

Statewide Radio System P25 Upgrade

Overview

After nearly 20 years of operation, the statewide digital radio system requires an update to have continued support. The update is basically an operating system upgrade, much the same as a computer upgrade from Windows 7 to Windows 10. The upgrade (P25) will require changes to the network, as well as to the radios operating on the network. All radios will require programming changes and some older radios will require replacement. Coordination with radio shops at this time is important. Components and tentative timeline are below:

1. **Radio Parameters:** All radios have 2 programming components:
 - The network parameters, sites, frequencies, operating system common to entire system.
 - The agency parameters, channels, talkgroups, button assignments, etc. unique to agencies.
 - The network parameters have been built by State Radio to be used in all radios, which will need to be combined with planned agency parameters and programmed by dealers or shops.
 - **Status: 50% complete, programming will continue through end of 2023.**
2. **P25 test site:** Site in Pierre to live test network and agency programming prior to deployment.
 - **Status: 50% completed. Procurement complete, plan to have on line by end of March 2020.**
3. **Upgrades:** Upgrade to network controller to allow old and new systems to operate during deployment.
 - **Status: 0% completed, expected to begin in July 2020 and be completed by September 2020.**
4. **P25 contract negotiations:** Currently ongoing, final detailed design & schedule pending.
 - **Status: 50% completed. Cost and scope final. Schedule and equipment list by January 2021.**
5. **Network Circuit Upgrades:** Radio site circuits to sites need to be upgraded prior to new system deployment.
 - **Status: 25% completed. Ongoing project through 2023.**
6. **Site Upgrades:** Planned start 7-1-2023. Site conversion will be done regionally; we can likely do up to 3 sites per day. Once sites are converted, they will be P25 ONLY. Radios not updated will no longer function on the system with the converted site. Also includes connected PSAP's at Pierre, Sioux Falls, Watertown, Huron, Rapid City.
 - **Status 0% completed. Expected to begin July of 2023 and be completed by December 2023.**
7. **RC/SF Upgrades:** Rapid City and Sioux Falls have additional infrastructure to support coverage in those areas, which will take much longer to convert than the average site. If a schedule in advance of July 2023 can be worked out, it would keep project on schedule if we can convert those sites and users prior to the start of the regular sites across the state.
 - **Status: 0% completed. Expected start mid 2022 and be completed by July 2023.**

User Agency Action Needed Prior to July 2023

- ! The network parameter programming for radios is largely developed and out to shops as requested. Agencies will need to plan with contracted radio shops to determine agency parameters as soon as possible to get those locked in and ready.
- ! Radios will either need to have both SmartX and P25 systems installed or the radio would need to be immediately replaced with a P25 only radio during upgrade. The second option will provide challenges for scheduling but would allow new radios to only need one operating system.

● Original 2003 35 Sites ● Added 23 Sites 2004-2018

