

**Exhibit I – NOFA #008 (“NOFA”)
Instructions for Submitting a Wireless Project Design Worksheet**

Wireless projects must demonstrate infrastructure deployed as a function of the Project contains adequate backhaul capabilities to Facilitate Covered Speeds to the entire coverage area listed in Exhibit B. Accordingly, the Office is requesting additional information from Applicant’s proposing wireless projects to confirm these capabilities.

Wireless Applicant’s must include the following information. Attach the requested information to a signed copy of this Worksheet and upload as a single PDF file to the Iowa Grants System consistent with the Instructions set forth in NOFA #008 section 2.2.6.8. **NOTE: Applicants proposing wireline Projects are NOT required to complete this Exhibit.**

1. Technology for Last Mile Deployment

- 1.1. Identify the Model of antennas (tower and users) - point to point or point to multi-point
 - 1.1.1. What is the range and capacity of the antennas? (miles and bandwidth)
 - 1.1.2. What are the power levels used? (decimal loss)
 - 1.1.3. What are the antenna heights used to facilitate services to subscribers?
 - 1.1.4. Is Line of Sight required? (Line of Sight (LOS), Near Line of Sight (nLOS), Non Line of Sight (NLOS))
- 1.2. Specify the coverage calculation method used
 - 1.2.1. Tower Radius (specify units for height and distance)
 - 1.2.2. Propagation Map (The tower locations need to be labeled consistent with 4.1)
 - 1.2.3. Combination of materials that demonstrate project’s propagation area
- 1.3. Specify spectrum frequency(ies) utilized
 - 1.3.1. Licensed or Unlicensed?
 - 1.3.2. Frequencies owned/utilized

2. Identify Tower Antenna Configurations and Capacities

- 2.1. Omni (User count at facilitated speed specified in application and distance away from the tower) **or**;
- 2.2. Each Directional Sector (User count at facilitated speed specified in application and distance away from the tower)
- 2.3. Stacking Ability in Frequency Range (functional increase percentage per sector)

3. Map of Tower Locations

- 3.1. Specify the locations of the towers on a map with identifier

4. Tower Data Set (excel chart)

- 4.1. What is the Tower Identifier?
- 4.2. Location as latitude and longitude
- 4.3. Tower Type
 - 4.3.1. Erected for Project
 - 4.3.2. Leased for Project
- 4.4. Tower Height

- 4.5. Sector Count
- 4.6. Number of Stacked Frequencies used
- 4.7. Potential service feeds based on blocks covered

5. Backhaul Map

- 5.1. Specify connections among tower and to drain locations (latitude and longitude)
- 5.2. Indicate backhaul direction
- 5.3. Use lines for wireless, use routes for fiber

6. Backhaul Data Per Tower

- 6.1. Max backhaul capacity required based on homes and businesses served
- 6.2. Backhaul aggregations
- 6.3. Backhaul destinations
- 6.4. Backhaul type
- 6.5. Backhaul Capacity
- 6.6. Oversubscription Rate

7. Internet Drain Data

- 7.1. Indicate drain
- 7.2. Indicate drain oversubscription value

8. Locational Contingencies

- 8.1. Describe your approach to resolving issues such as:
 - 8.1.1. Selected build location unavailable
 - 8.1.2. Tower site intended for lease has no capacity
 - 8.1.3. Geographic disparity during detailed design

9. Certification of Compliance. I certify on behalf of the Applicant that I will comply with the terms, conditions, and requirements of Iowa Code section 8B.11, Iowa Admin. Code ch. 129—22, and this NOFA.

In addition to any criminal penalties authorized by Iowa Code section 720.2 that may result from any false statements of material fact made herein or any other remedies available at law, equity, or otherwise, an Applicant that is subsequently determined to have made a statement, representation, warranty, certification, or attestation in an Application, or any attachments or enclosures associated therewith, that is later proven untrue in any material respect shall be obligated to repay the Office the entire amount of any grant funds previously distributed by the Office to the Applicant.

Sincerely,

Authorized Representative's Signature

Date

Name (Printed)

Title

Entity

NOFA Number