New Jersey Department of Transportation
Mobile Inventory Application
NJDOT Mobile Inventory Application

- NJDOT Roadway Characteristics Inventory
  - Field Mapping & “Standard” Roadway Attributes
  - Windshield survey by 2-person field crew
    - Still a Need
    - County (6,500 miles centerline) and Local Routes (29,000 centerline miles)

- 20+ year old GeoLink® Inventory Application
  - Mileposts and attributes collected for:
    - Intersections
    - Bridges
    - Facility Type
    - Number of Lanes
    - Median Type & Width
    - Pavement Type & Width
    - Shoulder Width
    - Speed Limit

- Tool Used by Michael Baker and Other Consulting Firms
- 2 Person Field Crew
  - Dedicated vehicle w/ warning lights
  - GPS/Antenna
  - Distance Measurement Instrument (DMI)
  - Laptop
- Panasonic Toughbook
- MS Access .MDB support discontinued since the release of Microsoft Office 2013
- MS Access .ACCDB database became the new standard, the files used by the old GeoLink software became obsolete
Redesigned Application

- Modern, optimized inventory interface
  - Windows Presentation Foundation (WPF)
    - XAML
- Touch Screen Friendly
- Code-base domains and value lists
- Disconnected data editing
  - Inventory route list pre-loaded to the mobile device
- Basemap and current location
- Ability to capture photos from device
- Ability to capture a GPS location and connect to GPS antennas using Bluetooth
• **Start Point**

When inventory route is selected, route information automatically populates into “Start Point” Window, including:

- SRI
- Road Name
- Start Milepost
- Date
- Default Values

Required ‘Start of Route’ fields are highlighted in red.

Click “Start the Day”. Green dot signifies GPS signal.
• Populate ‘Start of Route’ required fields which were highlighted in red
• Update additional default values, as appropriate
• Submit Button activated once required fields are populated
- Once Start of Route information is submitted, information bar turns green. Position on map updates as field crew drives down route.
- Populate Attribute Windows (Bridge, Highway Type, Intersection, etc.) as changes occur. Submit on specific Attribute Window.
- Intersection changes for MIRE (traffic control)
Coded value drop-downs on several fields to standardize data, increase efficiency, and minimize human error.
- **Comment Window**
  Allows user to enter additional information, such as user errors, road closure information, etc.

- **Attribute Counter**
  Allows user to view number of features collected, as well as SRI and mileposts.
- **End Road**
  End milepost is populated when the user clicks ‘Submit’ when the route inventory is complete.

- **Completed number of routes increase in top information bar**
  Completed: 40/313
• Microsoft Access Database stores the collected data
• New database created for each day of collection
• Database contains one table for each feature
• Field crew can manually update database after collection if minor errors exist (i.e. update misspelling of street name, etc.)
• Data loaded from Microsoft Access database to a project development database (SQL)
- Perform initial validation checks of the raw extracted data using the Field Data Checker application
- Execute loading procedures to the transportation data warehouse via the Field Data Loader
- Transfer extracted, processed, and quality checked data to the SLD database on a route-by-route basis
Questions?

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