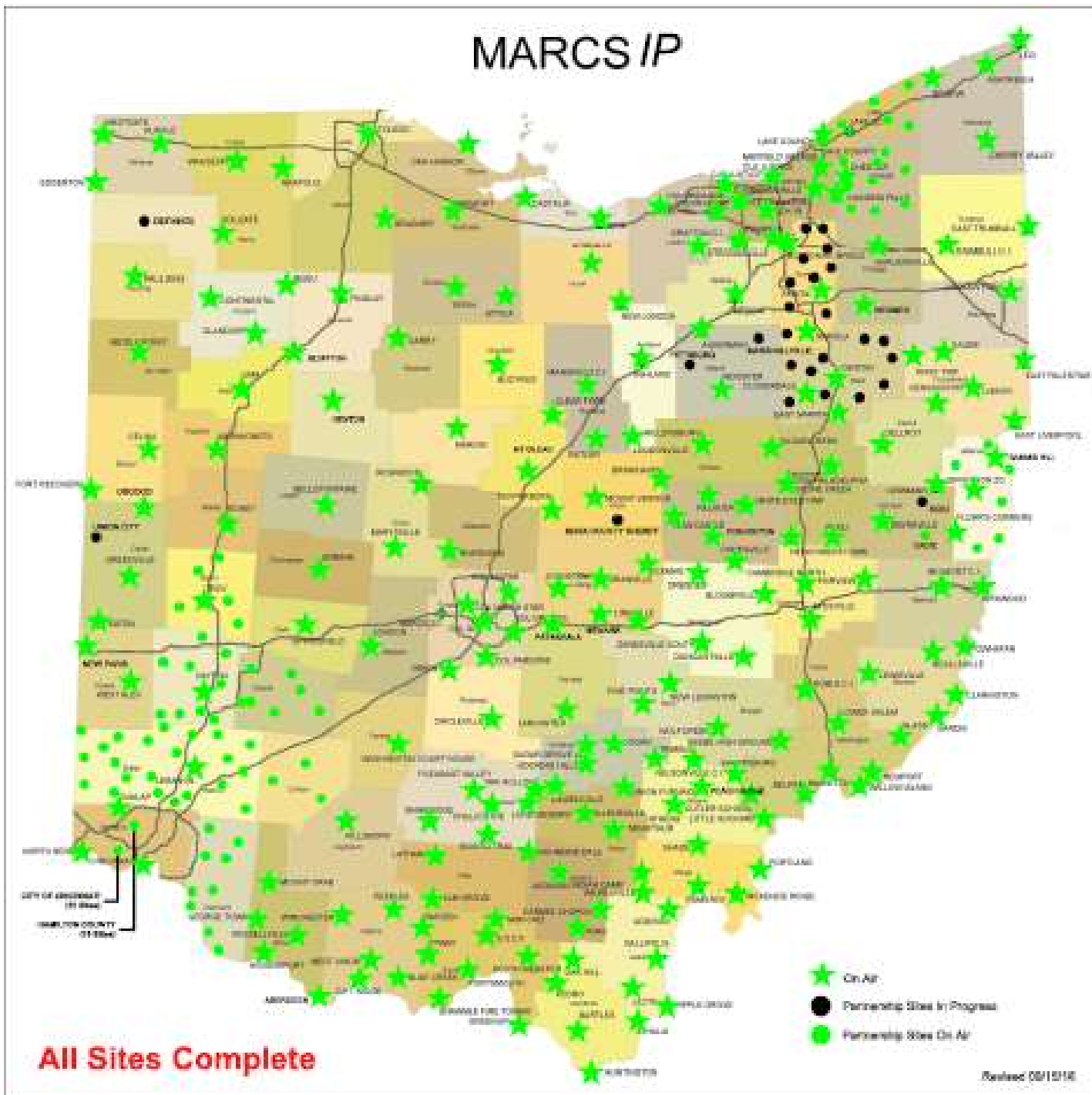


State of Ohio MARCSIP 7.15 System Overview



October 18, 2016

MARCS IP



All Sites Complete

Revised 08/12/16

Radio System Overview



- Four Zone Master Sites (SOCC, Lake County, Jefferson County and Butler County)
- 183 Repeater Sites – 6 channel 700/800 MHz sites to provide mobile coverage.
- Simulcast Subsystems – 17 different subsystem additional radio sites to provide portable radio coverage and in building coverage.
 - MARCS in Cuyahoga, Franklin and Washington Counties
 - Other Agencies - Lake County, Geauga County, Jefferson County, Franklin County, City of Columbus, Miami County, Montgomery County, Greene County, Warren County, Butler County, Clinton County, Clermont County, Hamilton County and City of Cincinnati.
- 67 911 centers that currently have 439 MCC7500 Dispatch Consoles across the locations

State of Ohio MARCSIP 7.15 October 18, 2016

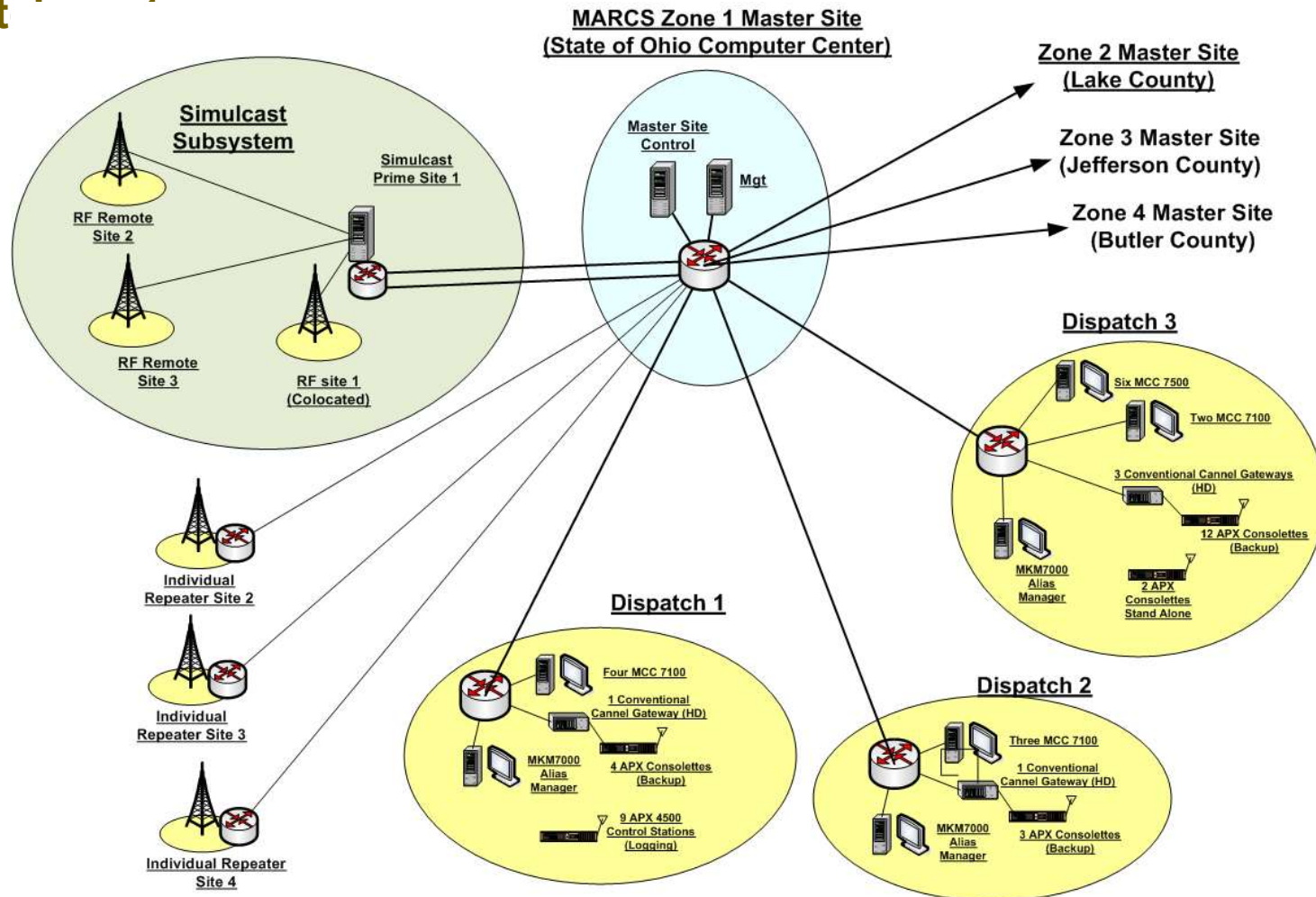
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Zone Overview



Master site in a zone controls the audio routing between the sites and the dispatch



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Repeater Site



Repeater site

Equipment Shelter to house the radio equipment

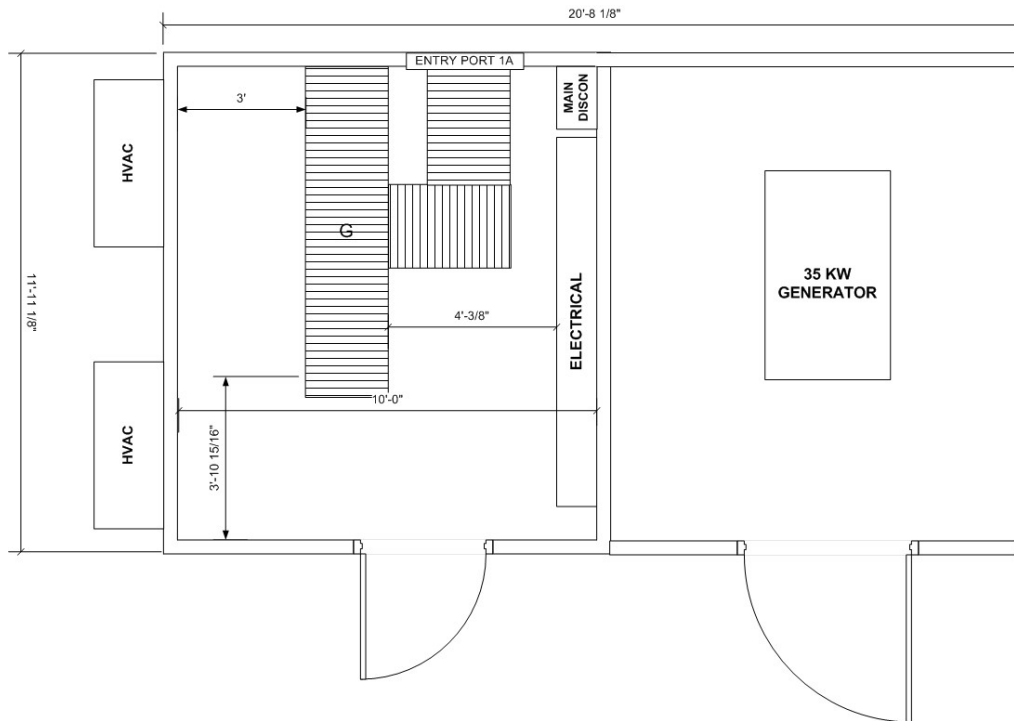


Radio Tower to support the antennas

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Equipment Shelter



Floor layout to accommodate the equipment

Provide Electrical Power and backup power

Generator can be Diesel, Natural Gas or Propane

Heating and Cooling to maintain the environment

Grounding system to protect the equipment from lightning

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Repeater Site Radio equipment



ASTRO Site Repeater equipment

Expandable Site Subsystem configured with 6 GTR8000 repeaters (800 MHz)

Site Gateway – GGM8000

LAN Switch and RF Distribution built into the equipment.

Antenna system with Tower Mounted Amplifier

Needs Ethernet Connectivity directly to the Zone Master Site using leased circuits



State of Ohio MARCSIP 7.15 October 18, 2016

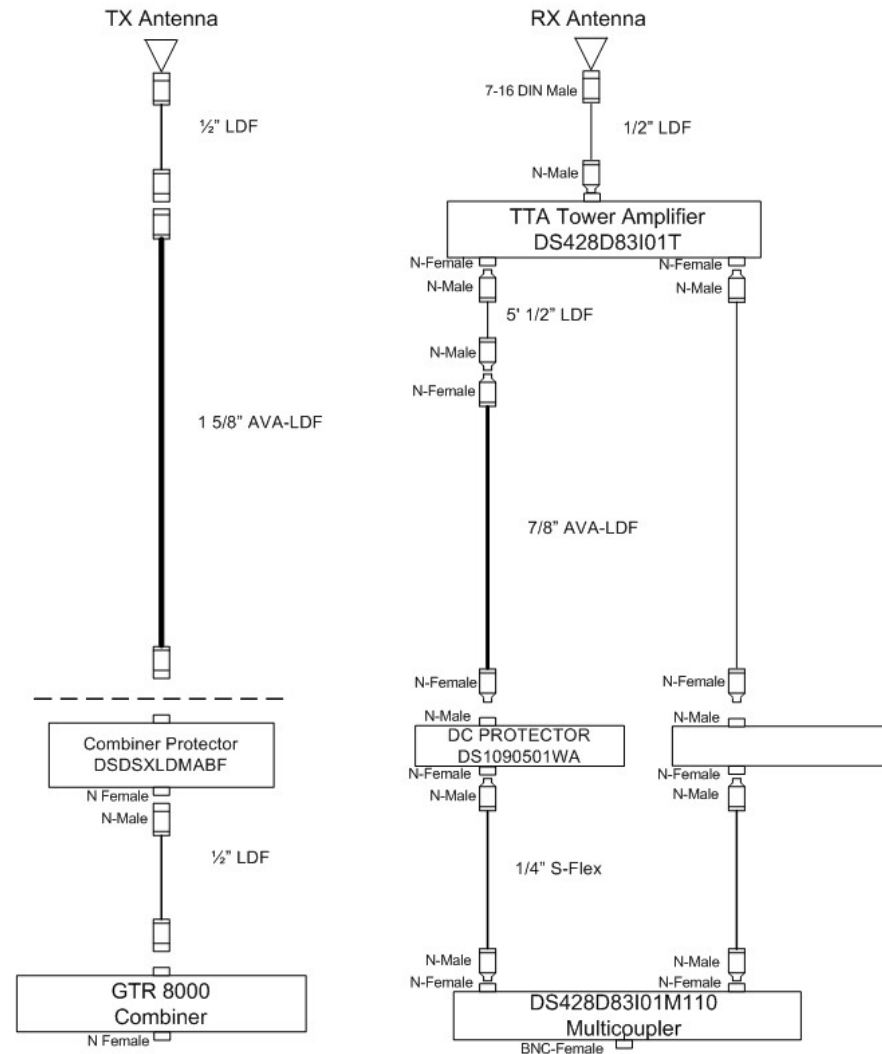
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Repeater site Sample Antenna system



Transmit antenna systems connects multiple transmitters to one antenna through a combiner. The supplied antennas support both the 700 and 800 MHz bands.

Receive antenna system connects multiple receivers to one antenna. The tower mounted amplifier improves the receive audio and supports both the 700 and 800 MHz bands.



State of Ohio MARCSIP 7.15 October 18, 2016



Thank You

State of Ohio MARCSIP 7.13 September 11th, 2012

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