>OTD Funded Project Objective

- To upgrade the capabilities of the Soil Compaction Supervisor (SCS) to make it compatible with modern Geographic Information System (GIS) data capture practices as well as more user friendly through better data logging and reporting capabilities.
- Initial efforts will also be investigated to determine the SCS's ability to be correlated to a standard proctor value or range.







>Scope:

- >Test Hardware functionality of SCSIII
- >Construct field user interface software
 - The proposed initial target will be an Android tablet device.
 - > Graphical display of compaction data
 - > Methods to choose and attach metadata, such as location and photos, to the compaction record
 - > Methods to store and/or forward data records on the tablet



- > Outdoor Testing A series compaction tests will be carried out on the GTI-campus to verify the operation of the updated SCS and to initiate the ability of the SCS to provide standard proctor values or ranges. Three soil types are planned:
 - Sand
 - Silt-clay mix
 - Granular & stoned based
- In all instances the soil density will also be measured with a nuclear densitometer in order to provide a standard soil density value. The soil moisture will be measured for each round of testing.





> DELIVERABLES:

- > An android application that is compatible with the most recent SCS hardware
- > The ability to attach GPS and other metadata to the compaction record prior to storing or forwarding
- > Testing data on the complete hardware/software system
- In ground test data for SCS sensor cross-checked by nuclear densitometer
- > Field demonstrations of the new SCS system



