

Technology Implementation in Field Operations

Submitted By: Rebecca "Becky" Owen (D2/Newberry Maintenance)

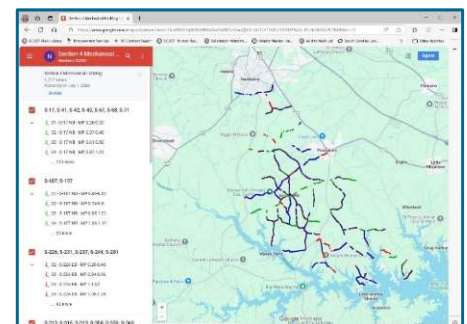
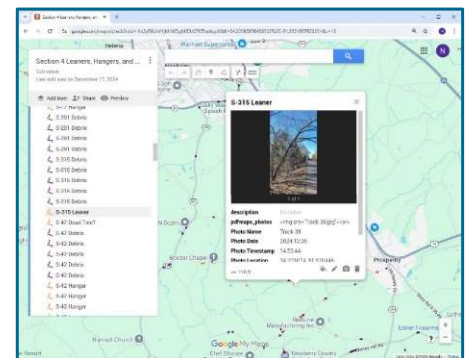
Manager: Jeremy Knight

Describe your innovation:

Newberry has effectively incorporated DOT-issued tablets and smartphones, along with a variety of digital tools, to enhance the efficiency and accuracy of field inspections and contracted work. Routine inspections of culverts, guardrails, and catch basins, as well as non-routine inspections prompted by events such as Hurricane Helene, have been streamlined through the use of technology. Additionally, contracted services like Mechanical Tree Limbing benefit from this tech-forward approach. The primary technology resources employed include Avenza Maps, Google Earth, Google Maps, Microsoft Excel, and an Excel-to-KML converter enabling precise mapping, data collection, and reporting.

Describe how your Innovation benefits the SCDOT:

The use of apps like Avenza Maps can significantly improve both the safety and efficiency of inspections. By consolidating all data locations, photos, and field notes into a single platform, inspectors can work more quickly and with fewer errors. GPS-enabled data collection eliminates the need to repeatedly stop for Distance Measuring Instrument (DMI) readings, and removes the manual step of converting handwritten DMI notes into MilePoints. GPS coordinates can be exported to Google Maps or converted into KMZ/KML files for seamless sharing with contractors or DOT forces. This not only streamlines communication but also reduces the need for risky activities, such as placing paint marks on busy roadways. With improved navigation capabilities, field crews can pinpoint work sites and use built-in GPS directions to reach them efficiently and safely.



YouTube Video Series:

1. [Using Google Maps to Inspect a Work Site](#)
2. [Using Google Maps to Inspect a Work Site](#)
3. [Inspecting the Work Site](#)
4. [Inspecting the Work Site](#)
5. [Using Google Maps to Look Up Information About Work Site](#)
6. [Inspecting a Work Site](#)
7. [Various Applications Using Google Maps](#)
8. [Collecting Field Data w/Avenza Apps to Google Earth & Maps](#)
9. [Exporting Data from Avenza Apps to Google Earth & Maps](#)
10. [Converting Excel to Google Earth](#)
11. [Converting Excel to Google Maps](#)
12. [Converting Excel and Google Earth to Manipulate Data for Mechanical Limbing](#)