple round auction format for auction No. 31. The initial bidding schedule will be announced in a public notice to be released at least one week before the start of the auction, and will be included in the registration mailings. The simultaneous multiple round format will consist of sequential bidding rounds, each followed by the release of round results. Details regarding the location and format of round results will be included in the same public notice.

The Bureau has discretion to change the bidding schedule in order to foster an auction pace that reasonably balances speed with the bidders’ need to study round results and adjust their bidding strategies. The Bureau may increase or decrease the amount of time for the bidding rounds and review periods, or the number of rounds per day, depending upon the bidding activity level and other factors. We seek comment on this proposal.

B. Reserve Price or Minimum Opening Bid

The Balanced Budget Act calls upon the Commission to prescribe methods by which a reasonable reserve price will be required or a minimum opening bid established when FCC licenses are subject to auction (i.e., because the Commission has accepted mutually exclusive applications for those licenses), unless the Commission determines that a reserve price or minimum bid is not in the public interest. Consistent with this mandate, the Commission has directed the Bureau to seek comment on the use of a minimum opening bid and/or reserve price prior to the start of each auction.

Normally, a reserve price is an absolute minimum price below which an item will not be sold in a given auction. Reserve prices can be either published or unpublished. A minimum opening bid, on the other hand, is the minimum bid price set at the beginning of the auction below which no bids are accepted. It is generally used to accelerate the competitive bidding process. Also, in a minimum opening bid scenario, the auctioneer

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8 See 47 C.F.R. § 1.2104(i).
9 See Balanced Budget Act, Section 3002(a). The Commission's authority to establish a reserve price or minimum opening bid is set forth in 47 C.F.R. § 1.2104(c) and (d).
generally has the discretion to lower the amount later in the auction. It is also possible for the minimum opening bid and the reserve price to be the same amount.

In light of the Balanced Budget Act, the Bureau proposes to establish minimum opening bids for Auction No. 31. The Bureau believes a minimum opening bid, which has been utilized in other auctions, is an effective bidding tool.\textsuperscript{11} A minimum opening bid, rather than a reserve price, will help to regulate the pace of the auction and provides flexibility.

For Auction No. 31, we have information available in the form of a Congressional estimate of the value of the spectrum. Accordingly, we list all licenses, including the related populations and proposed minimum opening bids, in Attachment A. We seek comment on this proposal.

If commenters believe that these minimum opening bids will result in substantial numbers of unsold licenses, or is not a reasonable amount, or should instead operate as a reserve price, they should explain why this is so, and comment on the desirability of an alternative approach. Commenters are advised to support their claims with valuation analyses and suggested reserve prices or minimum opening bid levels or formulas. In establishing the minimum opening bids, we particularly seek comment on such factors as, among other things, the amount of spectrum being auctioned, levels of incumbency, the availability of technology to provide service, the size of the geographic service areas, issues of interference with other spectrum bands and any other relevant factors that could reasonably have an impact on valuation of the 747–762 and 777-792 MHz bands. Alternatively, comment is sought on whether, consistent with the Balanced Budget Act, the public interest would be served by having no minimum opening bid or reserve price.

C. Minimum Accepted Bids and Bid Increments

Once there is a standing high bid on a license, a bid increment will be applied to that license to establish a minimum acceptable bid for the following round. For Auction No. 31, we propose to use a smoothing methodology to calculate bid increments, as we have done in several other auctions. The Bureau retains the discretion to change the minimum bid increment if it determines that circumstances so dictate. The Bureau will do so by announcement in the Automated Auction System. We seek comment on these proposals.

The exponential smoothing formula calculates the bid increment for each license based on a weighted average of the activity received on each license in all previous rounds. This methodology will tailor the bid increment for each license based on activity, rather than setting a global increment for all licenses. For every license that receives a bid, the

\textsuperscript{11} See, e.g., Auction of 800 MHz SMR Upper 10 MHz Band, Minimum Opening Bids or Reserve Prices, DA 97-2147, Order, 12 FCC Rcd 16354 (1997); Auction of the Phase II 220 MHz Service Licenses, Auction Notice and Filing Requirements for 908 Licenses Consisting of Economic Area (EA), Economic Area Grouping (EAG), and Nationwide Licenses, Scheduled for September 15, 1998, Minimum Opening Bids and Other Procedural Issues, Public Notice, 13 FCC Rcd 16445 (1998).
bid increment for the next round for that license will be established using the exponential smoothing formula.

The calculation of the percentage bid increment for each license in a given round is made at the end of the previous round. The computation is based on an activity index, which is calculated as the weighted average of the activity in that round and the activity index from the prior round. The activity index at the start of the auction (round 0) will be set at 0. The current activity index is equal to a weighting factor times the number of new bids received on the license in the most recent bidding round plus one minus the weighting factor times the activity index from the prior round. The activity index is then used to calculate a percentage increment by multiplying a minimum percentage increment by one plus the activity index with that result being subject to a maximum percentage increment. The Commission will initially set the weighting factor at 0.5, the minimum percentage increment at 0.1, and the maximum percentage increment at 0.2.

**Equations**

\[
A_i = (C \times B_i) + ((1-C) \times A_{i-1}) \\
I_{i+1} = \text{smaller of } (1 + A_i) \times N \text{ and } M
\]

where,
- \(A_i\) = activity index for the current round (round i)
- \(C\) = activity weight factor
- \(B_i\) = number of bids in the current round (round i)
- \(A_{i-1}\) = activity index from previous round (round i-1), \(A_0\) is 0
- \(I_{i+1}\) = percentage bid increment for the next round (round i+1)
- \(N\) = minimum percentage increment or bid increment floor
- \(M\) = maximum percentage increment or bid increment ceiling

Under the exponential smoothing methodology, once a bid has been received on a license, the minimum acceptable bid for that license in the following round will be the new high bid plus the dollar amount associated with the percentage increment (variable \(I_{i+1}\) from above times the high bid). This result will be rounded to the nearest thousand if it is over ten thousand or to the nearest hundred if it is under ten thousand.

**Examples**

License 1
\(C=0.5\), \(N = 0.1\), \(M = 0.2\)

Round 1 (2 new bids, high bid = $1,000,000)

1. Calculation of percentage increment for round 2 using exponential smoothing:
   \[A_1 = (0.5 \times 2) + (0.5 \times 0) = 1\]
   The smaller of \(I_2 = (1 + 1) \times 0.1 = 0.2\) or 0.2 (the maximum percentage increment)

2. Minimum bid increment for round 2 using the percentage increment (\(I_2\) from above)
0.2 \times 1,000,000 = 200,000

3. Minimum acceptable bid for round 2 = 1,200,000

**Round 2 (3 new bids, high bid = 2,000,000)**

1. Calculation of percentage increment for round 3 using exponential smoothing:
   \[ A_2 = (0.5 \times 3) + (0.5 \times 1) = 2 \]
   The smaller of \( I_3 = (1 + 2) \times 0.1 = 0.3 \) or 0.2 (the maximum percentage increment)

2. Minimum bid increment for round 3 using the percentage increment \( I_3 \) from above
   \[ 0.2 \times 2,000,000 = 400,000 \]

3. Minimum acceptable bid for round 3 = 2,400,000

**Round 3 (1 new bid, high bid = 2,400,000)**

1. Calculation of percentage increment for round 4 using exponential smoothing:
   \[ A_3 = (0.5 \times 1) + (0.5 \times 2) = 1.5 \]
   The smaller of \( I_4 = (1 + 1.5) \times 0.1 = 0.25 \) or 0.2 (the maximum percentage increment)

2. Minimum bid increment for round 4 using the percentage increment \( I_4 \) from above
   \[ 0.2 \times 2,400,000 = 480,000 \]

3. Minimum acceptable bid for round 4 = 2,880,000

**D. Information Regarding Bid Withdrawal and Bid Removal**

1. **General Bid Withdrawal Procedures**

   For Auction No. 31, we propose the following bid removal and bid withdrawal procedures. Before the close of a bidding period, a bidder has the option of removing any bids placed in that round. By using the remove bid function in the software, a bidder may effectively "unsubmit" any bid placed within that round. A bidder removing a bid placed in the same round is not subject to withdrawal payments.

   Once a round closes, a bidder may no longer remove a bid. However, in the next round, a bidder may withdraw standing high bids from previous rounds using the withdraw bid function. A high bidder that withdraws its standing high bid from a previous round is subject to the bid withdrawal payment provisions.\(^{12}\) We seek comment on these bid removal and bid withdrawal procedures.

\(^{12}\) See 47 C.F.R. §§ 1.2104(g); 1.2109.
In the Part 1 Third Report and Order, the Commission explained that allowing bid withdrawals facilitates efficient aggregation of licenses and the pursuit of efficient backup strategies as information becomes available during the course of an auction. The Commission noted, however, that, in some instances, bidders may seek to withdraw bids for improper reasons. The Bureau, therefore, has discretion, in managing the auction, to limit the number of withdrawals to prevent any bidding abuses. The Commission stated that the Bureau should assertively exercise its discretion, consider limiting the number of rounds in which bidders may withdraw bids, and prevent bidders from bidding on a particular market if the Bureau finds that a bidder is abusing the Commission's bid withdrawal procedures.  

Applying this reasoning, we propose to limit each bidder in Auction No. 31 to withdraw standing high bids in no more than two rounds during the course of the auction. To permit a bidder to withdraw bids in more than two rounds would likely encourage insincere bidding or the use of withdrawals for anti-competitive strategic purposes. The two rounds in which withdrawals are utilized will be at the bidder's discretion; withdrawals otherwise must be in accordance with the Commission's rules. There is no limit on the number of standing high bids that may be withdrawn in either of the rounds in which withdrawals are utilized. Withdrawals will remain subject to the bid withdrawal payment provisions specified in the Commission's rules. We seek comment on this proposal.

2. Special 30 MHz Nationwide Bid Withdrawal Procedure

   a. Nationwide Bidders

Additionally, for the licenses being offered in Auction No. 31, we recognize that there may be entities whose business plans are such that they may not wish to acquire any licenses if they are unable to aggregate them all. Our current rules are designed to facilitate the aggregation of licenses, and we believe they are adequate to facilitate the aggregation of all the 10 MHz or all 20 MHz licenses or any subset thereof. The bid withdrawal provisions of our Part 1 rules could, however, potentially discourage bidders from attempting a 30 MHz nationwide aggregation in an auction where there are divergent business plans. This is because, were such an aggregation attempt ultimately to fail, a bidder might be left with a subset of licenses for which its bids exceeded the value it places on that subset absent the complete aggregation. The bidder would then be forced to withdraw any high bids it holds and pay a bid withdrawal payment, or perhaps retain licenses for which it cannot recoup the price paid. We therefore propose a nationwide bid withdrawal procedure for the 747-762 MHz and 777-792 MHz bands to limit the exposure of bidders seeking a 30 MHz nationwide aggregation.

Bidders may still aggregate licenses subject to our standard bid withdrawal provisions. The following proposed procedure would be available, however, to limit the exposure

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13 Part 1 Third Report and Order, 13 FCC Rcd at 460, ¶ 150.
14 47 C.F.R. § 1.2104(g).
associated with bid withdrawal for those seeking a 30 MHz nationwide aggregation, while still discouraging insincere bidding. Under this approach, an applicant would be required to declare on its short-form application whether it is seeking a 30 MHz nationwide aggregation and wishes to be subject to the nationwide bid withdrawal provisions. **An applicant that chooses to be such a nationwide bidder would not be allowed to bid on anything other than all licenses comprising the 30 MHz nationwide aggregation, and must win either this nationwide aggregation or no licenses at all.** (However, in any given round, the bidder would not be required to place new bids on any licenses for which it is the standing high bidder.) **Thus, once such a nationwide bidder withdraws from a market, it must withdraw from all markets and will be ineligible to continue bidding for any licenses.**

The bid withdrawal payment for a 30 MHz nationwide bidder that withdraws from the auction would be calculated as the difference between the sum of the withdrawn bids and the sum of the subsequent high bids on the withdrawn licenses. Calculating the payment this way may result in a payment that is lower than a payment calculated on a license-by-license basis. In addition, nationwide bid withdrawal payments would be limited to 5 percent of the aggregate withdrawn bids. The withdrawn licenses would be offered in the next round at the second highest bid price, which may be less than, or equal to, the amount of the withdrawn bid, without any bid increment. The FCC would serve as the "place holder" on the license until a new acceptable bid is submitted.

b. **Eligibility Restoration**

If a 30 MHz nationwide bidder were to withdraw, eligibility and waivers for all other bidders would be restored to beginning auction levels, except for those nationwide bidders that have withdrawn from the auction by withdrawing their high bids. Without this restoration, few bidders would likely be eligible to bid on licenses withdrawn late in the auction.** Finally, if the Bureau implements the bid withdrawal procedure outlined here, it will suspend the Part 1 bid withdrawal rule for those applicants that choose to become 30 MHz nationwide bidders. We seek comment on this proposal.

E. **Stopping Rule**

For Auction No. 31, the Bureau proposes to employ a simultaneous stopping rule approach. The Bureau has discretion "to establish stopping rules before or during multiple round auctions in order to terminate the auction within a reasonable time."** A simultaneous stopping rule means that all licenses remain open until the first round in which no new acceptable bids, proactive waivers or withdrawals are received. After the first such round, bidding closes simultaneously on all licenses. Thus, unless circumstances dictate otherwise, bidding would remain open on all licenses until bidding stops on every license. **

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16 47 C.F.R. § 1.2104(e).
The Bureau seeks comment on a modified version of the simultaneous stopping rule. The modified stopping rule would close the auction for all licenses after the first round in which no bidder submits a proactive waiver, a withdrawal, or a new bid on any license on which it is not the standing high bidder. Thus, absent any other bidding activity, a bidder placing a new bid on a license for which it is the standing high bidder would not keep the auction open under this modified stopping rule. The Bureau further seeks comment on whether this modified stopping rule should be used unilaterally or only in stage three of the auction.

We propose that the Bureau retain the discretion to keep an auction open even if no new acceptable bids or proactive waivers are submitted and no previous high bids are withdrawn. In this event, the effect will be the same as if a bidder had submitted a proactive waiver. The activity rule, therefore, will apply as usual, and a bidder with insufficient activity will either lose bidding eligibility or use a remaining activity rule waiver.

Finally, we propose that the Bureau reserve the right to declare that the auction will end after a specified number of additional rounds ("special stopping rule"). If the Bureau invokes this special stopping rule, it will accept bids in the final round(s) only for licenses on which the high bid increased in at least one of the preceding specified number of rounds. The Bureau proposes to exercise this option only in certain circumstances, such as, for example, where the auction is proceeding very slowly, there is minimal overall bidding activity, or it appears likely that the auction will not close within a reasonable period of time. Before exercising this option, the Bureau is likely to attempt to increase the pace of the auction by, for example, moving the auction into the next stage (where bidders would be required to maintain a higher level of bidding activity), increasing the number of bidding rounds per day, and/or increasing the amount of the minimum bid increments for the limited number of licenses where there is still a high level of bidding activity. We seek comment on these proposals.

IV. Conclusion

Comments are due on or before January 24, 2000, and reply comments are due on or before January 31, 2000. An original and four copies of all pleadings must be filed with the Commission's Secretary, Magalie Roman Salas, Office of the Secretary, Federal Communications Commission, 445 Twelfth Street, S.W., TW-A325, Washington, DC 20054, in accordance with Section 1.51(c) of the Commission's rules. See 47 C.F.R. § 1.51(c). In addition, one copy of each pleading must be delivered to each of the following locations: (1) the Commission's duplicating contractor, International Transcription Service, Inc. (ITS), 1231 20th Street, N.W., Washington, DC 20036; (2) Office of Media Relations, Public Reference Center, 445 Twelfth Street, S.W., Suite CY-A257, Washington, DC 20554; (3) Amy Zoslov, Chief, Auctions and Industry Analysis Division, Wireless Telecommunications Bureau, 445 Twelfth Street, Suite 4-A760, Washington, DC 20554. Comments and reply comments will be available for public

For further information concerning this proceeding, contact the Auctions and Industry Analysis Division, Wireless Telecommunications Bureau, Howard Davenport, Auctions Attorney, or Craig Bomberger, Auctions Analyst, at (202) 418-0660; or Kathy Garland, Project Manager, at (717) 338-2888.

– FCC
V. Attachment A

Minimum Opening Bids and Upfront Payments for Auction No. 31

<table>
<thead>
<tr>
<th>Economic Area Grouping</th>
<th>License Bandwidth (MHz)</th>
<th>Description</th>
<th>Population (1990)</th>
<th>Bidding Units</th>
<th>Upfront Payment</th>
<th>Minimum Opening Bid</th>
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<td>Northeast</td>
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<td>$720,000,000</td>
</tr>
</tbody>
</table>