

**September 2016  
KQKS(FM) Channel 298C  
Lakewood, Colorado  
Auxiliary Antenna Engineering**

**Facilities Proposed**

The proposed auxiliary antenna operation will be on Channel 298C (107.5 MHz) with a maximum lobe effective radiated power of 33 kilowatts. Operation is proposed with a directional two-level panel antenna system (60 inch interbay spacing) which will be side-mounted on an existing tower located on Mount Morrison. The FCC Antenna Structure Registration Number for this tower is 1023484.

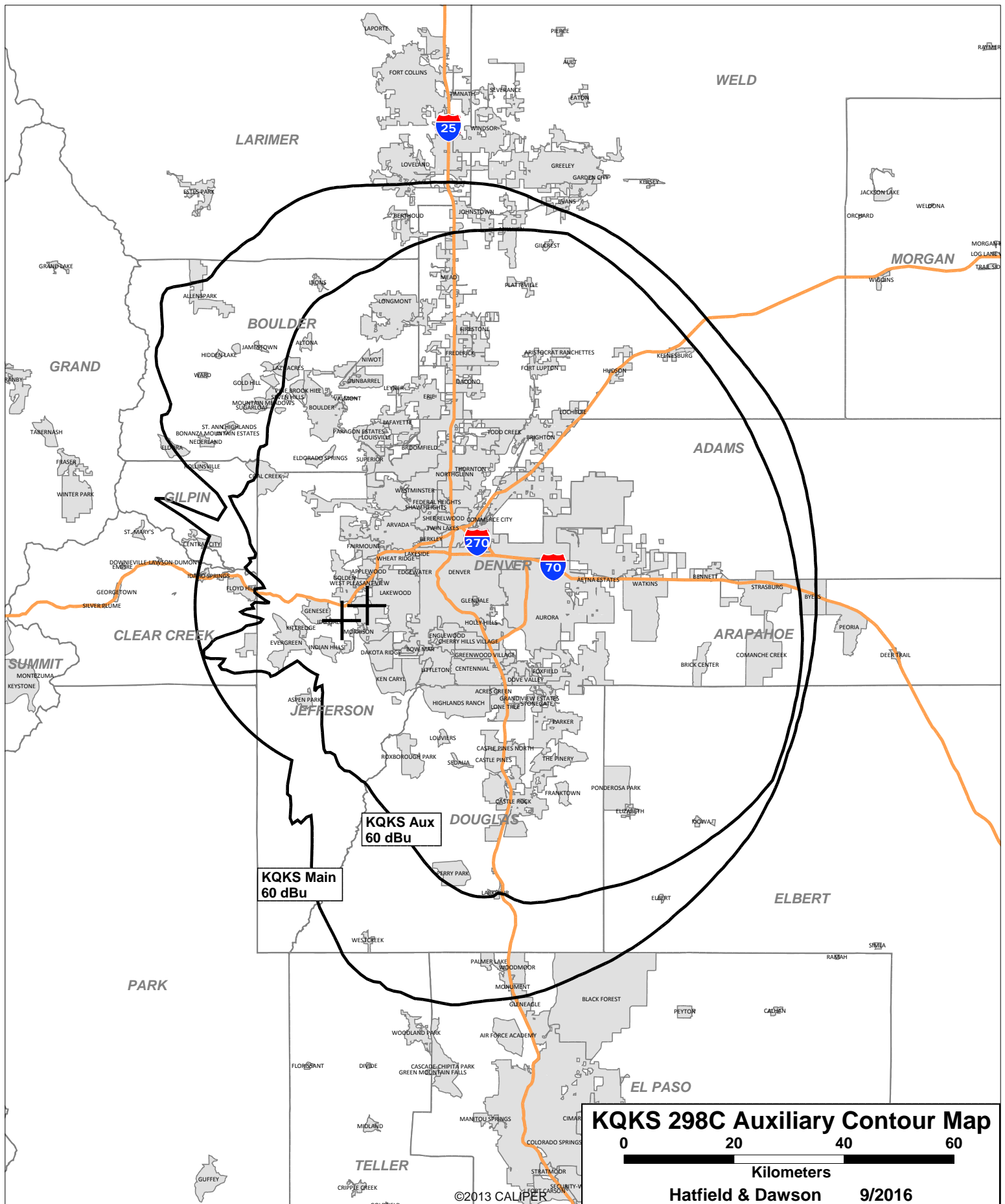
This antenna system will be shared by auxiliary facilities for KQMT 258C and KQKS 298C.

**RF Exposure Considerations**

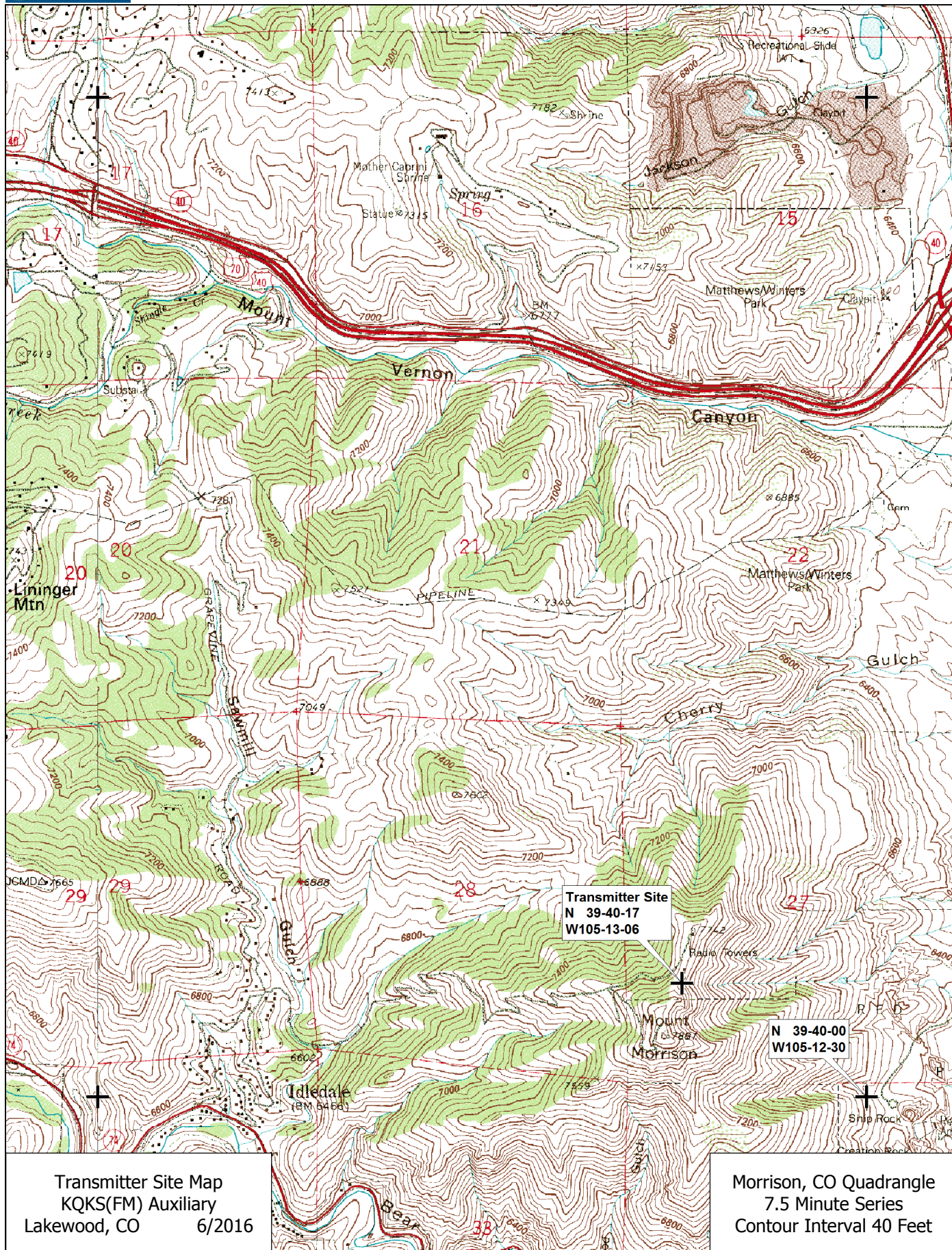
The Commission's FMModel software does not include an element model for a panel antenna, such as the ERI panel antenna which is proposed to be installed for use by the auxiliary facilities. Calculations of the total power density produced by the proposed auxiliary facilities using a Type 1 element pattern (which is the "worst case" element pattern in the Commission's FMModel software) produce a total result which is in excess of the general population limit, despite the fact that panel antennas are known to have much more favorable vertical plane radiation patterns than other FM antennas. Additionally, the calculated maximum is located at a point downhill from the main lobe of the antenna.

Should the Commission so require, the licensee will perform post-construction ground-level power density measurements in order to ensure compliance with the applicable FCC guidelines.

The permittee/licensee in coordination with other users of the site must reduce power or cease operation as necessary to protect persons having access to the site, tower or antenna from radiofrequency exposure in excess of FCC guidelines.







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