NEW FEATURES AND IMPROVEMENTS

SURVPC 7

February 3, 2023

Carlson

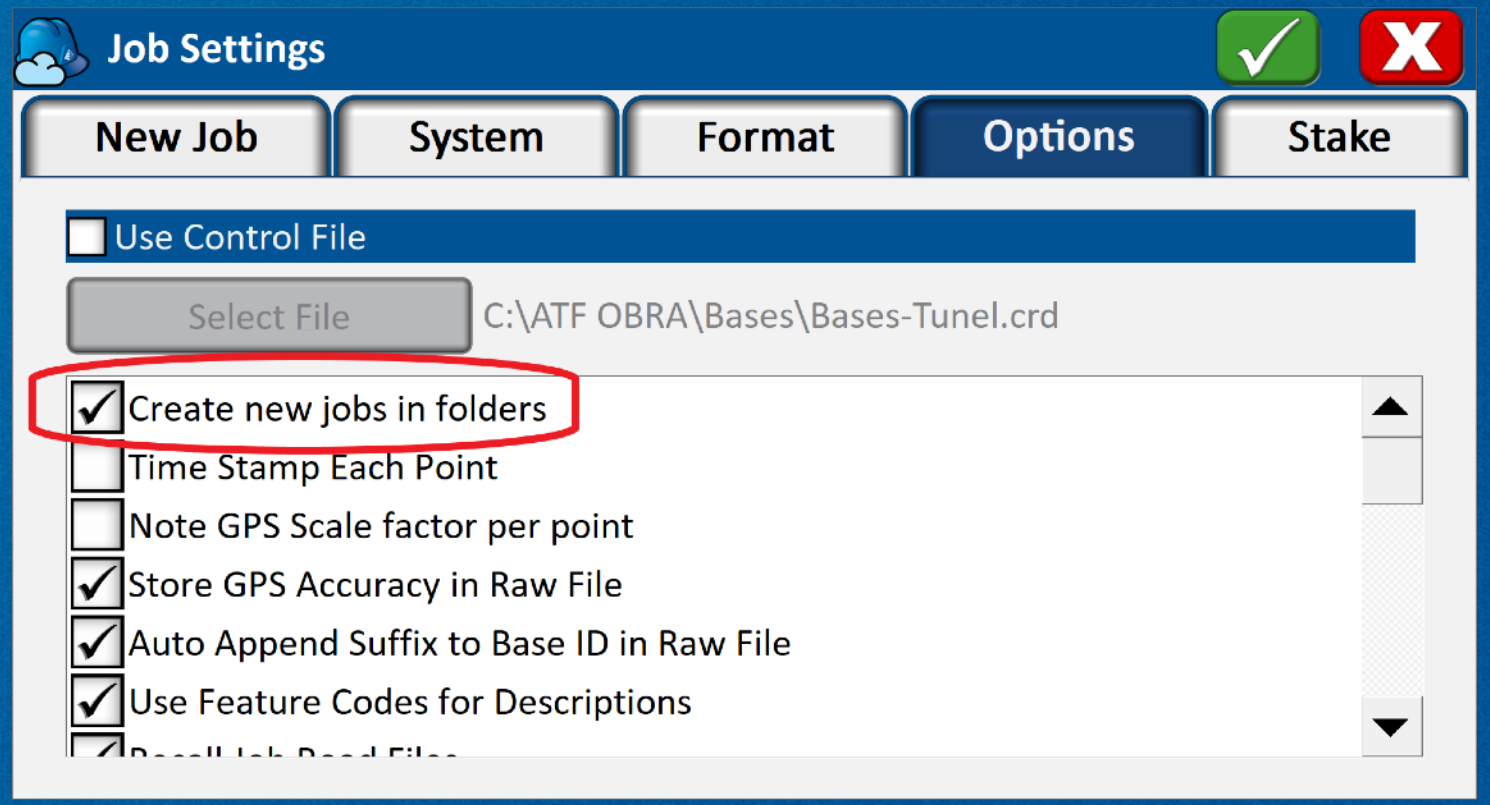
32 AND 64 BIT VERSIONS

- Use the new x64 version for improved performance, as well as the new BIM Module and Esri Online features.
- Use the legacy 32 bit version (x86) for Esri MXD files
- Both versions include native support of
  - DXF 2022
  - DWG 2022
  - DGN V8

Different Installation Locations:
64 Bit: C:\Program Files\Carlson SurvPC
32 Bit C:\Program Files (x86)\Carlson SurvPC

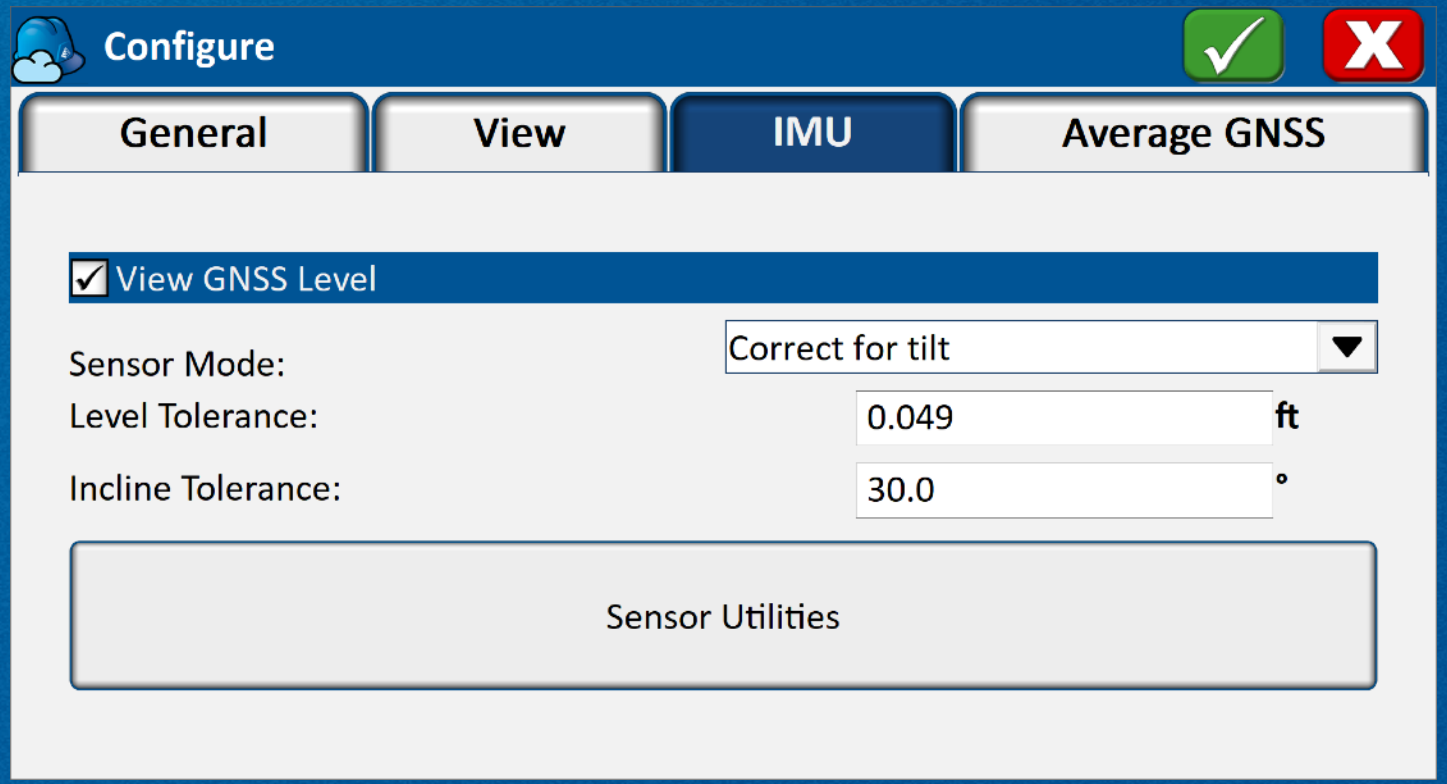
STORING JOBS IN FOLDERS

By default, new jobs will now be created in folders and all associated files will be added to the folder. This simplifies manual transfer of jobs. This setting can be disabled under Job Settings->Options if it is not preferred.



IMU SETTINGS MOVED

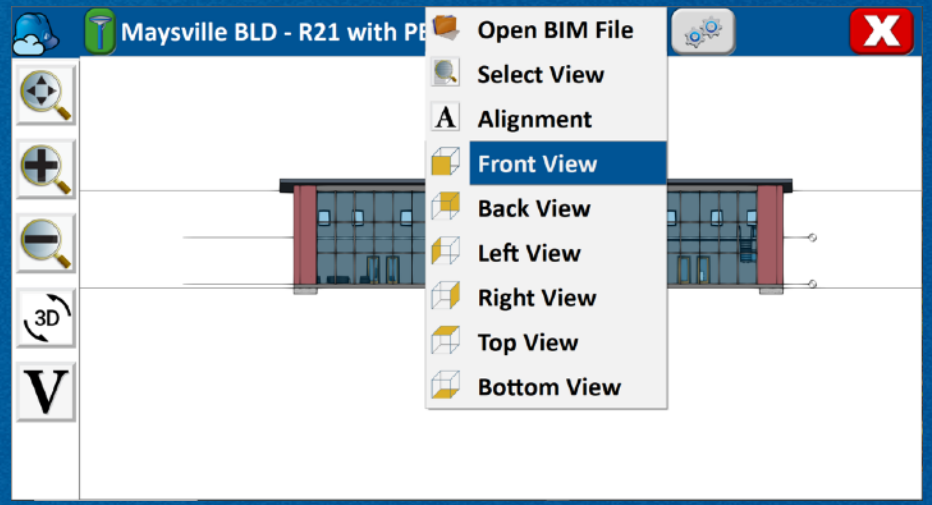
IMU Settings have now been consolidated under the Equip->Configure button for easy access. It is no longer necessary to go through equipment configure to disable IMU. Sensor Utilities is accessible from the same screen, and includes a handy compass test tool to test out the internal compass of the data collector.

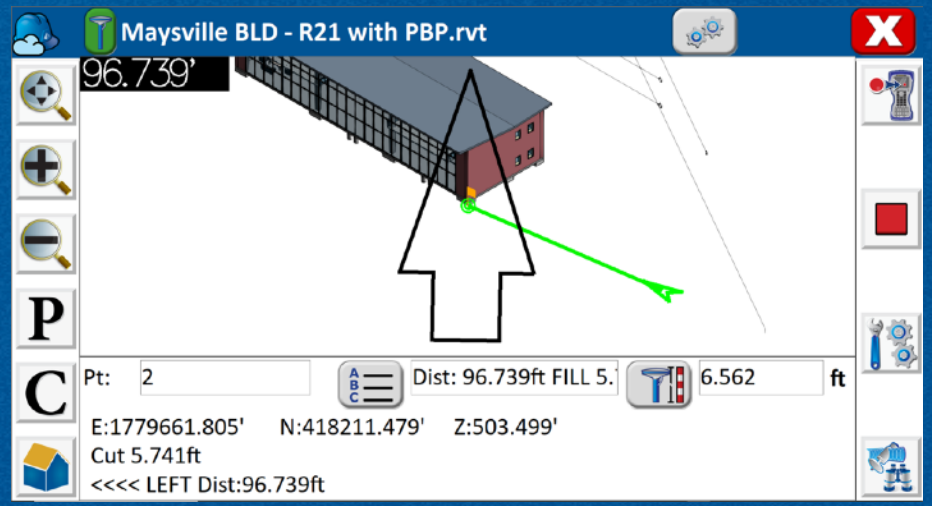


BIM SUPPORT

With the purchase of the new BIM module, users can now use IFC and Revit files for field work. Models can be visualized with full category and view mode accessibility. Points can be stored to the CRD file by snapping, or users can stake directly from the BIM drawing in both 1st and 3rd person modes.

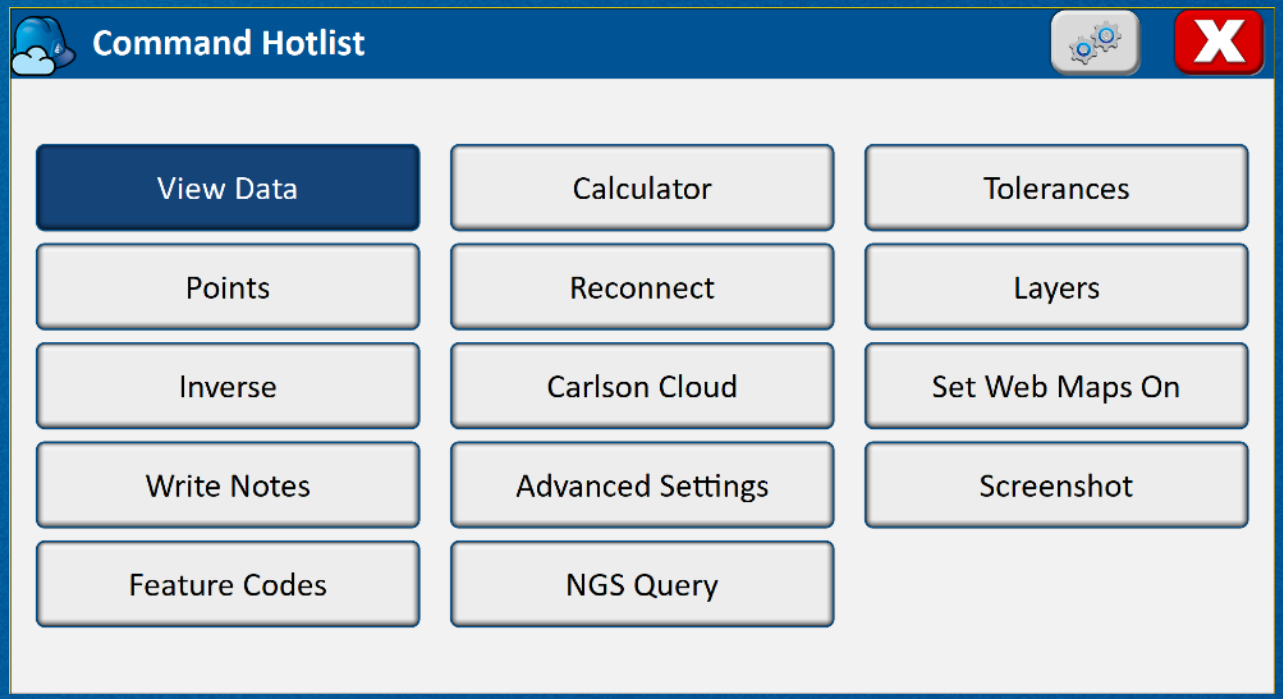
The BIM module is available for demo by selecting any button on the BIM tab.





CUSTOM USER HOTLIST

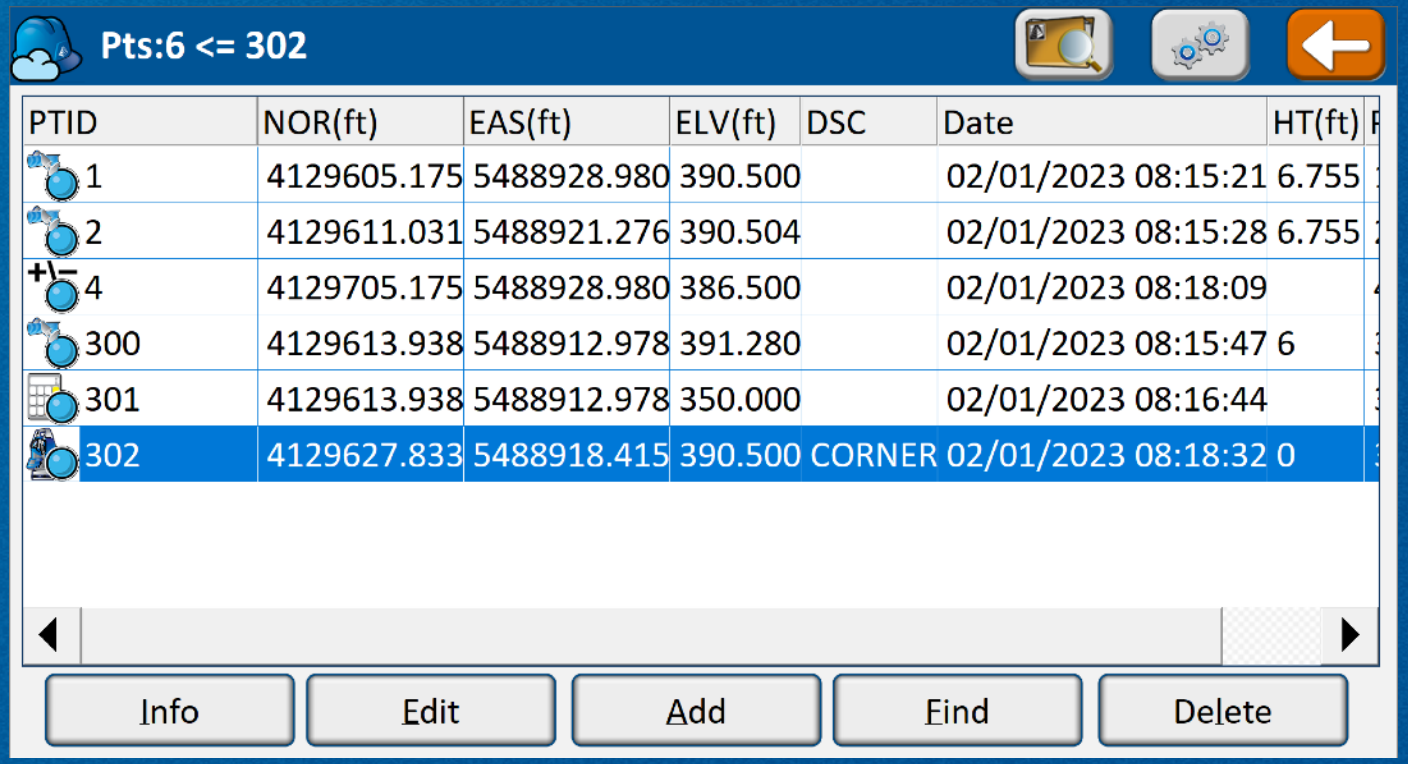
A quick access user hotlist is now available by double tapping in the top bar. A selection of handy shortcuts come preinstalled with the software, and the user can customize the hotlist using the gear icon in the top bar. Advanced users can even create their own hotlist items using python scripting!



ENHANCED POINT LIST

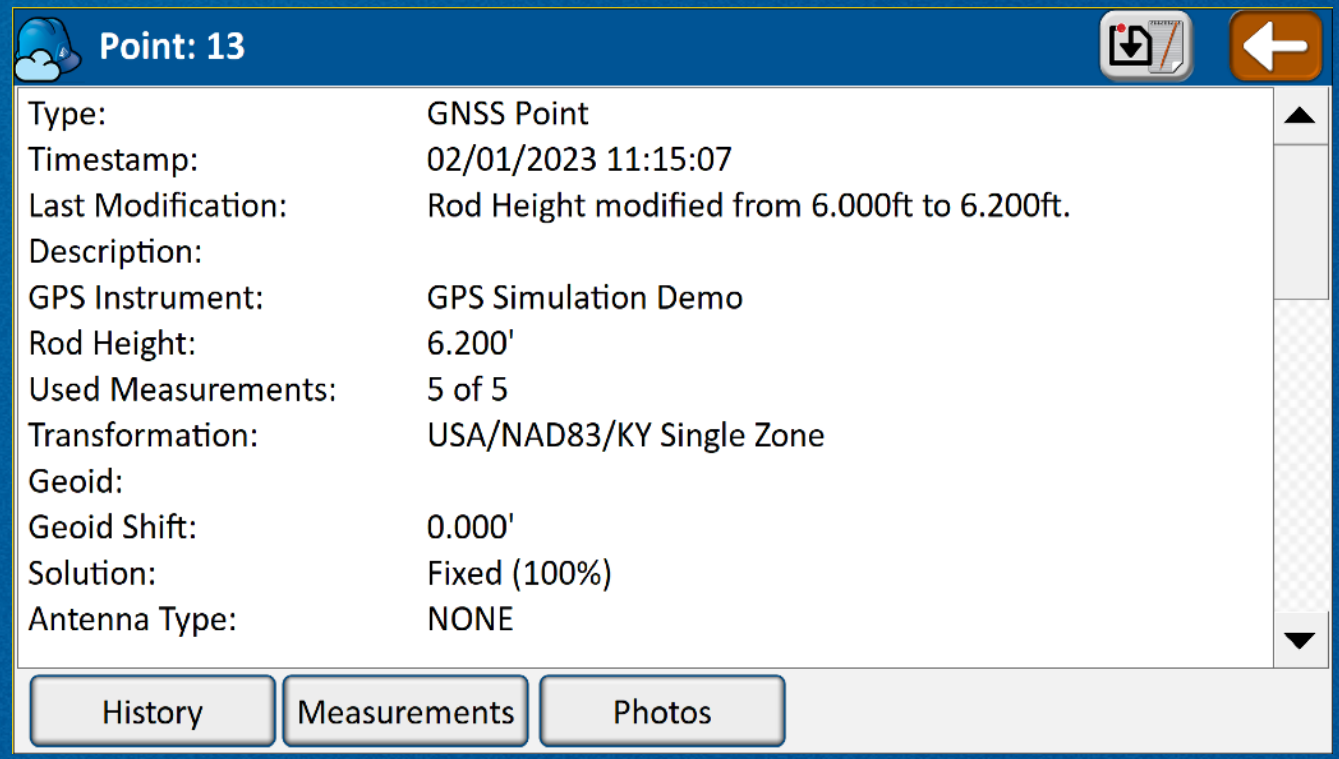
The point list now includes columns for date/time, rod height, and point source, represented by an icon.

The point list now functions as a full featured raw data explorer and editor.



IMPROVED POINT INFO

The Point Info screen is now much more detailed and includes full source information including statistics, measurement count, point adjustments, photos, modification notes, and access to point history. Pressing the measurements button dives deeper into the detailed information of the individual measurements used to calculate if the point is an average. Historical versions of a point can be restored to a new point ID from within point history.

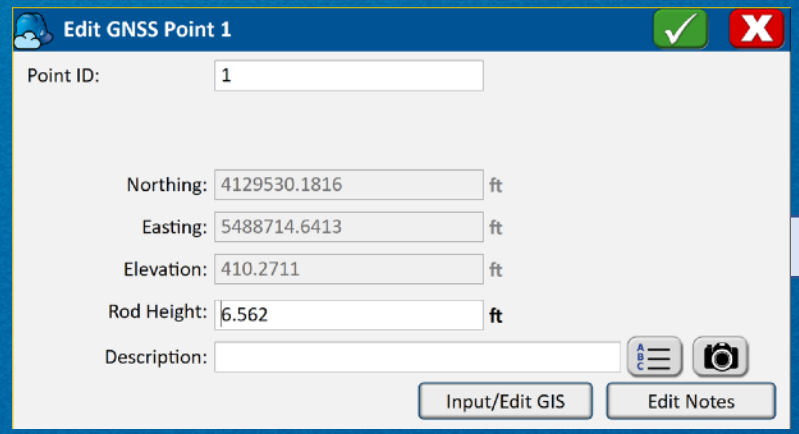


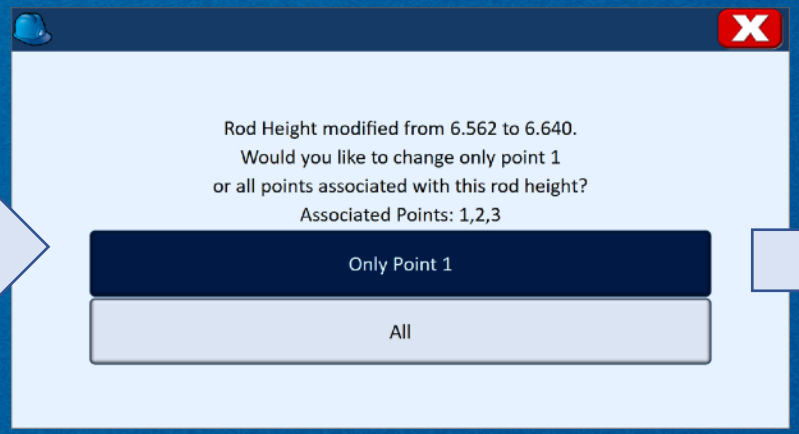
POINT REPORT

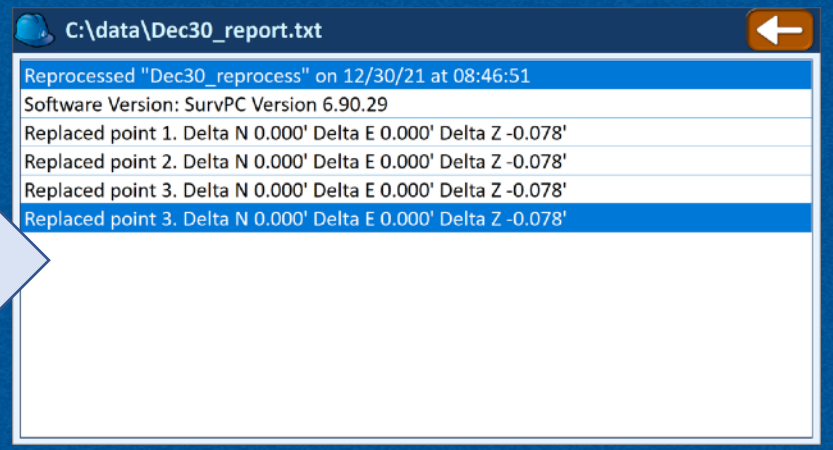
The report icon at the top of point info now generates a PDF or HTML point report with user selectable logo and options for session and measurement details. Report template can is fully customizable by editing the template file.

ROD HEIGHT MODIFICATION

Rod height can now be edited from the Point Info->Edit screen. The software will offer to modify the rod height of the current point only, or reprocess the file. In a full reprocess, all points measured with the selected rod height will be adjusted, as well as cascading updates to all dependent points. A modification report will be presented, and modifications will be tracked in point history.



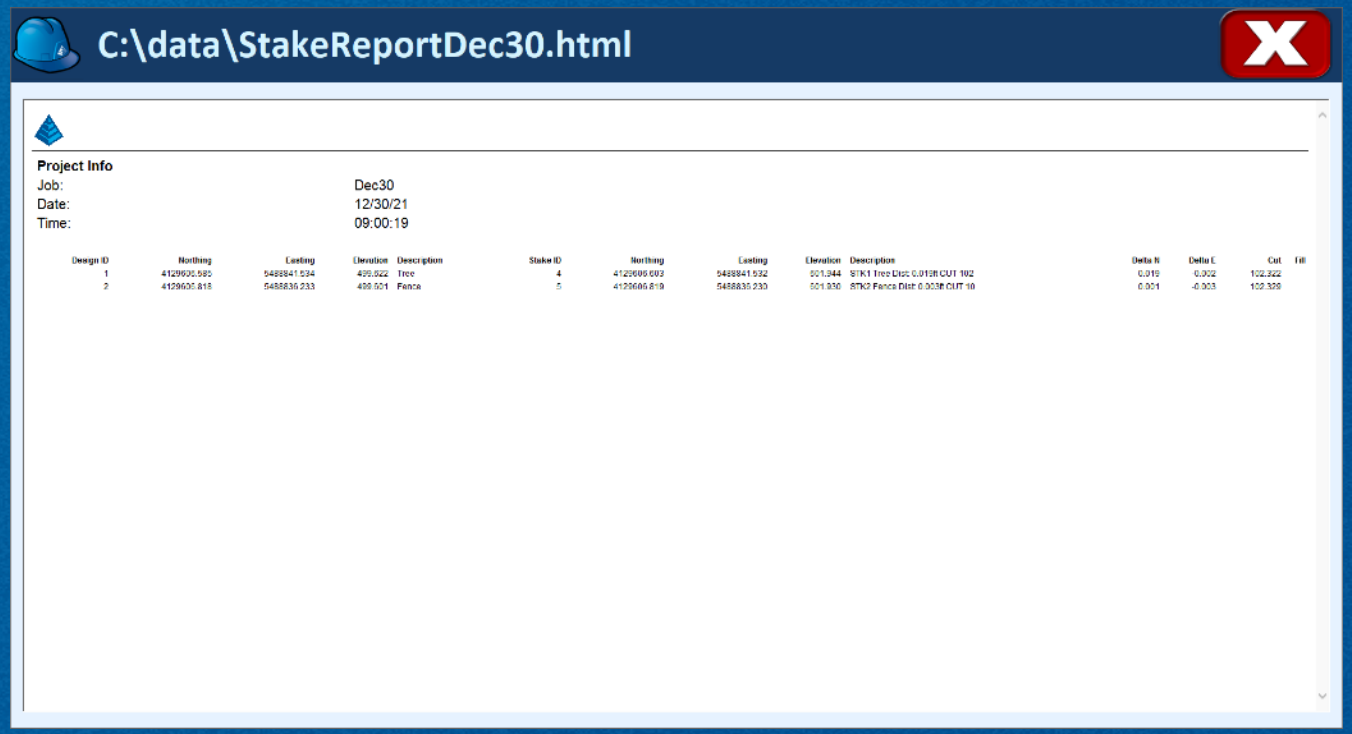




IMPROVED REPORTING

New HTML/PDF reports are available for coordinate lists, stake reports, volume calculations and full job details. Reports support email output and have fully customizable templates.

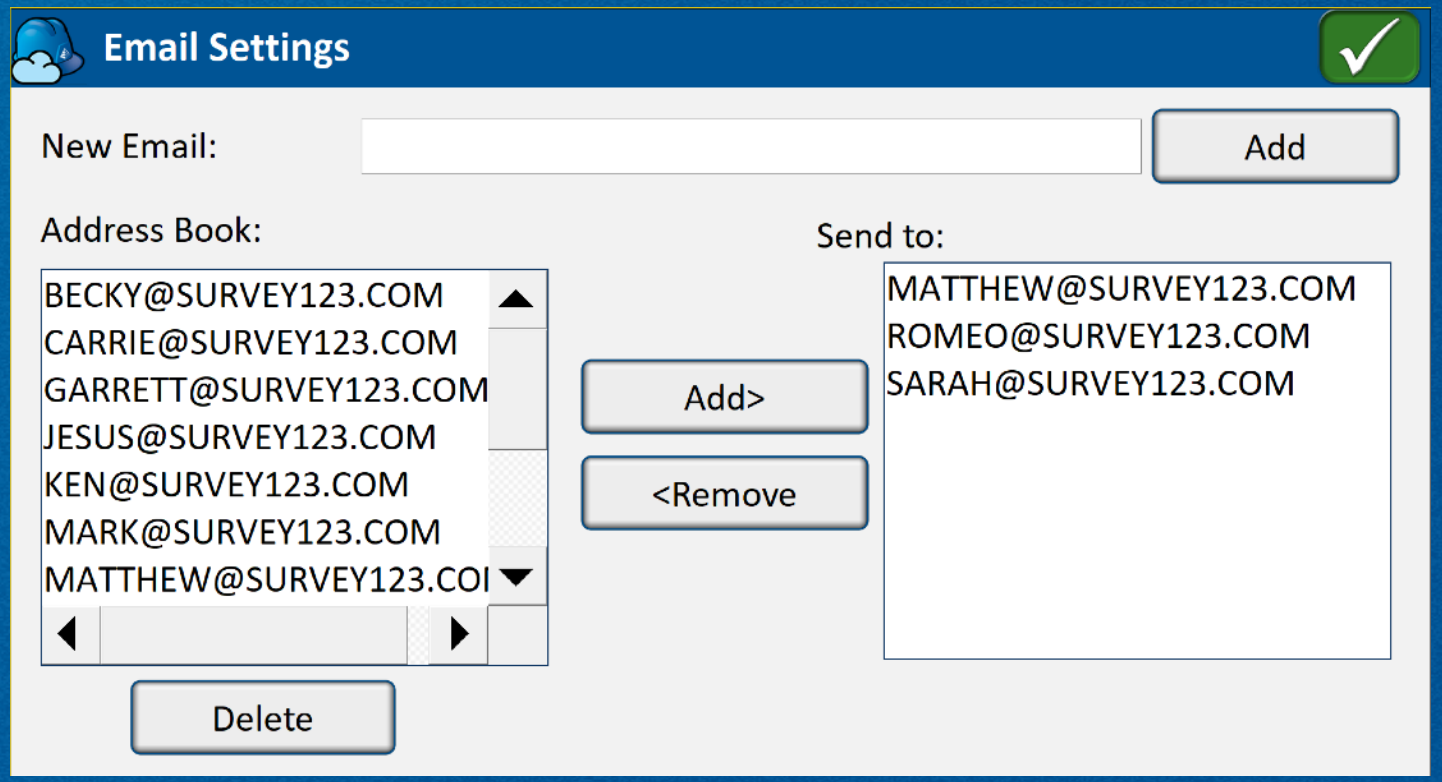
Example: Stake report including company logo



Other new export

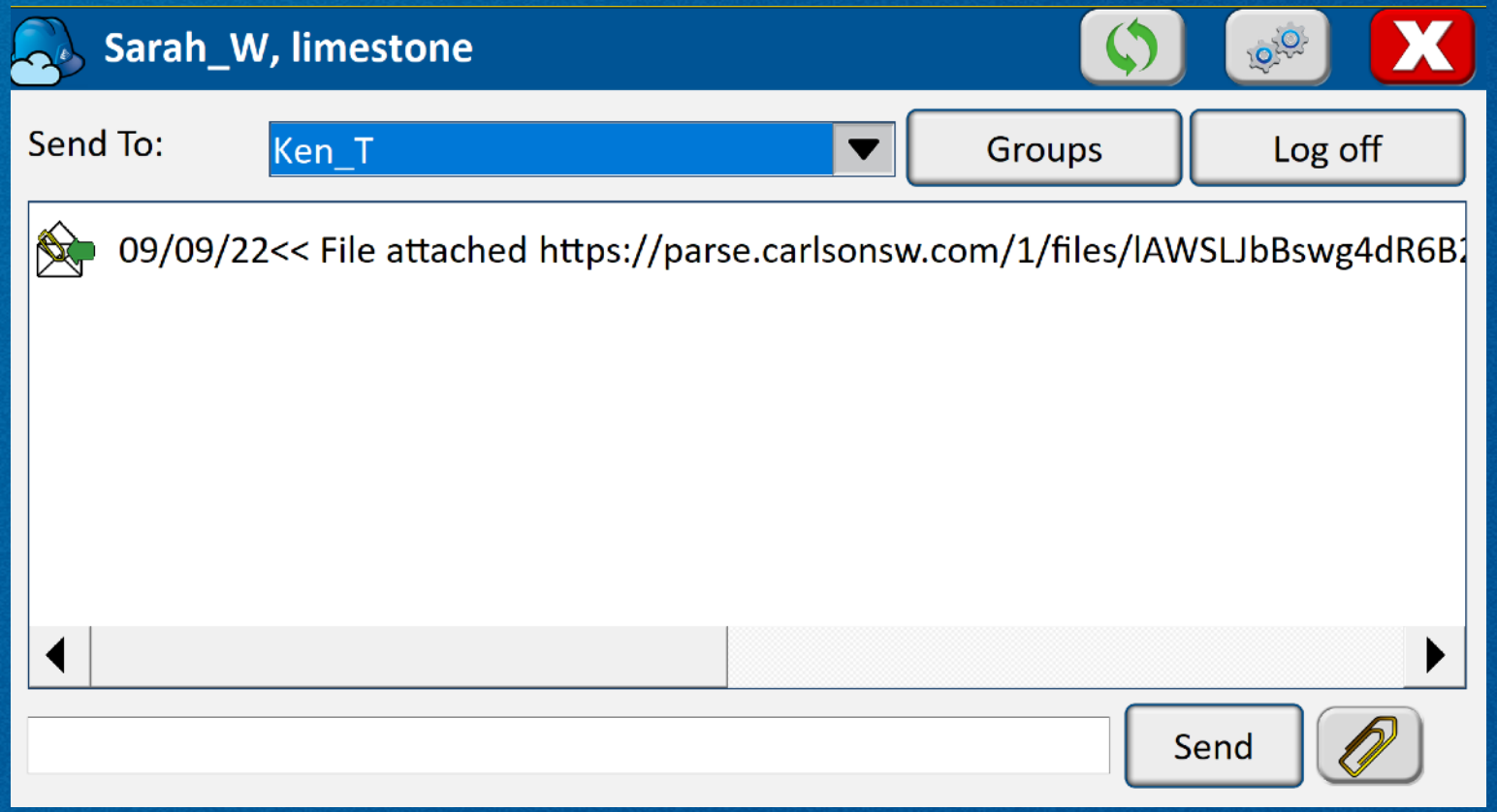
EMAIL OUTPUT

Email output is now available for reports, exports, and more throughout the software. Use the address book to store frequently used addresses.



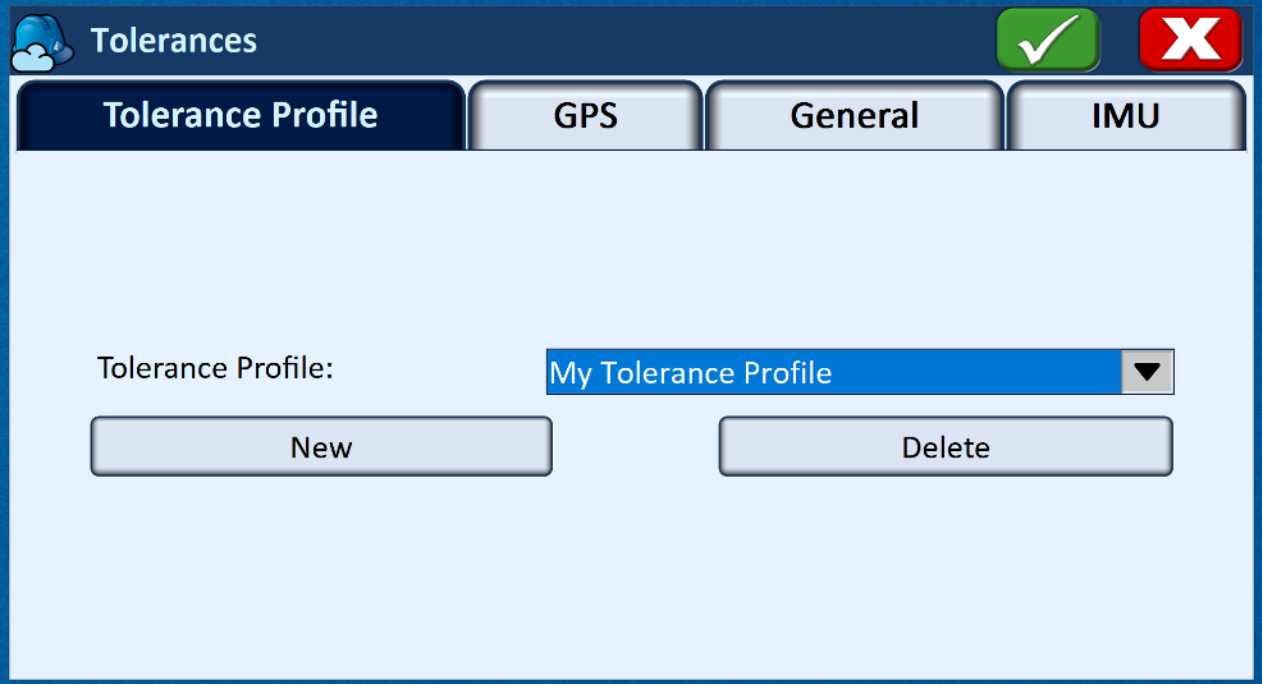
ENHANCEMENTS TO CARLSON CLOUD

- Automatic login at startup
- Helmet indicates login status
- Online users now indicated in the user list
- Define user groups
- Send company or user-group wide announcements
- Separate chat windows for each conversation
- New user options for notifications
  - Unobtrusive helmet icon
  - Immediate screen popup (current method)
  - No notification



TOLERANCE PROFILES

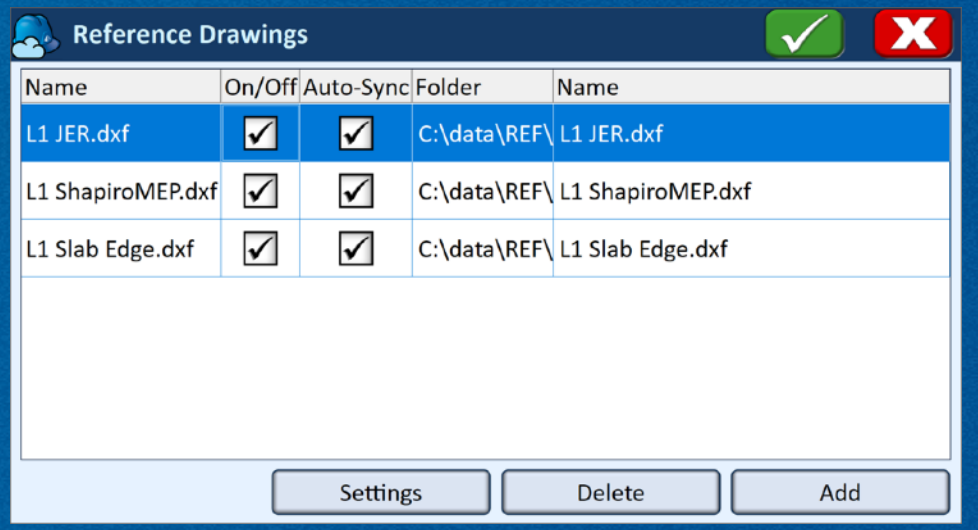
Tolerance profiles allows saving and switching grouped tolerance settings for canopy, topo, control, and other survey conditions.

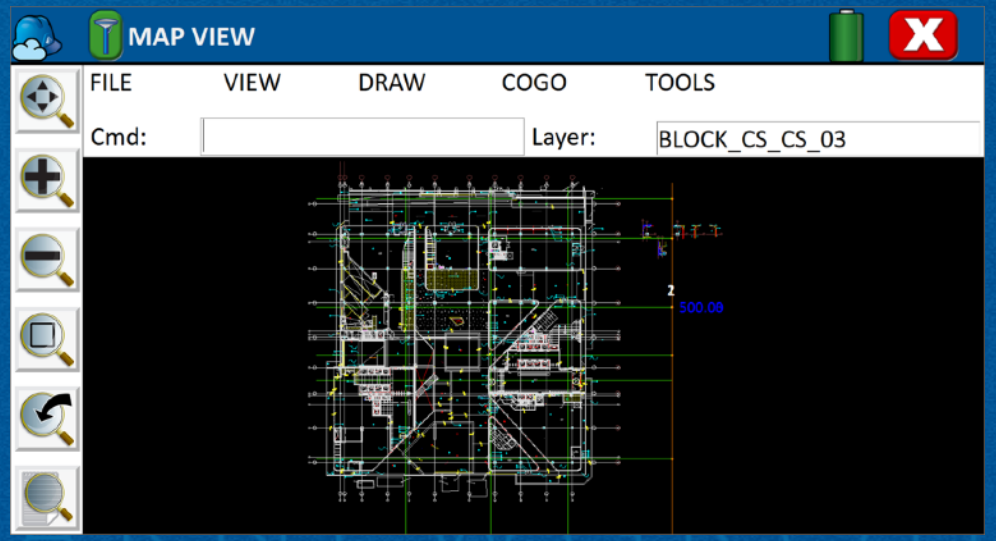


REFERENCE DRAWINGS

Load Multiple Read-Only reference drawings

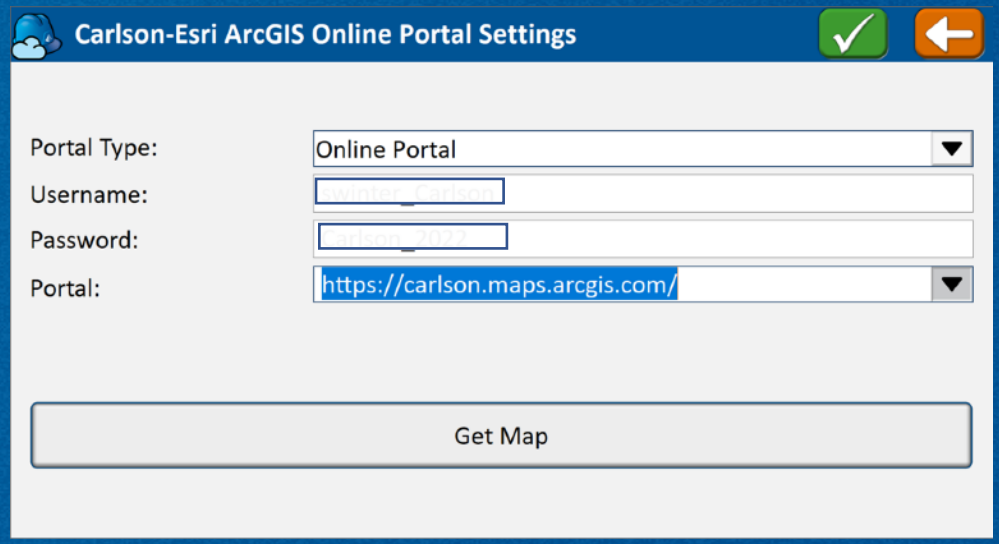
- Access under Map->File
- Auto-sync using timed update or Carlson Cloud
- Snap and stake to reference files
- Full layer control including show/hide of entire drawing or individual layers
- Available for DWG/DGN/DXF

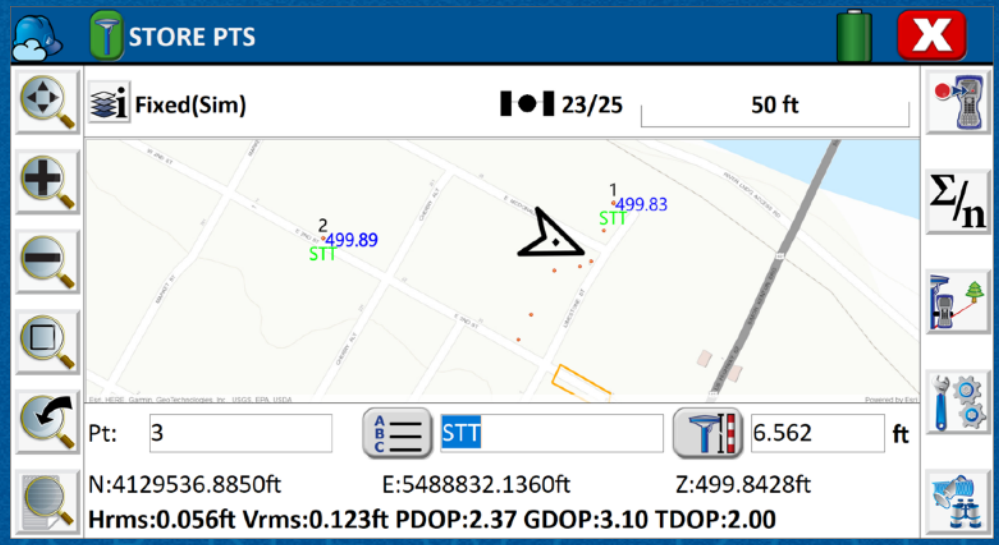




ESRI ARCGIS ONLINE INTEGRATION

Login using your Esri credentials to update and add to Esri maps through SurvPC. Update Esri position to RTK accuracy with any receiver in the Carlson driver library. Feature attributes will prepopulate with updated GPS position and accuracy information, and all measurements will simultaneously be stored in the Carlson CRD file for full survey integration.



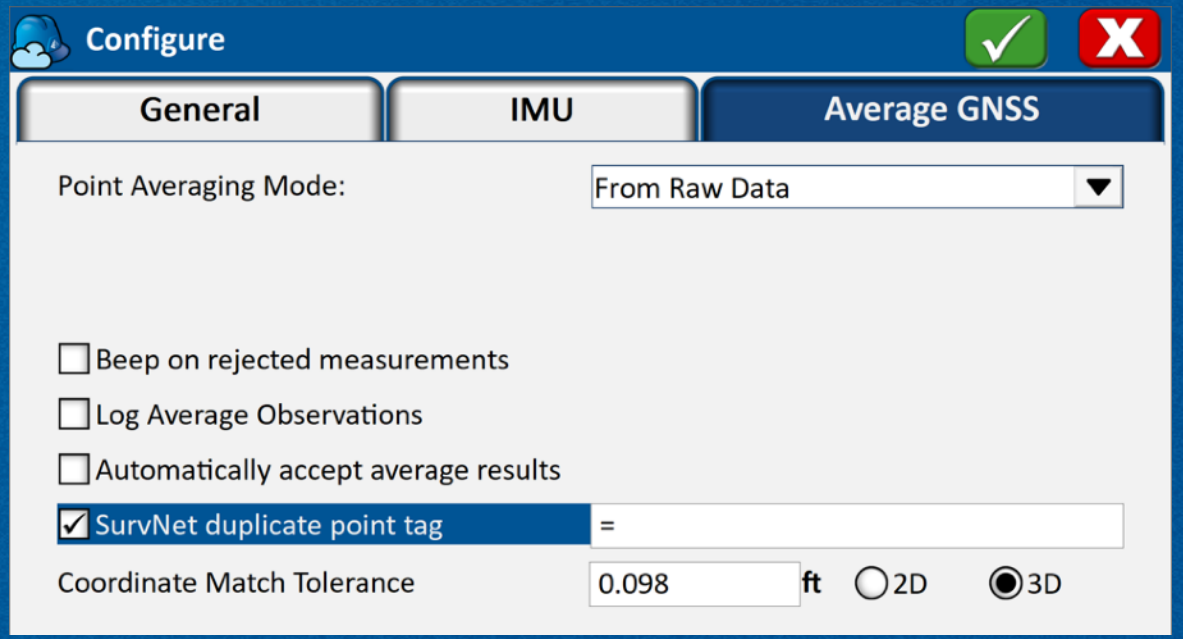


REDUNDANCY NOTATION AND BLUNDER DETECTION

Carlson

Average multiple measurement sessions automatically by using the same point ID. Configure a 2D or 3D coordinate match tolerance for blunder detection. Review session statistics to enable/disable measurements before storing the point, and access full details later in the point info screen.

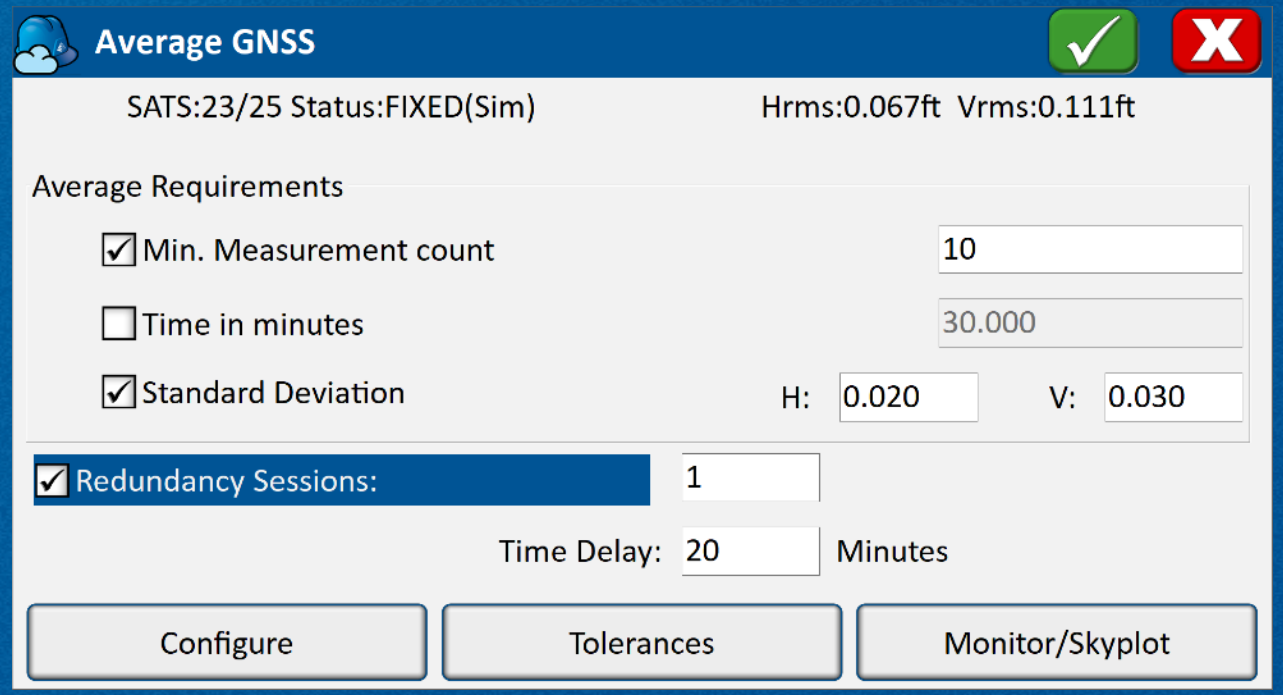
Users who prefer the legacy "=" method of tagging points using the description field now have an option for auto tagging based on position. Using this method, when a measured position matches an existing point within the set tolerance, the description field will be replaced with the duplication tag of the user's choice automatically. In addition, positions manually tagged as being equal will be flagged as a potential blunder if positions do not match within tolerance.



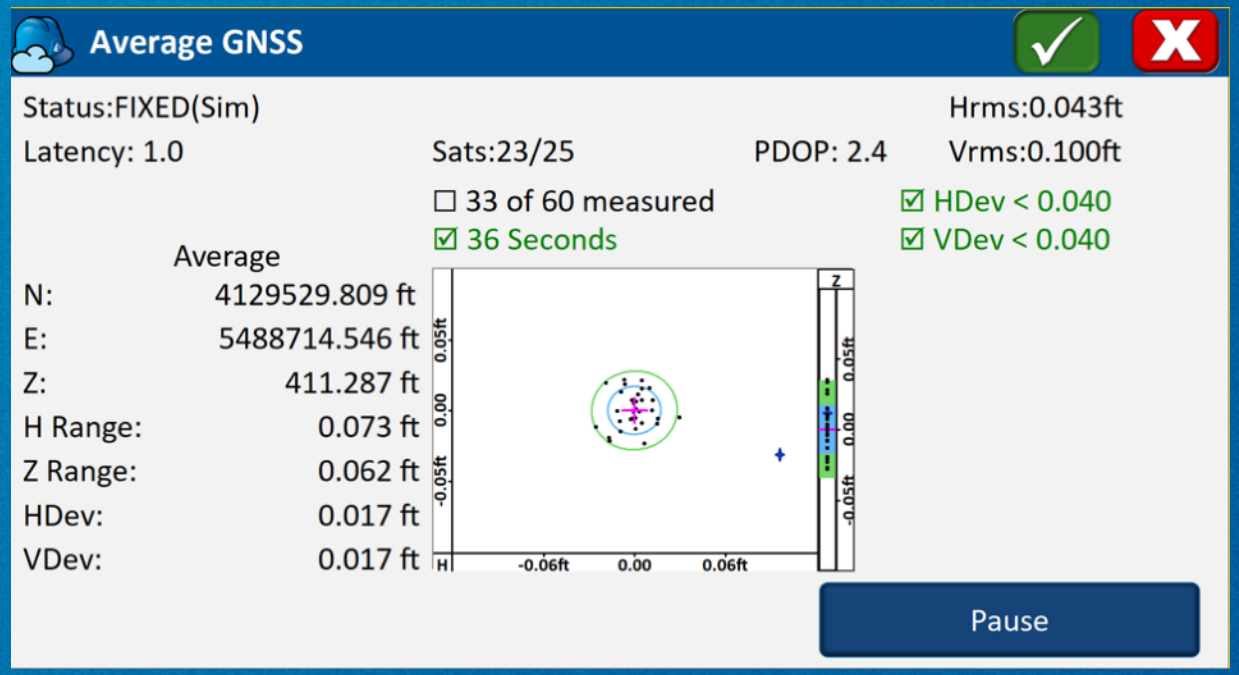
NEW AVERAGING OPTIONS

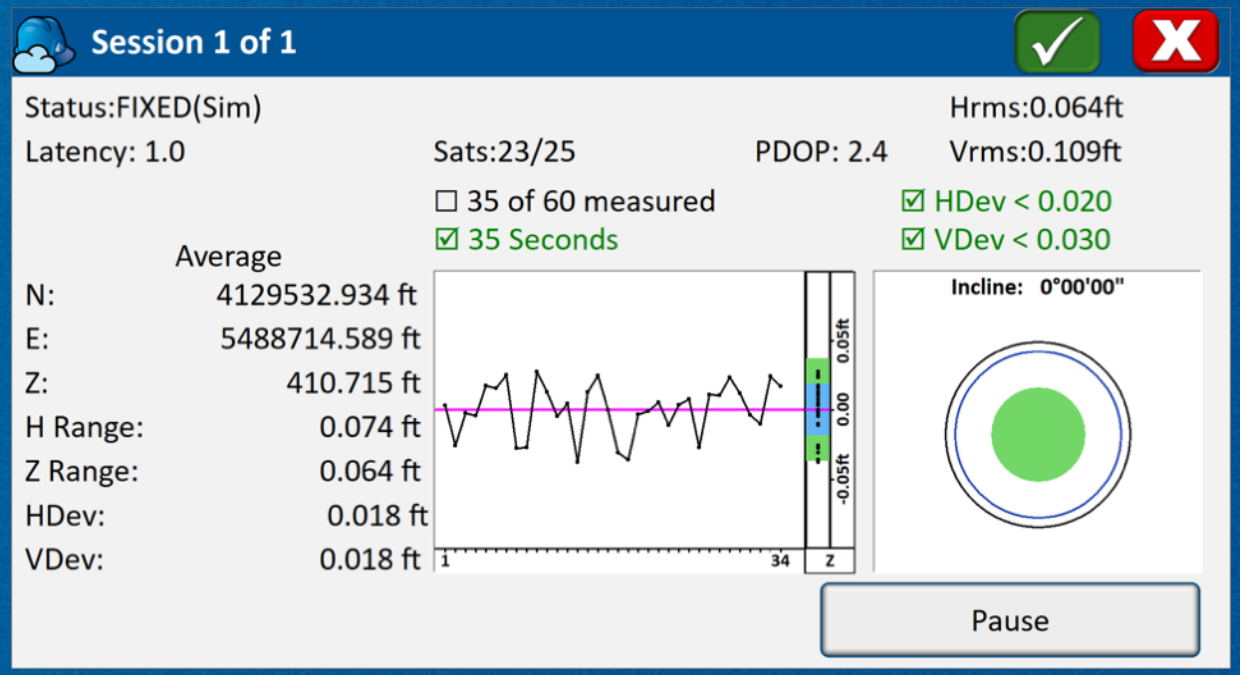
GNSS Average now allows the selection of multiple requirements for average completion. Customize minimum measurement count, time, and required standard deviation between measurements.

The new redundancy sessions option allows for unattended measurement redundancy. Simply configure the required time delay and the software will perform repeated averages with RTK resets.



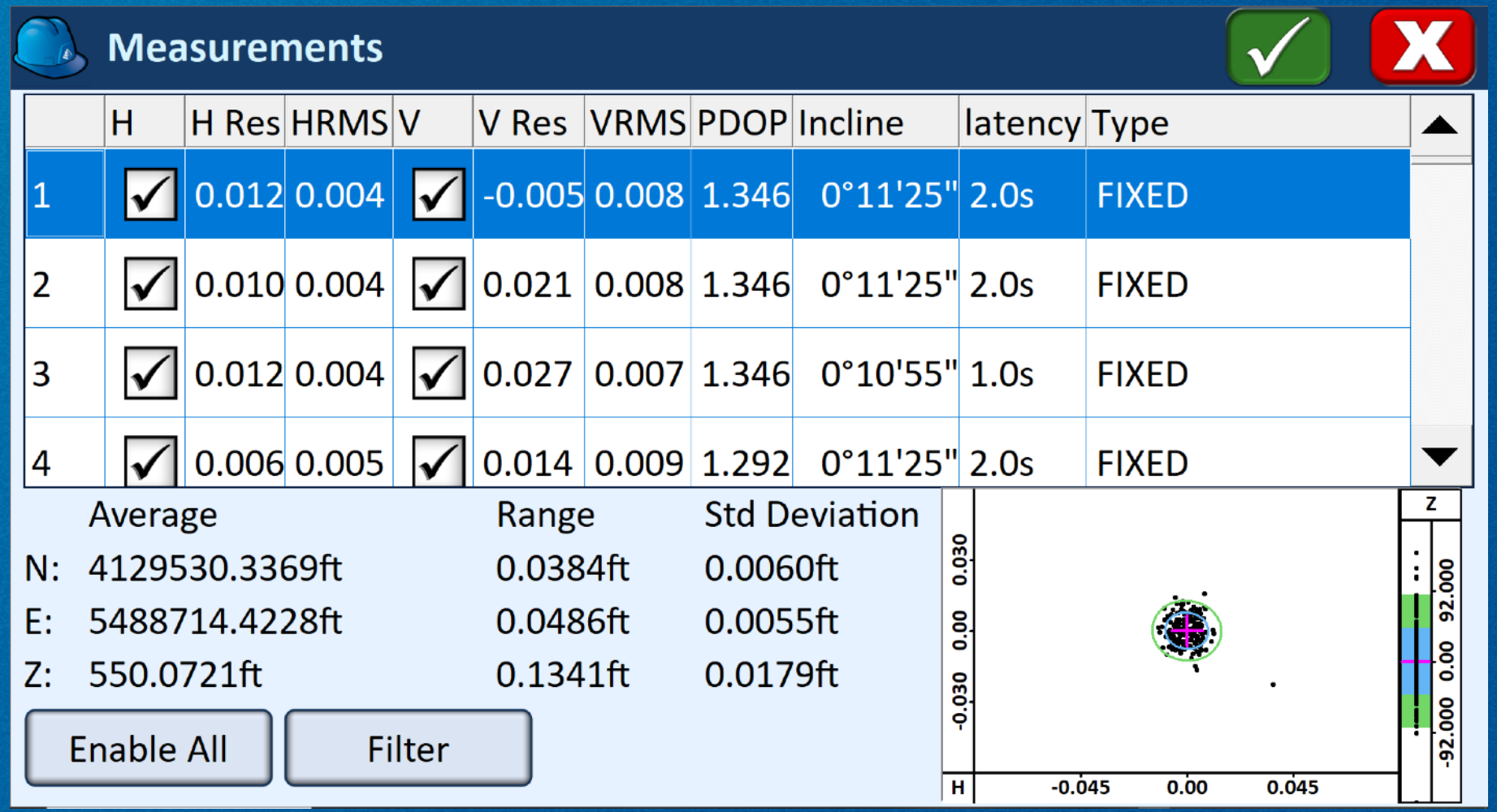
GRAPHICAL AVERAGE





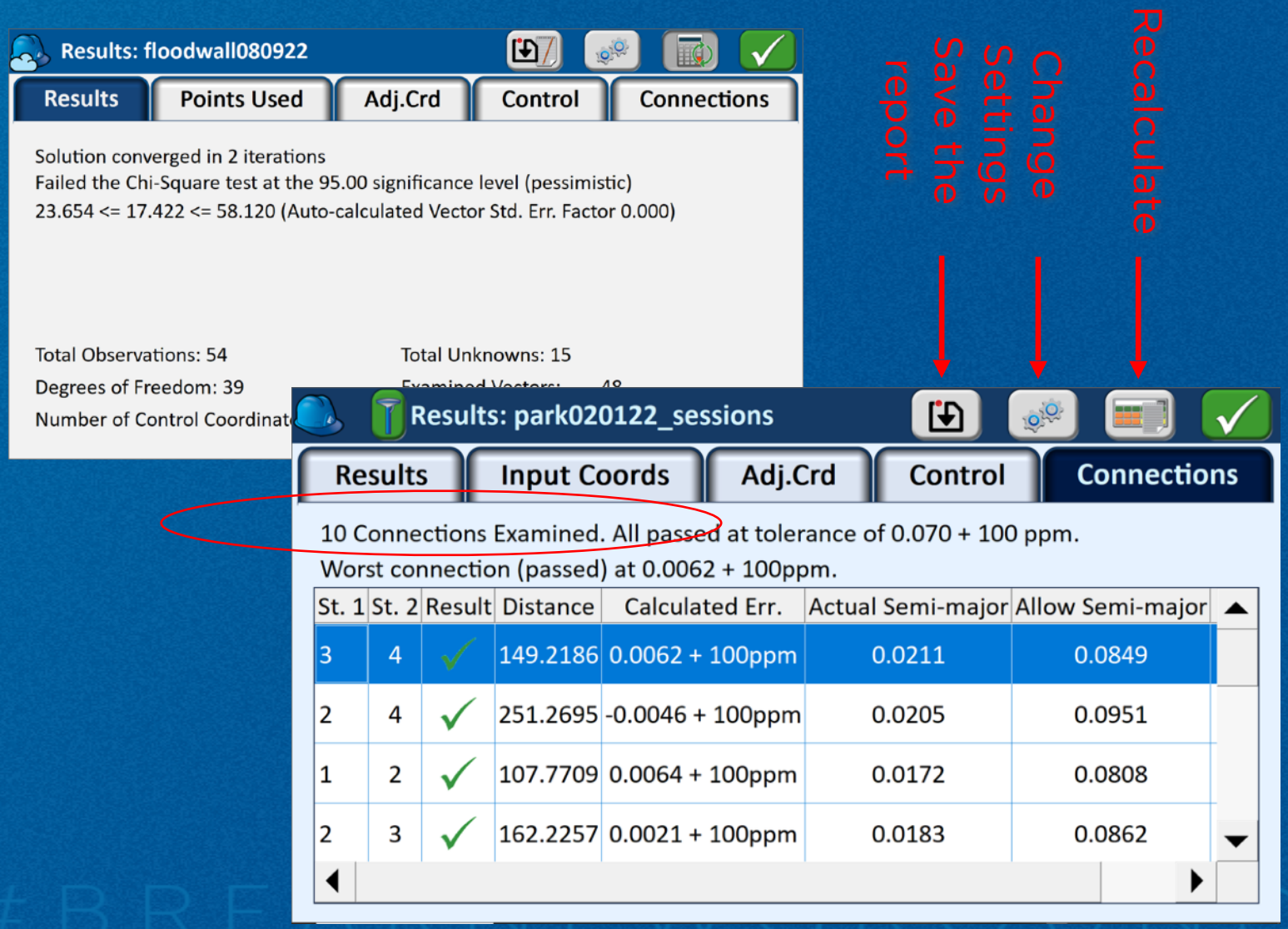
- Real time measurement positions are graphed for immediate feedback on precision
- Error ellipses (1 sigma and 2 sigma) drawn dynamically, or tap on the map to display live elevations
- Previous occupations of the point are indicated with blue crosses
- Pause/Resume at any time
- Graphical indicators for out of tolerance or unmet average requirements
- Point Info and reports will contain information for all sessions taken on a given point as well as detailed average results

REMOVE OUTLIERS BEFORE STORING



SURVNET LEAST SQUARES ADJUSTMENT

SurvNet least squares adjustment is now available in SurvPC for GPS boundary survey certification. Access the feature through File->Raw data. Compute results and create and email HTML and PDF relative point accuracy reports without leaving the field. Simplified output screens allow quick assessment of survey quality. Easily modify settings and recompute, remove points, or resurvey data if necessary.

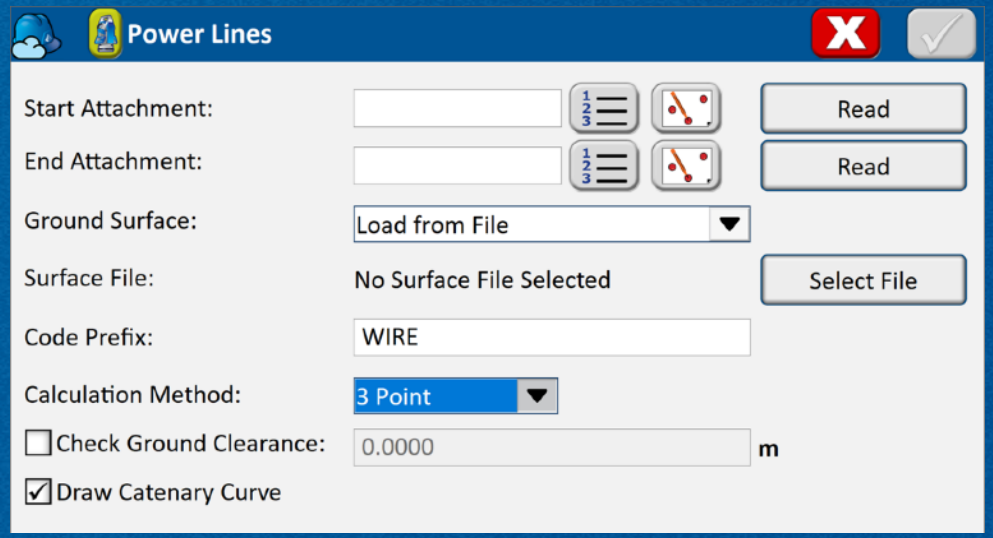


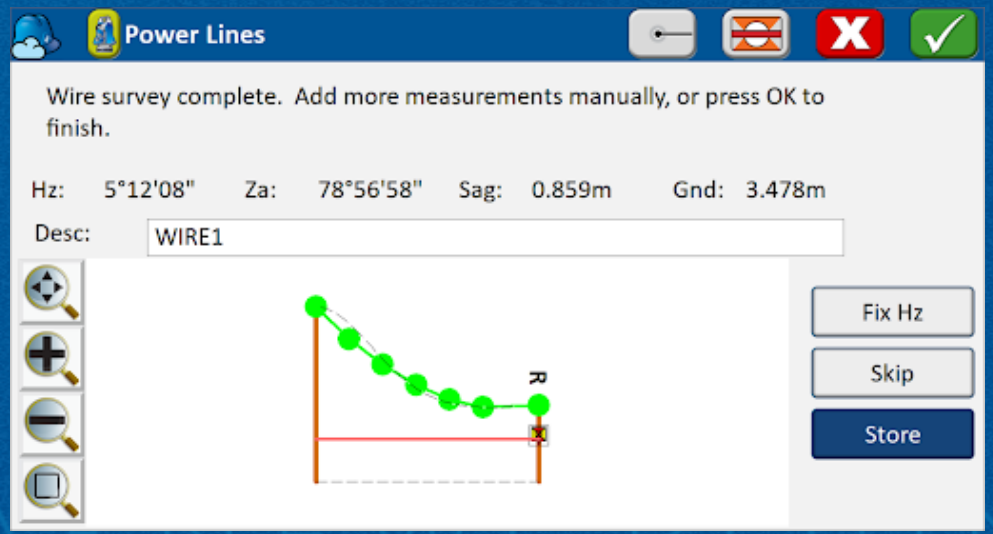
CATENARY SURVEY

The new Catenary Survey routine allows easy measurement of power lines and other wires. Measure Left and right attachments, then measure angle only to the wire to project points onto the vertical plane at defined intervals.

Define the ground plane using a DTM or PRO file and set allowable ground clearance distance. The software will warn if measurement breaks tolerance.

Save and email a complete report of the results and environmental conditions.

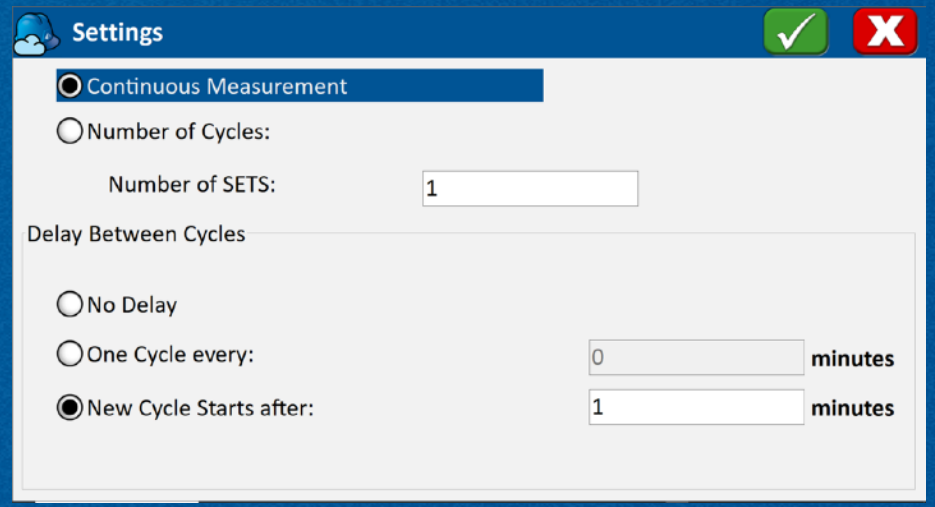


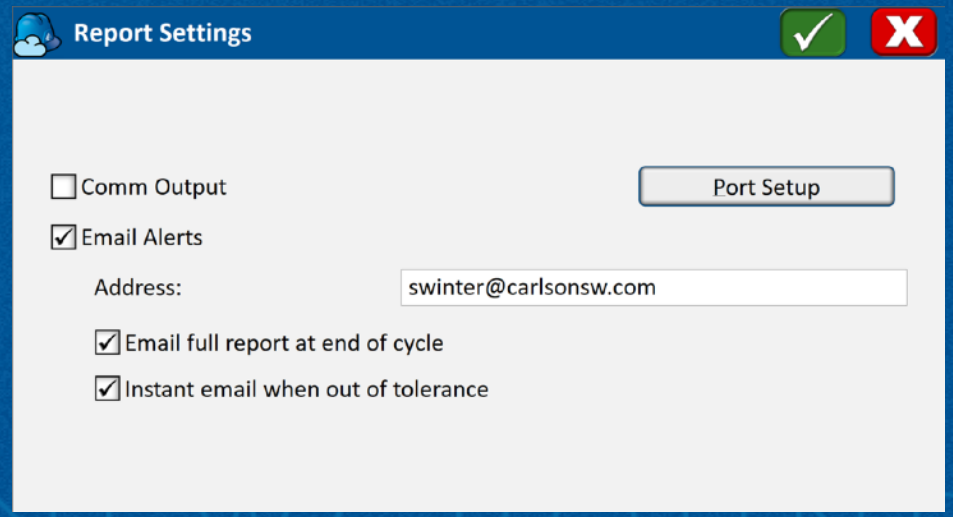


ROBOTIC MONITORING

The new monitoring routine offers a single-station system for deformation control of bridges, buildings, walls, etc. The software will continuously measure to defined targets and report deviation from previous measurement and total deviation. Monitoring cycles are user configurable for permanent setup. Email alerts send automatically when motion tolerances are exceeded. Results can be logged to a COMM or file in real time.

The monitoring module is available to try in demo mode under Survey->Feature Survey.

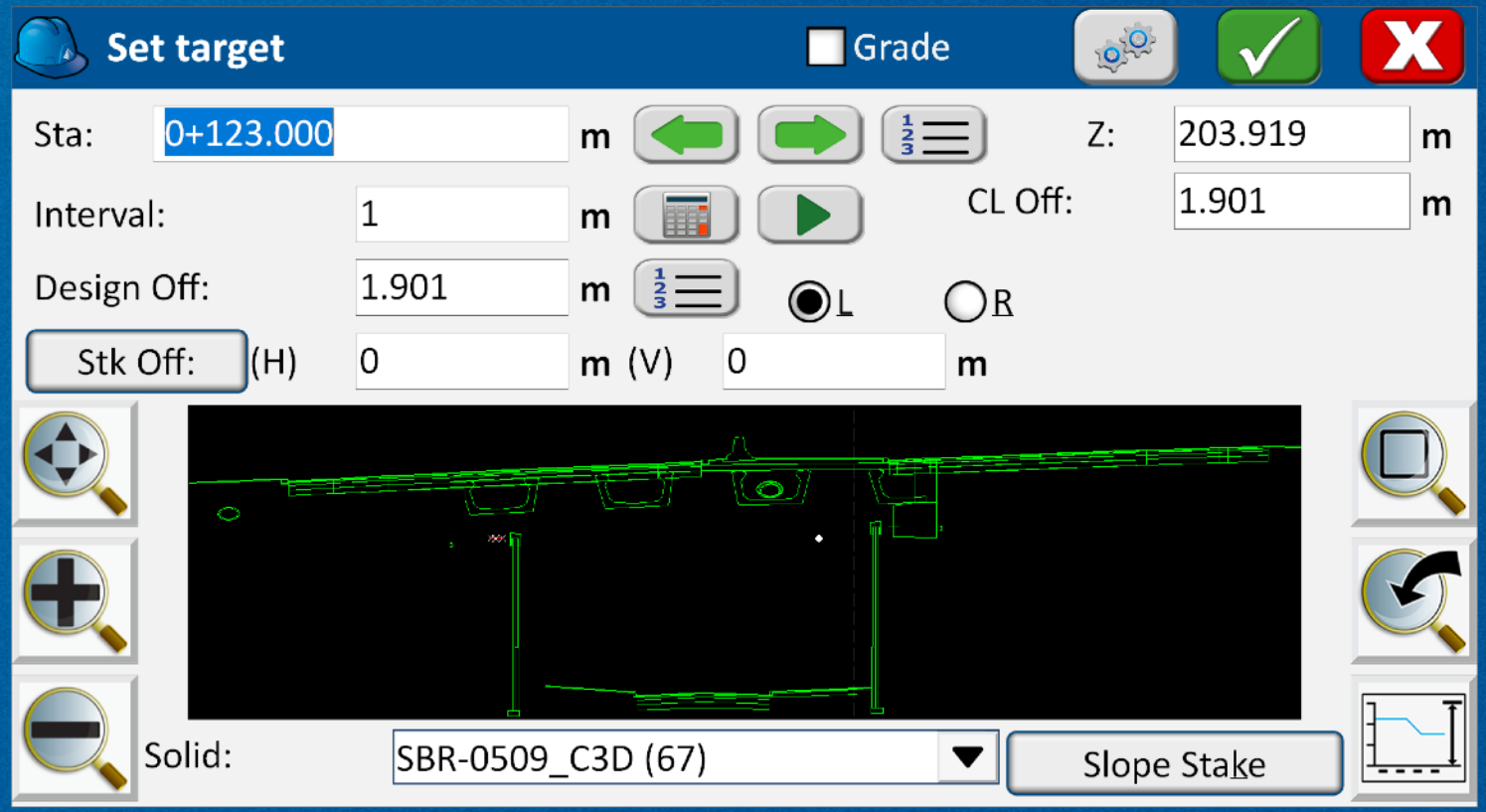




CIVIL DESIGN STAKE FROM BIM SOLIDS

The full power of SurvPC staking is now available using BIM models. Load any BIM file to create solid models using the BIM->Extract Solids feature. The resulting solids can then be loaded as a group into the stake roads routine for an incredible stakeout experience for roads, bridges, tunnels, and structures. View and stake any detail of the BIM model at any station, and in any direction with real-time sectioning. No information will be lost, no office preparation is needed, and design files will not be manipulated or contaminated.

This feature requires the BIM and Roading models.



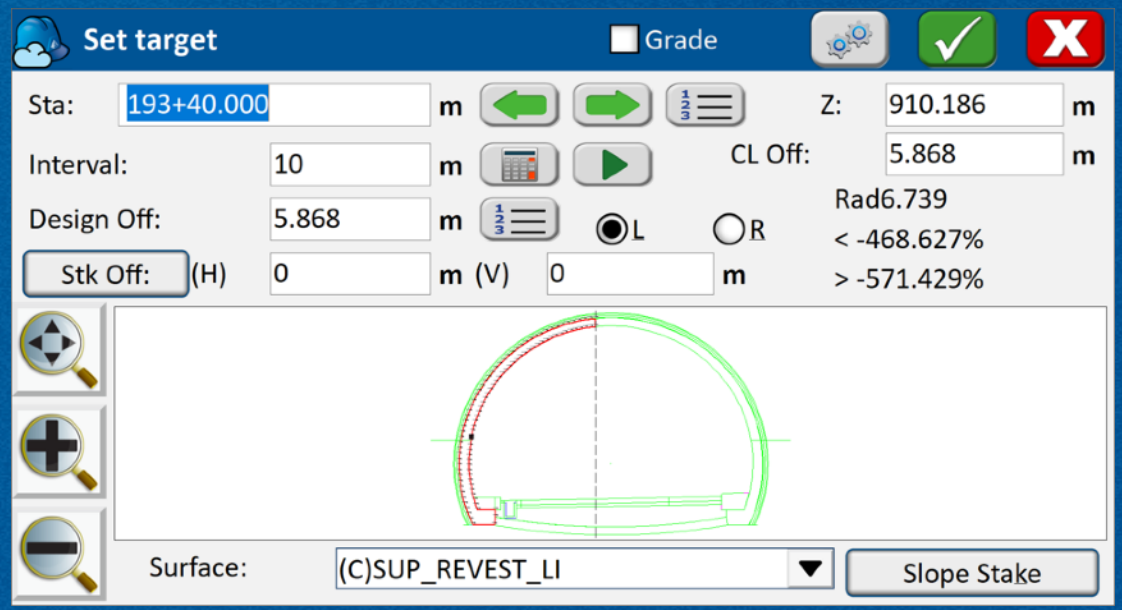
STAKE ROAD FROM SURFACE FILES

The Stake road routine now allows staking using digital terrain models. Load one or multiple DTM (design) files and the software will section on the fly for staking of any road element or layer at any station.

NEED NEW SCREEN SHOT

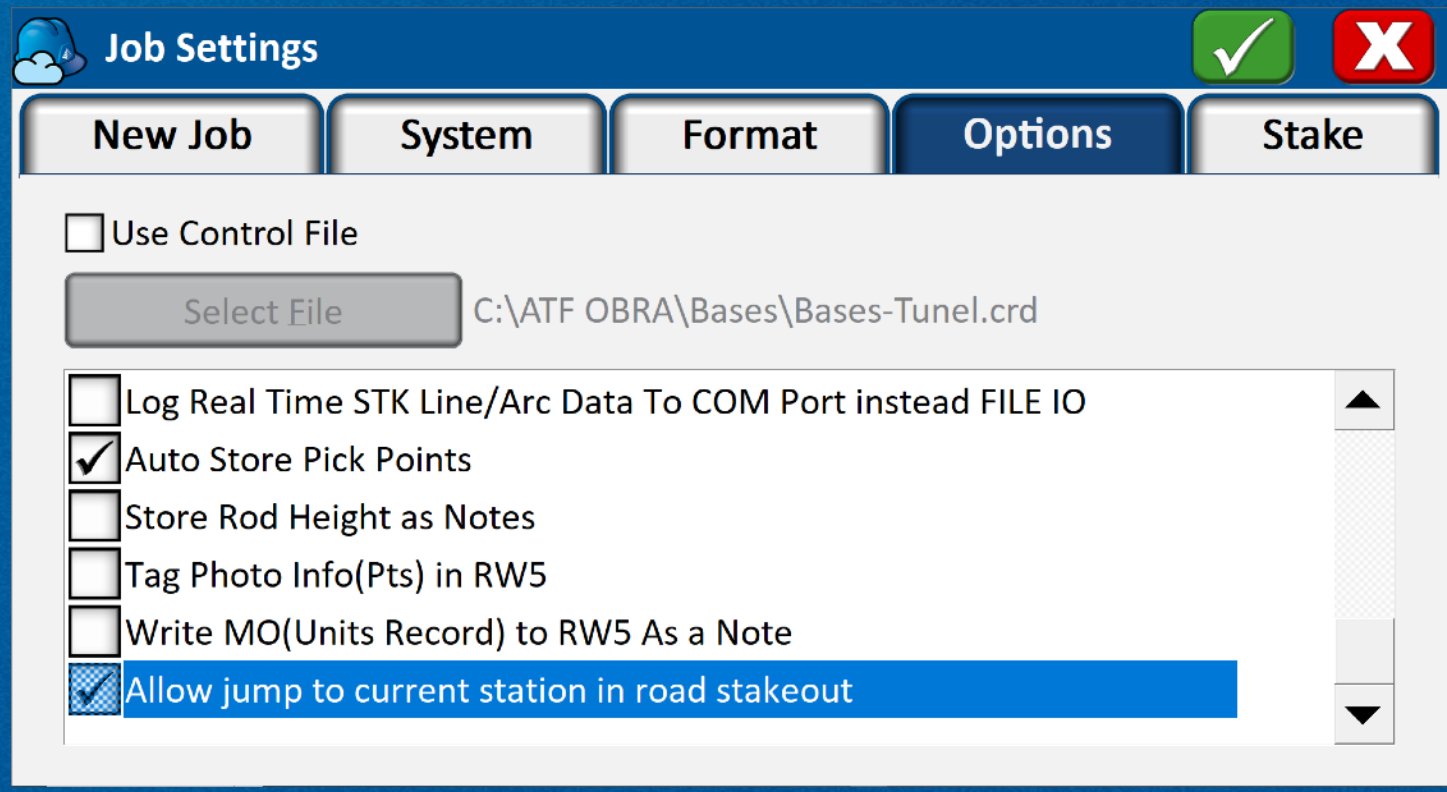
TUNNEL STAKEOUT

Tunnel stakeout is now possible with the new Tunnelling module. Load designs from both as-built sections or BIM solids from LandXML or IFC/Revit files. Stake any road surface or the tunnel dome for under/over excavation measurements to compare against design and laser scans in real time.



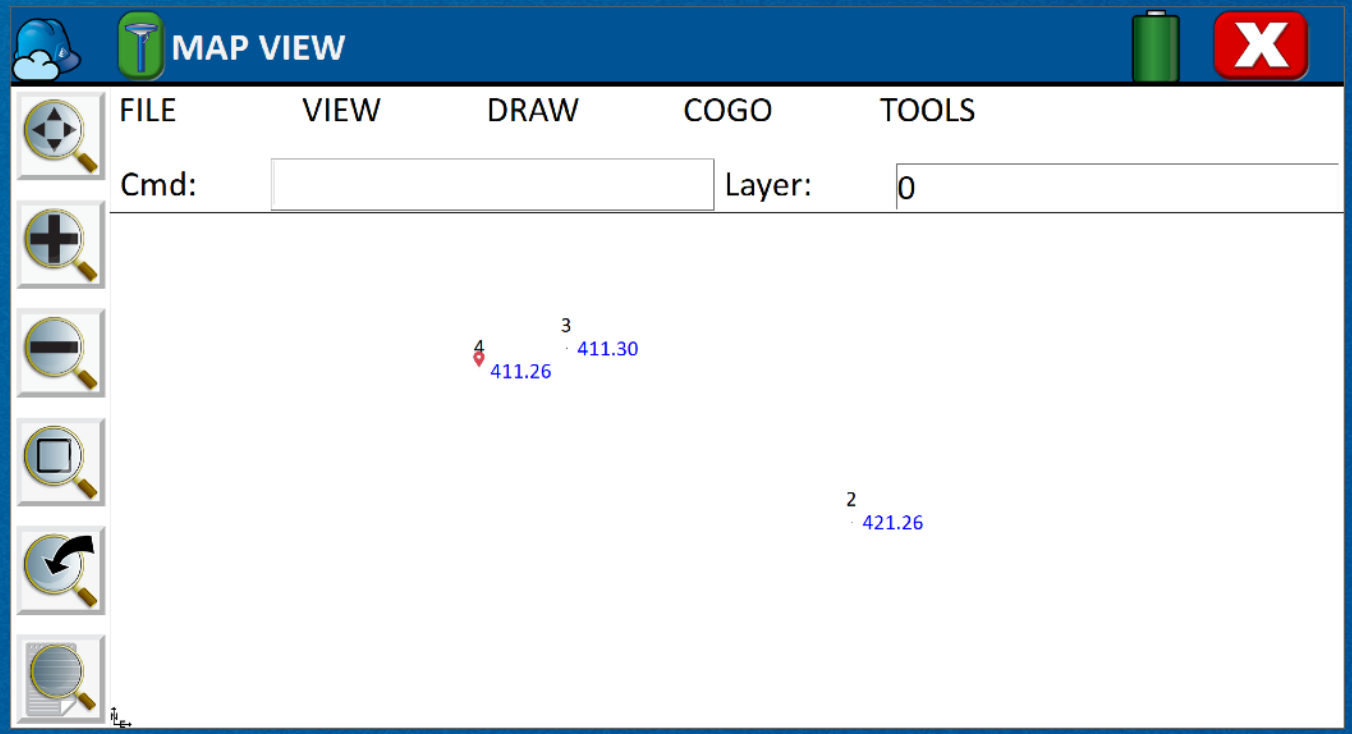
JUMP TO CURRENT STATION

Enable the “Allow Jump To Current Station In Road Stakeout” option to add a new option for road stakeout. When pressed, the software will recompute the cross section based on your current position. No need to return to the menu to manually change the design



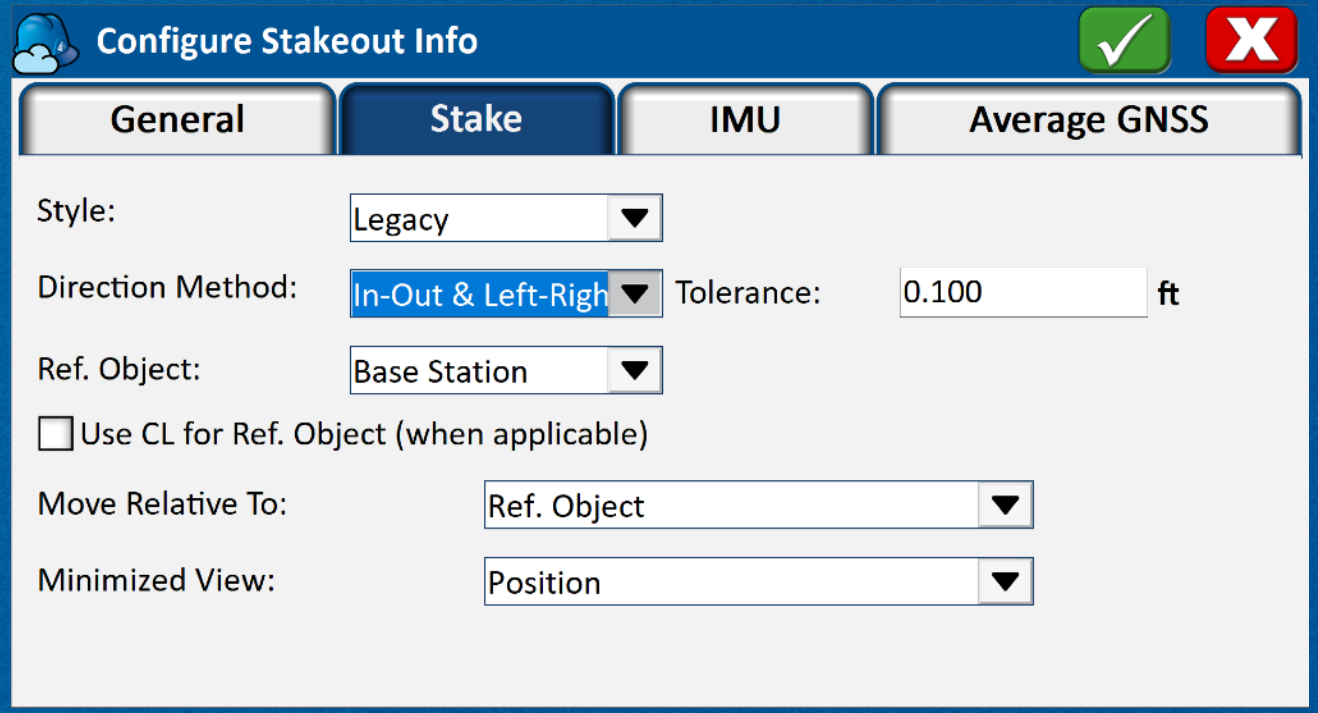
USER POSITION IN MAP SCREEN

A snapshot of the last user position is now noted in the map screen with a red icon. The new marker is also available in all point selection screen for quick reference to current position.



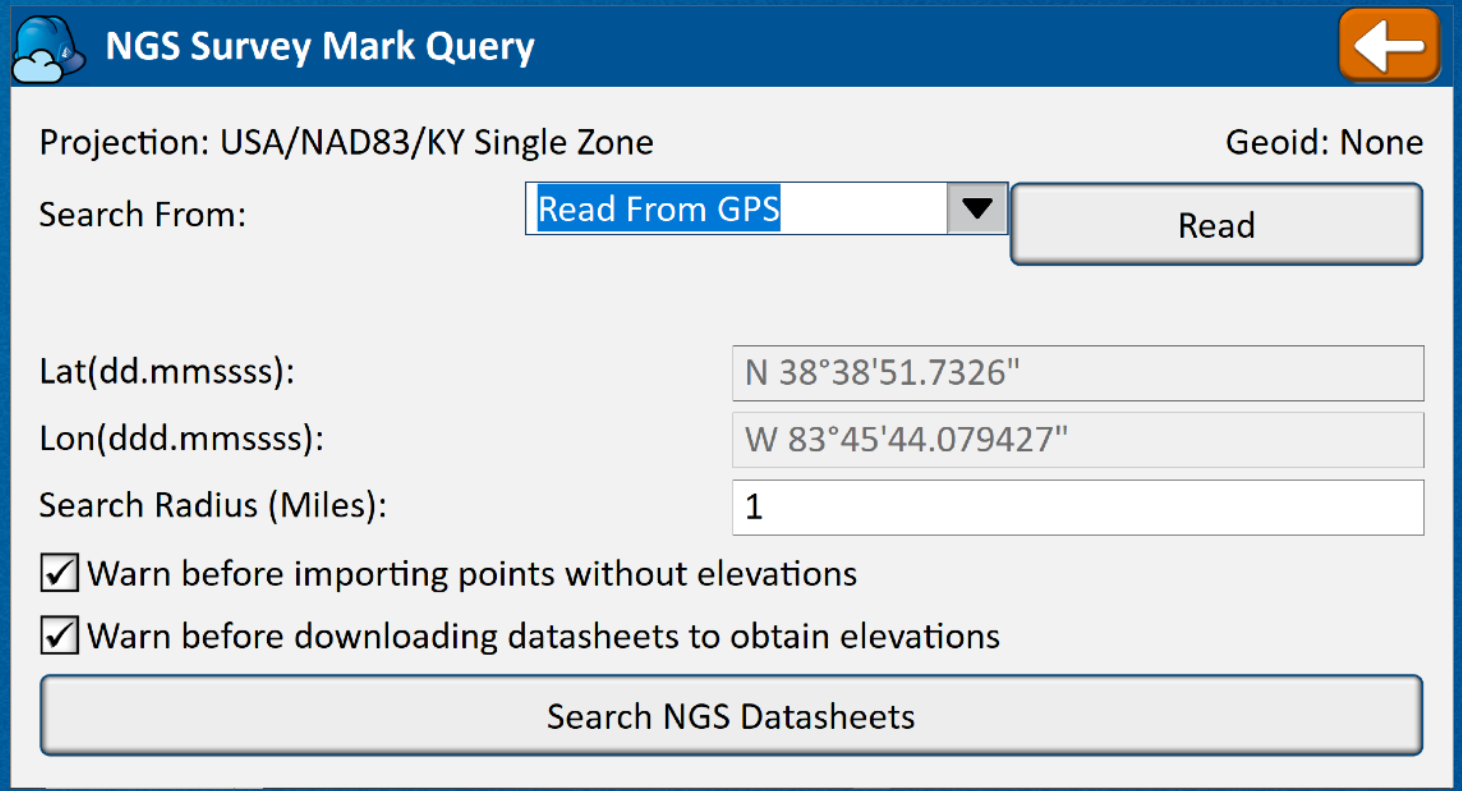
STAKEOUT SETTING CONSOLIDATION

Stake settings have been consolidated on the Configure->Stake screen for easier modification.



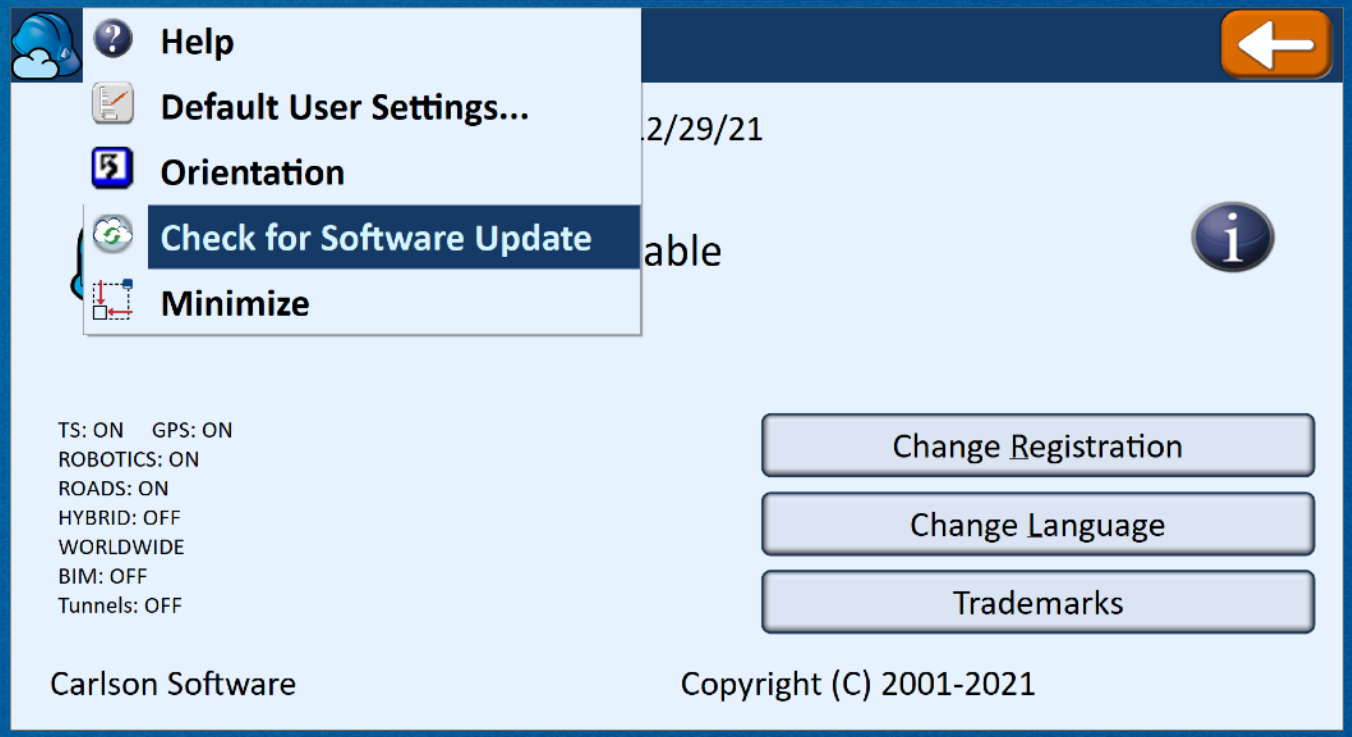
NGS SEARCH IMPROVEMENTS

NGS Search now has settings to control warnings displayed. The list of monuments found can be sorted by field. The distance from search center is displayed in the monument list. The user can extend the waiting time if the network is slow or a large search radius is specified. Lat/Lon display has been improved.



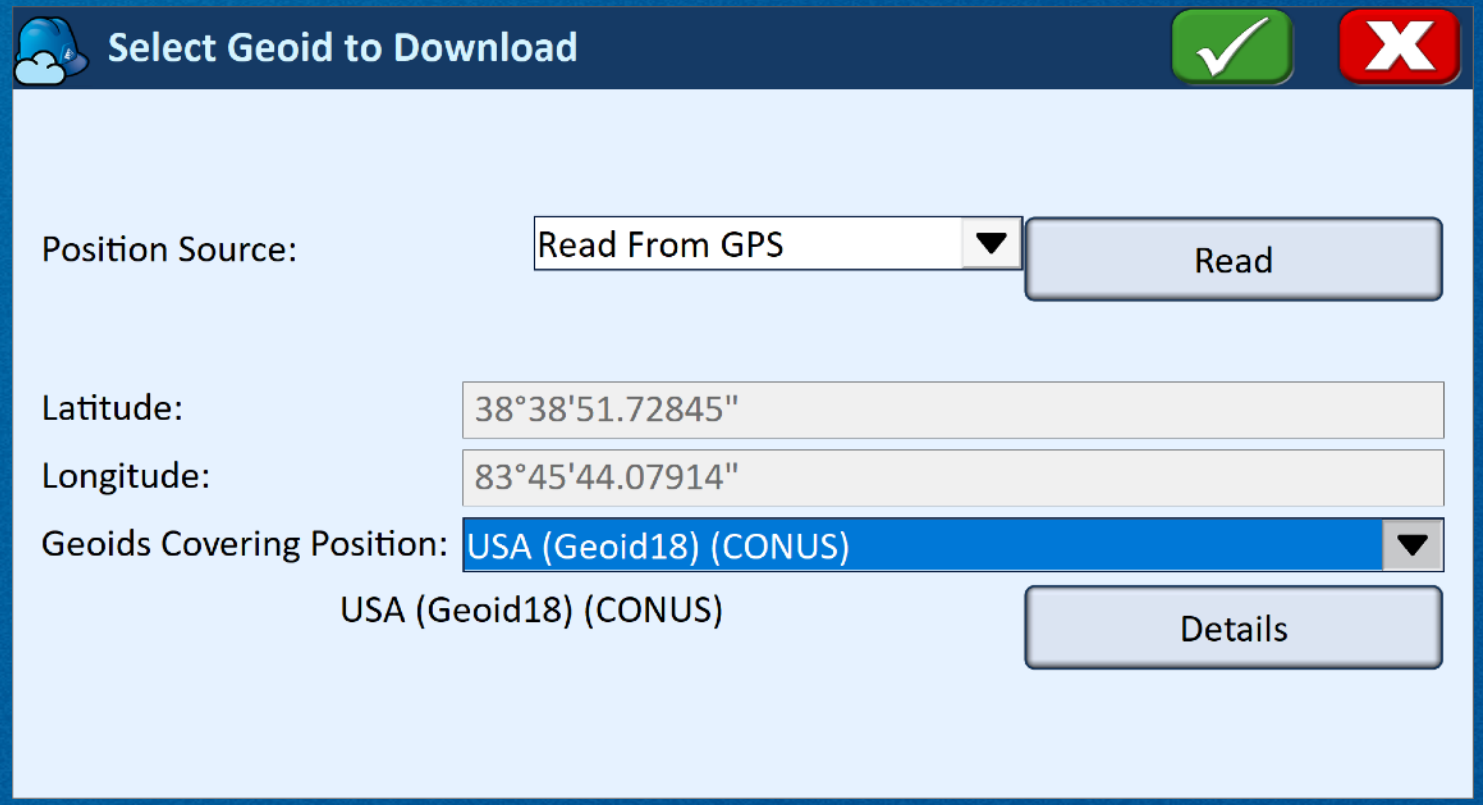
SOFTWARE UPDATE IN THE FIELD

Stay current by checking for software updates from the About screen under the helmet. Auto update, and view the latest release notes.



GEOID DOWNLOAD IN THE FIELD

Use any position to search for and download available geoids from the geoid selection screen.



HELP IMPROVEMENTS

User help now allows easy access to the manual and knowledge base, as well as instrument specific help for some models. The help screen also allows easy access to take a screenshot and email it. Screenshots will capture the screen under the help dialog.