

## MICROSOFT INFRASTRUCTURE GROUP

### *Modification of Call Sign E202212*

Microsoft Infrastructure requests the addition of a new point of communication to its earth station at Quincy, Washington (call sign E202212): YAM-5 (call sign S3147) for which an application for launch and operating authority is pending before the Commission.<sup>1</sup>

This amendment does not reflect any change to the facilities of the earth station as described in the pending application. Characteristics such as antenna model, transmit EIRP, and coordinated frequencies/arc remain unchanged. To the extent necessary, attachments and other materials associated with that pending application are incorporated by reference hereto.

Detailed information relating to the YAM-5 spacecraft is included in the materials submitted in support of that space station application (particularly Form 312 Schedule S). However, pertinent information from the YAM-5 space-station application, as well as consolidated technical details relating to earth station operations, are included below for ease of reference.

#### ***Uplink Beams:***

|                                  |                                            |
|----------------------------------|--------------------------------------------|
| Antenna size                     | 6.1 m                                      |
| Antenna Manufacturer/Model       | Comtech Ground Systems T355                |
| Center Frequency                 | 2067 MHz                                   |
| Bandwidth                        | 132 kHz                                    |
| Emission Designator              | 132KG1D                                    |
| Polarization                     | RHCP                                       |
| Transmit Gain                    | 36.5 dBi (at 2.025GHz)                     |
| Maximum EIRP per Carrier         | 25.4 dBW                                   |
| Maximum EIRP Density per Carrier | 10.2 dBW/4kHz                              |
| Location (NAD83)                 | Lat. 47° 14' 22.0"N<br>Lon. 119° 53' 5.5"W |
| Site Elevation (AMSL)            | 406.05 m                                   |

#### ***Downlink Beams:***

|                                  |              |
|----------------------------------|--------------|
| Center Frequency                 | 8125 MHz     |
| Bandwidth                        | 100 MHz      |
| Emission Designator              | 100MG1D      |
| Polarization                     | RHCP         |
| Transmit Gain                    | 16.2 dBi     |
| Maximum EIRP per Carrier         | 23.2 dBW     |
| Maximum EIRP Density per Carrier | -56.8 dBW/Hz |

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<sup>1</sup> See Application of Loft Orbital Solutions, Inc., IBFS File No. SAT-LOA-20220606-00057 (filed June 6, 2022). For the avoidance of doubt, no communications will occur unless and until YAM-5 is licensed by the Commission.

|                          |                                                |
|--------------------------|------------------------------------------------|
| Site Elevation (AMSL)    | 406.05 m                                       |
| Rx Location (NAD83)      | Lat. 47 ° 14' 22.0 "N<br>Lon. 119 ° 53' 5.5 "W |
| Rx Site Elevation (AMSL) | 406.05 m                                       |
| Rx Antenna Gain          | 52.9 dBi (at 8.2125 GHz)                       |

***Point(s) of Communication:***

|                    |                                                                                                                                                                 |
|--------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Satellite          | YAM-5                                                                                                                                                           |
| Call Sign          | S3147                                                                                                                                                           |
| Orbit Type         | NGSO                                                                                                                                                            |
| Orbital Parameters | Apogee: 525.0 km<br>Perigee: 525.0 km<br>Inclination: 97.6 degrees<br>RAAN: 108.7 degrees<br>Orbital Period: 5708.0 seconds<br>Argument of Perigee: 0.0 degrees |