

GRAND JUNCTION WIRELESS, INC.

DELTA, CO

Exhibit 1

PARTICULARS OF OPERATION
(ITEM 4 OF FORM 442)

Frequency		Power		Emission	Modulating Signal	Bandwidth
MHz	B	C	D	E	F	kHz
						G
2500-2686	10 watts	53 dBm	Peak	5m75C3F	+/-1000 hz	6000

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EXHIBIT 2
(ITEM 10 OF FORM 442)

PROPOSED EXPERIMENTAL PROGRAM

Grand Junction Wireless, Inc. ("GJW") hereby seeks authority under Rule 5.202 subsections (a), (d) (i) and (j) to operate an experimental radio facility for two years, as described in this application.

The purpose of the experimentation is to test various equipment configurations and transmission parameter variations to determine the best transmitter design for serving the market area.

GJW is in the process of developing the Grand Junction/Delta/Montrose, CO wireless system. GJW has leased the E-group channels and the H-group channels. Currently, no application for the ITFS channels can be filed due to the freeze on such filings imposed by the Mass Media Bureau. Nonetheless, GJW has lease agreements for 16 of the twenty ITFS channels with local schools and is in the process of negotiating a lease of the remaining ITFS channel group with a local school. Accordingly, GJW has secured, or has reliable assurances of securing, virtually all of the "wireless cable" channel capacity in the area.

The area of Grand Junction/Delta/Montrose, CO is comprised of two geographically separated population centers within the Rocky Mountains. As a result, the market presents GJW with unique and difficult business and related operational issues. Because of the terrain and the separation of the Grand Junction area from the Delta/Montrose area, the normal practice would be to serve the market from two "tandem" sites using common reference source phase-lock coordinated, and carrier offset, transmitters. But, the market is rural and lacks the expected household penetration level required to afford the expense of a dual-transmitter site approach. Instead, GJW proposes to work in conjunction with Antenna Concepts to design, to test and to refine a transmission antenna system which will serve GJW's needs, including minimizing multi-path problems. A letter of support from Antenna Concepts appears in this application.

The antenna needed for the service of the market must be specially designed and refined through field tests in the market. It must transmit a portion of the EIRP with one beam tilted toward the arc between 280 and 5 degrees off true north, and the remainder of the EIRP with an entirely different beam tilted toward the arc between 170 and 185 degrees off true north. No "off-the-shelf" 2.5 GHz transmission antenna having those

characteristics is available and, indeed, two antennas operating with a splitter may be required.

The terrain features of the area offer challenging multipath and ducting problems which will be addressed in the course of experimentation. Both population areas are bounded by major cliffs which are expected to create multipath problems. Those problems are exacerbated by the reflectivity of the rock; ferro magnesian rocks being excellent reflectors at virtually any angle.^{1/} It is possible that the dual cardioid antenna will use cross-polarization in an effort to control multipath interference problems. However, the need for that more expensive approach will not be fully appreciated until after experimentation.

The course of experimentation will include the test of various subscriber antennas that have been developed recently to determine the extent of their unwanted signal rejection. The performance of these antennas in conjunction with hybrid transmission antenna designs is of especial interest to GJW and will form a part of the experimentation. How those components and other system components interact is of great interest to GJW and, indeed, to the wireless cable industry.

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^{1/} Lithic sandstones and limestones are also good reflectors but only at or below the critical angle for the material, and then mostly when wet.

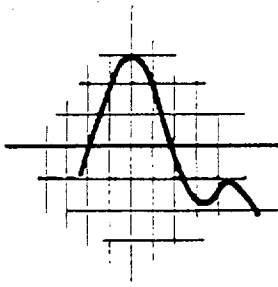
GRAND JUNCTION WIRELESS, INC.

DELTA, COLORADO

Exhibit 2A

LETTER OF SUPPORT FROM ANTENNA CONCEPTS

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ANTENNA CONCEPTS INC.

June 9, 1994

J. Kelly Bloomer, President
Grand Junction Wireless Inc.
311 Aspen Airport Business Circle, Ste. K
Aspen, CO 81611

Dear Mr. Bloomer:

Thank you for the opportunity for ACI to express our interest in and support for your application to the Federal Communications Commission for permission to conduct an experimental testing protocol in the Grand Junction, CO area of Western Colorado.

We understand that you wish to test transmission characteristics of television in the 2.1 to 2.8 GHz range using both analog and digital modulation. Transmission using vertical, horizontal, and circular polarization is also being proposed to determine ways of minimizing multipath reception in mountainous areas.

Our company is a leader in antenna research and development and a proven supplier of custom designed broadcast antennas. Additionally, we have done extensive work in circular polarization, and so are enthusiastic about the proposed transmitting antennas to provide adequate signal levels in the Grand Junction, Delta, and Montrose areas from a single transmit site.

We are pleased to join with you as the antenna supplier and to assist with laboratory and field testing. Please let me know how we can next be of assistance.

Sincerely,

Mark A. Cunningham
President and CEO

jls

GRAND JUNCTION WIRELESS, INC.

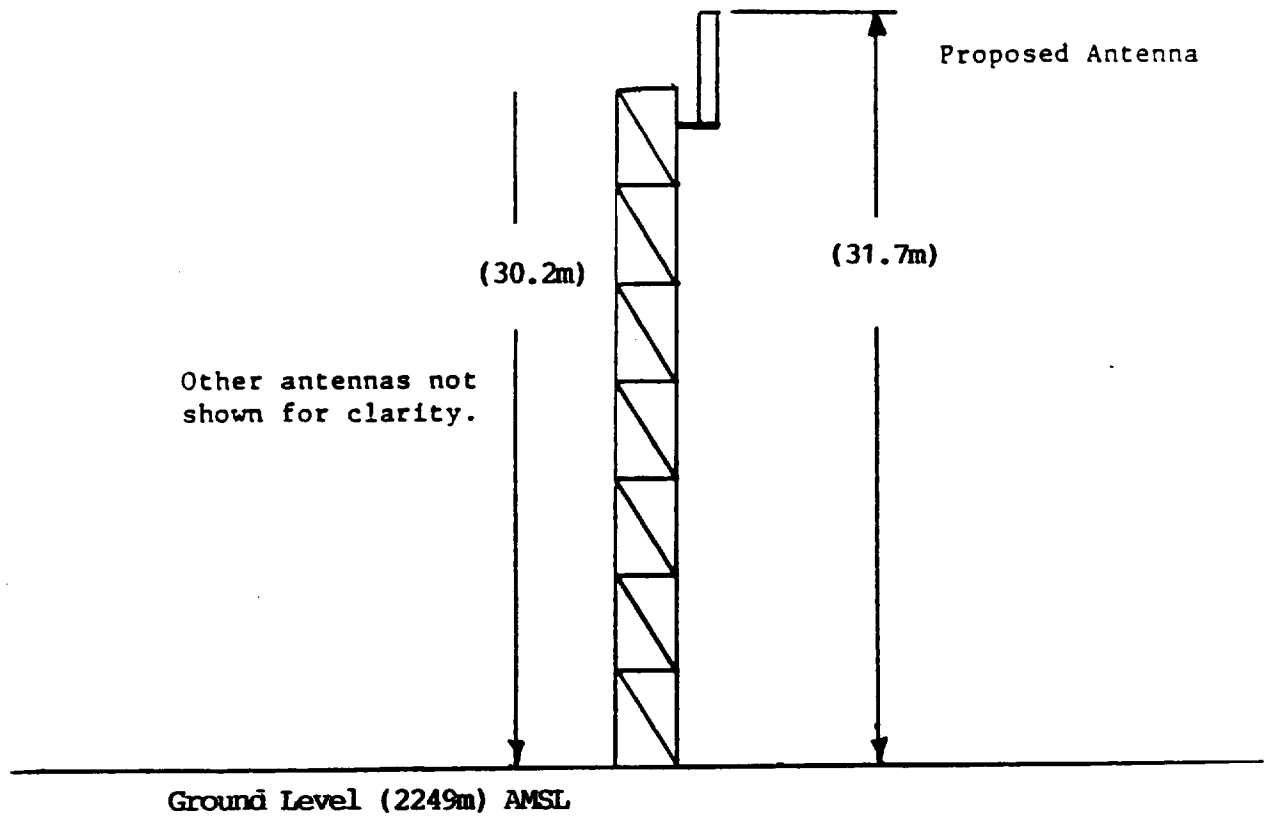
Exhibit 3

VERTICAL PROFILE SKETCH OF TOTAL STRUCTURE
(ITEM 15 OF FORM 442)

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ANTENNA STRUCTURE

Applicant's proposed antenna structure is less than 200 feet high, and it is not of greater height than the surfaces described in Section 17.7(b). Thus, pursuant to Section 17.7 of the FCC Rules and Regulations, FAA notification is not required.



Delta, CO

Not drawn to scale.