

SYSTEM POWER ANALYSIS

|                                 |                                   |                                |             |
|---------------------------------|-----------------------------------|--------------------------------|-------------|
| TRANSMISSION SYSTEM:            |                                   | CALLS:                         | WCXG        |
| VERTICAL RUN:                   |                                   | Location: Grand Rapids         |             |
| Type:                           | Andrew HJ7-50A, 1-5/8 in. Air Hel | Frequency: 89.7 MHz.           |             |
| Length:                         | 156 feet                          |                                |             |
| Attenuation:                    | 0.1920 dB/100-feet                |                                |             |
| Loss this section:              | 0.300 dB                          |                                |             |
| HORIZONTAL RUN:                 |                                   | STATION ERP:                   |             |
| Type:                           | Andrew HJ7-50A, 1-5/8 in. Air Hel | kW At Peak: 3.20               |             |
| Length:                         | 50 feet                           | kW At Horizon: 3.20            |             |
| Attenuation:                    | 0.1920 dB/100 Feet                |                                |             |
| Loss this section:              | 0.096 dB                          |                                |             |
| TOTAL TRANSMISSION SYSTEM:      |                                   | ANTENNA POWER GAIN AT PEAK:    |             |
| Total Attenuation:              | 0.40 dB                           | Numeric: 2.250                 |             |
| Coax Efficiency:                | 91.30% %                          | dBd: 3.522                     |             |
| Coax Power Rating:              | 17.50 kW                          |                                |             |
| *Coax Safety Factor:            | 10.51 dB *                        |                                |             |
|                                 |                                   | ANTENNA POWER GAIN AT HORIZON: |             |
|                                 |                                   | kW: 2.250                      |             |
|                                 |                                   | dBk: 3.522                     |             |
|                                 |                                   | TRANSMISSION SYSTEM LOSS:      |             |
|                                 |                                   | kW: 0.496                      |             |
|                                 |                                   | dBk: 1.121                     |             |
|                                 |                                   | TRANSMITTER POWER OUTPUT:      |             |
|                                 |                                   | kW: 1.594                      |             |
|                                 |                                   | dBk: 2.025                     |             |
|                                 |                                   | Date:                          | 24-Jul-2015 |
| OTHER LOSSES AND DERATING INFO: |                                   |                                |             |
| Filter Loss                     | 0.00 dB                           |                                |             |
| Connector Loss                  | 0.1 dB                            |                                |             |
| Antenna Height AMSL             | 0 Ft                              |                                |             |
| Derated for 1.3: VSWR           | 13.46 kW                          |                                |             |
| Derated for Elevation           | 13.46 kW                          |                                |             |
| Derated For Temperature         | 13.46 kW                          |                                |             |
| **Safety Amount (Derate - TPO)  | 11.90 kW                          |                                |             |