



**To:** Myron Lee, Dixie MPO Director

**From:** Brian Christensen, P.E.  
Project Manager  
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**Date:** April 22, 2019

**Subject:** Dixie ITS Communications Study Update

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**Memorandum**

Horrocks Engineers has been honored to work with the Dixie MPO and its partners to prepare the Dixie ITS Communications Study Update for 2019. We have completed the scope of work by conducting the following activities:

Identified Communication System Inventory and Needs:

- Horrocks gathered the available maps and inventories of deployed communications facilities and updated the official UDOT ITS Fiber Map. We met with MPO stakeholders individually and as a team to discuss missing data and clarified this data on the Map in GIS format.
- We met with telecommunications companies to discuss their facilities and what is available for ITS communications in the future.
- Horrocks Engineers evaluated the existing communication system that connects with signals to determine the capacity and future expansion of the system.
- The updated ITS Fiber Map is a web-based map that is located at:  
<https://horrocks.maps.arcgis.com/apps/webappviewer/index.html?id=096d0a7dd31a4be289b9623935308fc9>

Identified Issues:

- The MPO stakeholders commented on the existing ITS communications infrastructure and provided information that would enhance the value of the system.
- UDOT Traffic and Safety offered suggestions on where ITS countermeasures could be applied to assist with crash hot spot locations.

Identified Communication System Requirements:

- UDOT was involved in determining if there were additional ITS devices that would be beneficial in the Dixie MPO area, such as CCTV cameras, Highway Advisory Radios, Variable Message Signs, or other active warning devices. The capacity of the proposed system was then analyzed to determine if there was enough bandwidth for the intended future devices. The signal strength was determined to be adequate for the new devices and hub locations based on current ITS technologies available today. As this technology is rapidly changing, the team determined identifying future conduit capacity for future fiber optic infrastructure would reduce future construction costs.

Prepared Communications Master Plan:

- A report was prepared to incorporate the existing ITS Communications system with the proposed improvements. Deployment of the improvements are shown in a Plan with an implementation schedule for 1-3 years, 4-6 years, and 7-10 years for built out of the system. Funding mechanisms were identified and presented.
- It was decided that a StoryMap format would be prepared in lieu of a written report as it is a dynamic report that can be easily viewed and shared from any desktop. Maps can be interactively updated, while keeping

the Plan as current as possible. The StoryMap features interactive GIS maps that spatially demonstrate where ITS facilities are located and where they are planned to be installed in future years. The location of the StoryMap can be housed at the MPO. Horrocks Engineers is happy to provide the information to you to be placed on your server so it can be readily accessed by the public.

A template for agreements that are used between government and private telecom companies for trading fiber optic assets were distributed to the MPO stakeholders. This was done as a starting point to begin discussions with telecom companies for agreements that would allow sharing/leasing conduit. The task of getting these agreements in place had proven to be difficult for a variety of political and legal reasons. Each city and the County can proceed at their own pace to achieve the goal of sharing existing conduit.

At this point, we have reached the end of our scope of work and declare the work complete. If there is anything else that we can assist with to finalize the work, we have some funding remaining in the project for this purpose.

Thank you, again, for the opportunity to work with the Dixie MPO.