

Ka-Band Earth Station – Bismarck, ND

Frequency Coordination Report

28 GHz



Prepared on Behalf of
NORTHWOOD SPACE
CORPORATION

May 28, 2026

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1. Summary of Results

On behalf of NORTHWOOD SPACE CORPORATION, Comsearch performed a coordination notice under Section 25.203(c) and Section 25.136(a)(4) of the FCC's rules for all existing and proposed terrestrial licenses within the coordination contours of their proposed Ka-Band earth station in Bismarck, ND, which will transmit at 28 GHz¹. Prior-notification letters were sent to the licensees and a copy of the notification data is provided in section four of this report. The earth station coordination was finalized on May 28, 2026.

There were no objections from any of the incumbent 28 GHz licensees.

2. 28 GHz Common Carrier and LMDS Coordination

In accordance with FCC Rules and Regulations, the Ka-Band earth station in Bismarck, ND was prior-coordinated by Comsearch. A notification letter and datasheets for this earth station were sent to the following 28 GHz common carrier fixed microwave licensees. These licensees are authorized to operate temporary fixed operations from 27.5 – 29.5 GHz on a local basis.

Licensee	Authorized Geographic Area
None Identified	

A notification letter and datasheets for the Ka-Band earth station in Bismarck, ND were also sent to the following 28 GHz local multipoint distribution system (LMDS) licensees. These licensees are authorized to operate fixed operations from 29.1 – 29.25 GHz on a market basis.

Licensee	Authorized Geographic Area
None Identified	

No objections were received from the common carrier or LMDS incumbents.

¹ The proposed earth station will operate in the 27.5 – 31.0 GHz portion of the Ka-Band.

3. 28 GHz UMFUS Coordination

There were six 28 GHz UMFUS licensees identified within the coordination distance of the proposed earth station. The proposed earth station will operate on frequencies that overlap Channel L1 & L2 of the UMFUS service. The total frequency allocation for Channels L1 & L2 of the UMFUS spectrum appears below.

Channel: **L1** 27.500 - 27.925 GHz
 L2 27.925 - 28.350 GHz

Licensee	Authorized Geographic Area
BEK Communications Cooperative	Market Based
Dakota Central Telecommunications	Market Based
DISH	Market Based
T-Mobile	Market Based
Verizon	Market Based
West River Telecommunications	Market Based

There were no objections from the UMFUS incumbents within coordination distance.

4. Earth Station Coordination Data

This section presents the data pertinent to the proposed Ka-Band earth station in Bismarck, ND. This data was circulated to all incumbent licensees in the shared 28 GHz frequency ranges.

Date: 04/20/2026
 Job Number: <PCNJobCode>

Administrative Information

Status: ENGINEER PROPOSAL
 Call Sign: <PCNCallSign>
 Licensee Code: NORSPC
 Licensee Name: Northwood Space Corp.

Site Information

BISMARCK, ND

Venue Name
 Latitude (NAD 83): 46° 52' 56.1" N
 Longitude (NAD 83): 100° 48' 17.4" W
 Climate Zone: A
 Rain Zone: 5
 Ground Elevation (AMSL): 509.0 m / 1670.0 ft

Link Information

Satellite Type: Low Earth Orbit
 Mode: TO - Transmit-Only
 Modulation: Digital
 Minimum Elevation Angle: 5.0°
 Azimuth Range: 0.0° to 360°
 Antenna Centerline (AGL): 1.52 m / 5.0 ft

Antenna Information

Transmit - FCC32

Manufacturer: Northwood Space
 Model: NW24
 Gain / Diameter: 57.0 dBi / 2.4 m
 3-dB / 15-dB Beamwidth: 0.23° / 0.55°

Max Available RF Power (dBW/4 kHz): 0.0
 (dBW/MHz): 24.0

Maximum EIRP (dBW/4 kHz): 57.0
 (dBW/MHz): 81.0

Interference Objectives: Long Term: -151.0 dBW/4 kHz 20%
 Short Term: -128.0 dBW/4 kHz 0.0025%

Frequency Information

Transmit 28.0 GHz

Emission / Frequency Range (MHz): 2M00G7W / 27500.0 - 31000.0

Max Great Circle Coordination Distance: 215.0 km / 133.6 mi
 Precipitation Scatter Contour Radius: 100.0 km / 62.1 mi

Coordination Values	BISMARCK, ND
Licensee Name	Northwood Space Corp.
Latitude (NAD 83)	46° 52' 56.1" N
Longitude (NAD 83)	100° 48' 17.4" W
Ground Elevation (AMSL)	509.0 m / 1670.0 ft
Antenna Centerline (AGL)	1.52 m / 5.0 ft
Antenna Model	2.4 meter
Antenna Mode	Transmit 28.0 GHz
Interference Objectives: Long Term	-151.0 dBW/4 kHz 20%
Short Term	-128.0 dBW/4 kHz 0.0025%
Max Available RF Power	0.0 (dBW/4 kHz)

Azimuth (°)	Horizon Elevation (°)	Antenna Discrimination (°)	Transmit 28.0 GHz	
			Horizon Gain (dBi)	Coordination Distance (km)
0	38.76	85.41	9.10	215.00
5	38.88	82.56	9.10	215.00
10	38.80	79.71	9.10	215.00
15	38.72	76.91	9.10	215.00
20	38.69	74.19	9.10	215.00
25	38.69	71.56	9.10	215.00
30	38.54	68.97	9.10	215.00
35	38.53	66.56	9.10	215.00
40	38.36	64.19	9.10	215.00
45	38.28	62.04	9.10	215.00
50	38.18	60.06	9.10	215.00
55	38.20	58.38	9.10	215.00
60	38.20	56.93	9.10	215.00
65	38.27	55.82	9.10	215.00
70	38.39	55.04	9.10	215.00
75	38.44	54.48	9.10	215.00
80	38.45	54.21	9.10	215.00
85	38.45	54.24	9.10	215.00
90	38.48	54.61	9.10	215.00
95	38.52	55.30	9.10	215.00
100	38.59	56.30	9.10	215.00
105	38.66	57.57	9.10	215.00
110	38.78	59.14	9.10	215.00
115	38.78	60.84	9.10	215.00
120	38.87	62.81	9.10	215.00
125	38.99	64.98	9.10	215.00
130	38.99	67.23	9.10	215.00
135	39.28	69.78	9.10	215.00
140	39.87	72.55	9.10	215.00
145	39.95	75.13	9.10	215.00
150	40.10	77.82	9.10	215.00
155	40.17	80.53	9.10	215.00
160	40.24	83.28	9.10	215.00
165	39.72	86.00	9.10	215.00
170	39.76	88.83	9.10	215.00
175	39.81	91.66	9.10	215.00
180	39.94	94.46	9.10	215.00
185	40.02	97.23	9.10	215.00



Azimuth (°)	Horizon Elevation (°)	Antenna Discrimination (°)	Transmit 28.0 GHz	
			Horizon Gain (dBi)	Coordination Distance (km)
190	40.10	99.95	9.10	215.00
195	40.19	102.61	9.10	215.00
200	41.05	104.87	9.10	215.00
205	41.14	107.28	9.10	215.00
210	41.22	109.59	9.10	215.00
215	41.26	111.78	9.10	215.00
220	41.31	113.82	9.10	215.00
225	40.93	116.01	9.10	215.00
230	40.56	118.05	9.10	215.00
235	40.28	119.85	9.10	215.00
240	40.20	121.27	9.10	215.00
245	40.11	122.46	9.10	215.00
250	40.09	123.32	9.10	215.00
255	39.97	124.00	9.10	215.00
260	39.82	124.42	9.10	215.00
265	39.72	124.50	9.10	215.00
270	39.65	124.24	9.10	215.00
275	39.56	123.71	9.10	215.00
280	39.55	122.81	9.10	215.00
285	39.43	121.74	9.10	215.00
290	39.40	120.34	9.10	215.00
295	39.33	118.73	9.10	215.00
300	39.35	116.84	9.10	215.00
305	39.24	114.85	9.10	215.00
310	39.21	112.64	9.10	215.00
315	39.24	110.24	9.10	215.00
320	39.21	107.76	9.10	215.00
325	39.29	105.12	9.10	215.00
330	39.27	102.45	9.10	215.00
335	39.23	99.70	9.10	215.00
340	39.15	96.91	9.10	215.00
345	38.94	94.08	9.10	215.00
350	38.89	91.20	9.10	215.00
355	38.82	88.30	9.10	215.00

5. Contact Information

For questions or information regarding the 28 GHz Frequency Coordination Report, please contact:

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