

# ITS Strategic Roadmap – FY20 Planning

## Structured Cable Management

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### Background

Structured cabling is a component of the construction of buildings and facilities that delivers the analog and digital signals that drive the modern business workplace. Some of the technology tools used at the Metro Government that rely on effective structured cabling include:

- Cable infrastructure both internal and external to Metro’s facilities
- Analog and Voice over IP (VoIP) telephone
- Data networking
- Wireless networking
- Building Automation Systems
- Physical Security (Access Control)
- Security camera systems
- Audio Visual Systems
- Cabling needs for various service providers to Metro facilities
- Uninterruptible Power Supplies (UPS) for communication closets

The primary cabling technologies used include Cat-5e, Cat-6 and fiber optics. In addition, there are other cabling types supporting the needs of the aforementioned systems.

Services provided by ITS include cable plant design/installation, cable plant management and cable plant maintenance. These services include the management of all telecom facilities including MDFs, IDFs (wiring closets) and other telecom facilities such as conduit, etc. which provide for connectivity both within and across all Metro facilities.


Primary stakeholders are the department of General Services, builder and manager of many Metro facilities; Departments that build and manage facilities not under the General Services umbrella; contracted construction companies who perform construction and building maintenance; Metro’s contracted cabling and wiring vendors; and the departments and agencies of the Metro general government that rely on network services.

### Current Strategic Drivers

1. **Continuing Demand for Metro Facilities** (High) – Presently the ITS department supports IT services within the general government in approximately 265 separate locations. The need for new facilities and upgrades to existing facilities continues to expand in support of the increasing population of Nashville.
2. **Safety Video** (High) – As the population grows the need for public safety cameras are in high demand by the Police Department, Parks Department, Public Works and Metro Transit Authority



as well as individual departments responsible for the safety of Metro citizens visiting Metro facilities.

3. **Demand for Secure Government Systems (High)** – With massive data breaches in the news on a regular basis, we must strive at all times to protect the security, availability and integrity of all facilities and systems entrusted to our management.
4. **Industry Standard Compliance (High)** – There is a well-defined set of construction and technology industry standards that are critical for use in construction projects to provide reliability, availability, maintainability, safety and security.
5. **Challenges in a Growing and Complex Environment (High)** – As the amount of network infrastructure increases, the complexity of the network and its management challenges increase as well. This will include working with Metro Departments for documenting and sharing that documentation within Metro.
6. **Expectation for Ubiquitous Wireless Coverage (Medium)** – In a world where every fast food restaurant offers free Wi-Fi at some level, there is an expectation among workers and citizens for complete coverage for Metro internal Wi-Fi as well as public Wi-Fi.
7. **Recommendations of Metro Broadband Study**  (High) – Metro engaged CNX to study and make recommendations regarding the future of broadband within Metro Government. These recommendations include increasing Metro’s owned fiber-network plant.
8. **Need for building-wide cellphone and public safety radio coverage (Medium)** - Distributed Antenna Systems (DAS) help boost mobile broadband and 800mhz radio coverage by installing a network of small antennas throughout a building to serve as repeaters for these signals. This improves reliability in heavy traffic areas for cellular network capacity and eliminates dead spots that supplies radio signals to first responders for communication during emergencies.

## On the Horizon Strategic Drivers

1. **One Touch Make Ready (High)** – Based on guidance from the FCC in 2018, a system to increase the efficiencies is currently being planned to support the many service providers competing for access to common spaces on utility poles. The intent of this plan is to accelerate broadband deployment and re while one provider is waiting for another to move their cable.
2. **Administration Change (Medium)** - A major election for Metro Government in the fall of 2019 has the potential to replace our current mayor, vice mayor and members of the Metro Council. With this election comes the potential to disrupt the planned direction of systems, funding and personnel related to prior administrations.



### Short Term Goals (0-6 months) 7/1/19 – 12/31/19

#	Goal/Objective	Est. Start	Est. Duration
1	Update standards documents to be used for construction projects and align them with the latest BICSI structured cabling industry standards.	7/19	4 months
2	Design new forms and update documents used by Low Voltage Contractors for bidding and reporting to Metro ITS on infrastructure projects to align with new BICSI standards.	7/19	4 months
3	Implement an outside plant (OSP) cable management platform. Capital funding required.	7/19	4 months
4	Continue to work with designers and architects during the planning stages of construction/renovation projects to insure ITS needs are met and included in the construction documents.	7/19	Ongoing
5	Continue the rollout of access control systems on network cabinets to ensure the security of the Metro Network.	7/19	Ongoing

### Medium Term Goals (6-18 months) 1/1/20 – 12/31/20

#	Goal/Objective	Est. Start	Est. Duration
1	Update inventory tracking processes for UPSs.	1/20	Ongoing
2	Develop an inventory of all Outside Plant (OSP) cable and perform an initial inspection for maintenance purposes.	1/20	Ongoing
3	Establish an on-going survey and inspection of ITS telecom rooms for preventative maintenance measures and to address any security issues. Capital funding required.	1/20	Ongoing

### Long Term Goals (18-36 months) 1/1/21 – 6/30/22

#	Goal/Objective	Est. Start	Est. Duration
1	Develop process and work with General Services and other departments to integrate documentation related to Metro facilities and Outside Plant infrastructure.	1/21	Ongoing
2	Work with service providers to stream line outside plant (OSP) installation with One Touch Make Ready.	1/21	Ongoing

### Related Roadmaps

- Network Infrastructure
- Wireless Network Infrastructure
- Physical Security Support
- Safety Communications

