Trimble Access
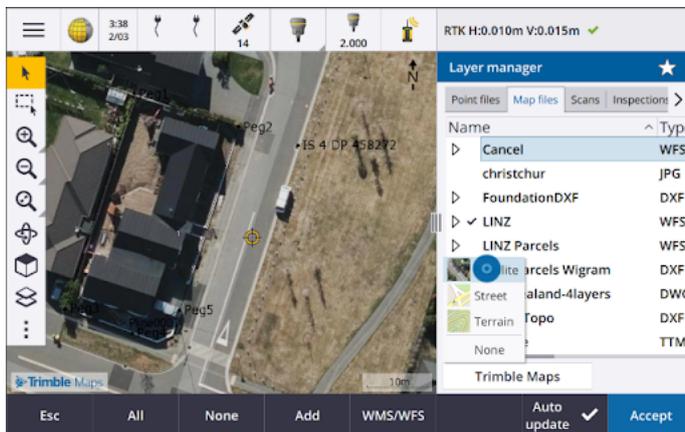
Version 2023.00 Release Notes

This release of the Trimble® Access™ software includes the following changes.

Key features

Built-in Trimble Maps support

Trimble Access 2023.00 provides built-in support for Trimble Maps. Trimble Maps provides a simple, easy-to-use way to obtain background map imagery for your Trimble Access jobs.

Using Trimble Maps requires no configuration – simply connect the controller to the Internet and the Trimble Maps service can automatically provide background data for the extents of the job. Select from **Satellite**, **Street** or **Terrain imagery**.

> **NOTE –** The job must use a defined projection and datum. Trimble Maps cannot provide background imagery for jobs that use a **Scale factor only** or **No projection / no datum** coordinate system.

Trimble Maps is available with any Trimble Access controller that has a current Trimble Access Software Maintenance Agreement or to any user who has a valid Trimble Access subscription.

For more information, see the topic **Trimble Maps** in the *Trimble Access Help*.

Layer manager provides improved linking to design files

Easily link one or more design files at once from Trimble Connect, from a USB drive or from existing folders using the **Add** button from the **Layer manager**.

- For cloud projects, easily select and download files from Trimble Connect, directly from the **Layer manager**.

- For USB drives inserted to the controller, files on the USB drive are shown in the file browser, ready to be selected and automatically copied to the project folder on the controller.

- For SD memory cards inserted to a Windows controller, you can select and use files on the memory card from their current file location.

> **NOTE –** On Android devices, SD memory cards are treated the same way as USB drives, and files selected from the memory card are copied to the project folder on the controller.

> **TIP –** When browsing folders, you can now pin your favorite folders for faster navigation.

Map files linked to the job are now shown as visible in the map when you return to the **Layer manager**. Point files linked to the job are always shown as visible and selectable when you return to the **Layer manager**. You can change the visibility or selectability of files and layers as required.
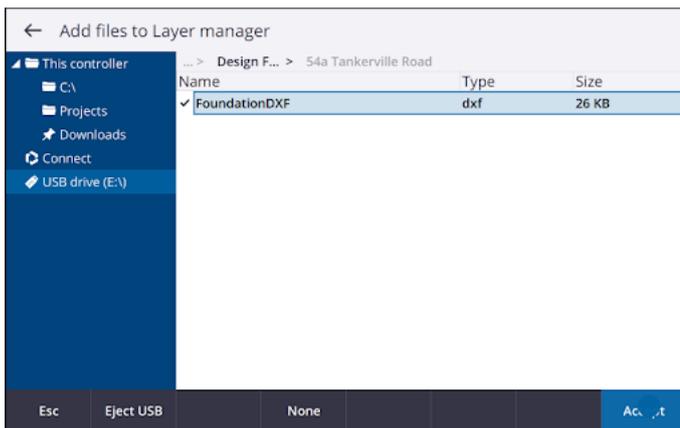
> **NOTE –** To update a file that has already been linked to the job in **Layer manager**, you must make sure the new file replaces the previous file of the same name. To do this, make sure **Auto update** in the Layer manager is enabled, then tap **Add** and deselect and then reselect the file.

Map tools for working with large datasets

Select and pan in the map

We have consolidated the **Select** ↖ and **Pan** ✋ buttons in the **Map** toolbar, so that you can now select single points and pan in the map without having to tap the **Pan** button to enter **Pan** mode.

To pan in the map, make sure **Select and pan** ↖ is selected in the map toolbar and then simply tap and drag the map. Alternatively, place two fingers on the screen and slide in the desired direction to move the view. If you are using a controller that has arrow keys, you can use the arrow keys to pan.

For more information, see the topic **Map** in the *Trimble Access Help*.

Multiselect button for Rectangle or Polygon selection of multiple map items

Trimble Access 2023.00 includes a new button on the **Map** toolbar that toggles **Rectangle selection** and the all-new **Polygon selection**. Use these selection tools to select multiple items in the map you want to work with, including points and lines, and parts of scan point clouds.

- Tap **Rectangle selection** ⬚ and then drag a box around the items you want to select.

- Tap **Polygon selection** ⬚ and then tap in the map to start creating a polygon shape around the items you want to select. Keep tapping in the map to add nodes to the polygon. When you are done adding nodes, tap ⬚ to close the polygon. The polygon shape disappears from the map and items inside or partially inside the polygon are colored blue to indicate they are selected.

- To change toggle between **Rectangle selection** and **Polygon selection** mode, tap the button to select it (the button is highlighted) and then tap it again to change mode.

For more information, see the topic **Selecting items in the map** in the *Trimble Access Help*.

Show only some items in a BIM model

The new **BIM** toolbar provides tools for isolating the items in a BIM model you are most interested in.

Select items from the BIM model in the map and then tap **Hide** 👁 to hide the selected items. Alternatively, tap **Show only** 👁 to hide everything except the selected items.

For more information, see the topic **Showing only some items in a BIM model** in the *Trimble Access Help*.

Map data transparency

The new **Transparency** form provides separate transparency controls for BIM models in the map and other map backgrounds including Trimble Maps, data layers from a WMS, and background images. Increased transparency can provide better contrast with features in the job or in other linked files.

To open the **Transparency** form, tap ⋮ and select **Transparency**.

For more information, see the topic **Map data transparency** in the *Trimble Access Help*.

Surface inspection transparency

To remove distracting artifacts from your scan inspections, when setting up the **Color scale** for a **Surface inspection** you can now select **Transparent** for scan points that you do not want to be shown. For example, set the color for scan points *outside* of the ranges you are interested in to **Transparent**, so that only points you are interested in are colorized and shown on the map.

For more information, see the topic **Surface inspection** in the *Trimble Access Help*.

Other new features and enhancements

Export feature coded symbols as a DXF file

You can now export feature coded symbols to DXF from Trimble Access.

From the **Export** screen, in the **Points and lines** field select **Feature library symbols** to show points, lines, arcs, polylines and polygons using the symbols defined in the Feature library file used for the job. Alternatively, you can choose to export points and lines showing **Method symbols** or simple dots and lines.

For more information, see the topic **To export data from the job** in the *Trimble Access Help*.

Import CSV with configurable delimiter

When importing a CSV file using the **Comma Delimited (*.CSV, *.TXT)** file format you can now select the **Field delimiter** that separates the data in your file into distinct fields. The delimiter options include comma, semicolon, colon, space, and tab.

Geotagging images on Android controllers

You can now geotag images when running Trimble Access on an Android controller. Previously, geotagging was supported only on Windows controllers. Geotagging adds information to the properties of the file, including the GPS coordinates of where the image was captured, a timestamp showing when the image was captured, and other relevant information including point ID as the image description and user name.

For more information, see the topic **To geotag an image** in the *Trimble Access Help*.

Station stakeout enhancements

Trimble Access 2023.00 includes the following enhancements for staking stations. For more information, see the topic **Stations available for stakeout** in the *Trimble Access Help*.

Station selection and settings for lines, arcs, and polylines

When staking stations on a line, arc, or polyline, you can now use the **Select station** screen to select the station to stake and to define station interval settings. You can:

- Define the station interval.

- Select the **Method** used to increment the station interval:

  - The **0 based** method is the default method and gives station values that are multiples of the station interval.

  - The **Relative** method gives station values relative to the start station.

- Enable the new **Auto increment** setting enables you to automate the selection of the next (or previous) station.

Auto increment station during stakeout

When staking stations on a line, arc, polyline or alignment the new **Auto increment** setting enables you to automate the selection of the next (or previous) station for a more streamlined stakeout workflow.

To enable **Auto increment**, select the stakeout method and then tap ⸝⸝ next to the **Station** field in the **Stakeout** screen to open the **Select station** screen and then select **Sta+** or **Sta-** in the **Auto increment** field. To be able to manually select the required station in the navigation screen, select **No** in the **Auto increment** field.

Sharing station interval settings for alignments in IFC files

When staking stations on an alignment, **Station interval** settings configured in the **Select station** screen are written to the alignment file so that the same settings are used if the file is shared with other survey crews.

Because Trimble Access cannot write to an IFC file, if the file is an IFC file, then in Trimble Access version 2023.00 onward **Station interval** settings configured in the **Select station** screen are written to a Trimble Additional Properties (TAP) file. The TAP file is stored in the same folder as the IFC file of the same name. If other survey crews are using the IFC file, then you can share the .tap file with the .ifc file to ensure all survey crews use the same station interval settings.

Consistent station abbreviations for start and end station

Trimble Access now uses **S** to denote the **Start station** and **E** to denote the **End station** for lines, polylines, arcs, alignments, roads and tunnels. In previous versions the abbreviations used to denote the start and end station were different for different feature types.

Web map service (WMS) and web feature service (WFS) enhancements

Trimble Access version 2023.00 includes the following enhancements for web map and web feature services (WMS/WFS):

- WMS and WFS now provide the same enhanced sign in options. You can now select the **Sign in method** and add credentials and other information required to use the service. Previously, sign in details for a WFS had to be configured and saved to a file using SiteVision Manager.

  > **TIP –** If you are using a WMS URL that includes sign in credentials as parameters, you can keep the sign in credentials as part of the URL and select **None** in the **Sign in method** field. However sign in credentials that are part of the URL are never encrypted. To ensure that your credentials can be encrypted if supported by the server setup, Trimble recommends that you remove the sign in parameters from the URL and select **Http Authentication** in the **Sign in method** field and then enter the **Username** and **Password**.

- You can now select the EPSG code from the **Coordinate system** field when using a WFS. In addition, for both WMS and WFS the software now uses the job coordinate system to determine the most appropriate EPSG code to use from the list of codes provided by the service.

- Like WMS, WFS now keeps parameters entered by the user in the URL and passes them on to the service. This enables you to enter parameters such as version number, if required.

- The processing of WMS and WFS data has been improved to support the reading of global/local or grid coordinates based on the EPSG code.

- To provide better support for servers that provide both WMS & WFS on the same URL, you must now select **Web Feature Service (WFS)** or **Web Map Service (WMS)** from the **Service type** field. Previously, Trimble Access attempted to detect the service type automatically.

For more information, see the topic **To manage web map & web feature services (WMS or WFS)** in the *Trimble Access Help*.

No join in CAD toolbar

The **No join** button on the **CAD** toolbar has a new icon ✂ to better reflect that the **No join** function enables you to measure a standalone point that has the same code but is not joined to the previous point or the next point.

For more information, see the topic **To create features using control codes in Measure codes** in the *Trimble Access Help*.

Check backsight auto return

When checking the backsight during a conventional survey, if the instrument had automatically turned to the backsight or if you tapped **Turn** to turn the instrument to the backsight, then when you tap **Esc** to leave the **Check BS** screen the instrument will now automatically turn back to the previous HA/VA.

Underground utility locator support for Vivac Metrotech vLoc3-Pro

In Trimble Access 2022.10 we introduced support for the Radio Detection RD8100 cable and pipe locator. In Trimble Access 2023.00 we have added support for another popular model of utility locator, the Vivac Metrotech vLoc3-Pro receiver.

Connect Trimble Access to the vLoc3-Pro and measure the location of underground assets such as cables and pipes.

> **NOTE –** Because Trimble Access connects to the vLoc3-Pro receiver using Bluetooth, the vLoc3-Pro must be fitted with the vLoc3 Series Bluetooth Module.

The vLoc3.uld file is provided in the **C:\ProgramData\Trimble\Trimble Data\System Files** folder when you install the Trimble Access software. Use the Utility Location Definition (ULD) file with your FXL file to set up your job for measuring points using the utility locator.

Once you have created a job that uses the FXL file and defined the **Utility locator** settings in the survey style, you can connect to the utility locator and measure points using the codes configured with attributes to record the depth information from the utility locator.

For more information, see the topic **Utility locators** in the *Trimble Access Help*.

Project location and ground coordinates

We have improved the software screen for setting up a ground coordinate system so that you can now key in the *ground coordinates* of the project location and the software will automatically calculate and display the offsets to the underlying projection grid coordinates for the project location. Alternatively, if you key in the

offsets (as required in previous versions of Trimble Access), the resulting ground coordinates of the project location are computed and shown.

For more information, see the topic **To set up a ground coordinate system** in the *Trimble Access Help*.

GNSS signal tracking

- BeiDou tracking is now enabled by default in new GNSS survey styles. GNSS surveys with firmware earlier than version 6.00 must contain either GPS or BeiDou observations. If you disable one, then tracking the other constellation is automatically enabled.

- You can now enable NavIC signal tracking in real-time kinematic surveys where both the base and rover receivers support IRNSS/NavIC signals for RTK.

TLS encryption for internet data links

Internet data links for GNSS RTK surveys now support the use of Transport Layer Security (TLS) internet data encryption for secure server connections. The **Use TLS encryption** switch in the **Connections** tab of the GNSS contact enables this setting. Trimble Access supports TLS version 1.2 or later.

12da point names

Trimble Access can now read the name record for points in a 12da file. The name is displayed in the **Code** field.

File naming improvements

We have made the following improvements when naming files:

- International characters are now supported in file names when running Trimble Access on Windows or Android. Previously characters using accents or cyrillic symbols were supported only on Android.

- The full file path (including file name and folder names) is no longer restricted to 250 characters. However, because other software such as Windows Explorer does have character limits for file paths, Trimble recommends exceeding 250 characters with caution.

Performance improvements

- You should now see fewer map update delays when changing the visibility or selectability of BIM files or layers in the **Layer manager** when **Auto update** is enabled.

- We have removed the **Use Trimble keyboard** setting from the **Settings / Language** screen. The on-screen Trimble keyboard now always automatically appears when you need to enter data in a field in the software, regardless of the operating system of the controller, or whether the controller is operating in Tablet mode.

- When tapping the screen close to a slider control, the software no longer responds to screen taps at the far left or far right of the slider, and now responds only to screen taps on the slider control or on the slider control labels.

Coordinate System Database updates

The Trimble Coordinate System Database installed with Trimble Access includes the following enhancements:

- Added SIRGAS-ROU98 datum and zones for **Uruguay**.

- Added old realizations of California Spatial Reference System (CSRS) for **California**.

- Added coordinate system zones for **Guam**.

- Added coordinate systems for **Austria**: EPSG 31257, 31258, 31259.

- Added SIRGAS-Ecuador coordinate system support for **Ecuador**.

- Added Kinematic Datum IGS20 and RTX20 (which are considered the same as ITRF 2020).

Positions measured using the Trimble Centerpoint RTX™ correction service are now always computed in the receiver as ITRF 2020 at the epoch of measurement. The time-dependent transformation database installed with Trimble Access now transforms the RTX positions between ITRF 2020 at the epoch of measurement and the global reference frame.

New hardware support

Trimble SX12 Wi-Fi HaLow support

Trimble Access version 2023.00 introduces support for the Trimble SX12 scanning total station with Wi-Fi HaLow™, available in the United States, Canada, Australia, and New Zealand. Wi-Fi HaLow provides a reliable, easy-to-use method for transferring large amounts of data such as point clouds, images, and video at a longer range than standard Wi-Fi™ technology.

When running Trimble Access version 2023.00 on a Trimble controller fitted with an EM130 Wi-Fi HaLow module, you can connect to a Trimble SX12 scanning total station using Wi-Fi HaLow from the **Wi-Fi** tab in the **Connections** screen.

For more information, see the topic **Wi-Fi connections** in the *Trimble Access Help*.

Trimble SX12 password support

Wi-Fi or Wi-Fi HaLow connections to a Trimble SX12 scanning total station with firmware S2.8.x or later installed require an instrument password for enhanced security protection.

Trimble Access version 2023.00 supports the configuration of an instrument password for the SX12.

Once you have entered the password for an instrument, the Trimble Access software saves and remembers the password for each instrument you connect to. As long as the password stored in the instrument matches the password for that instrument stored on the controller, you can reconnect to the instrument without having to re-enter the password.

For more information, see the topic **Instrument password** in the *Trimble Access Help*.

Trimble EM940 EMPOWER RTK Radio module

Trimble Access version 2023.00 introduces support for the Trimble EM940 EMPOWER RTK Radio module, which enables you to receive GNSS corrections on the 450 MHz and 900 MHz frequency band when using a Trimble GNSS receiver that does not have an internal radio, or which has a radio that is not in the required frequency band.

The EMPOWER RTK Radio module attaches to any supported controller that has an EMPOWER module bay, such as the Trimble TSC7 or TSC5 controller.

For more information, see the topic **To configure a rover radio data link** in the *Trimble Access Help*.

Trimble Installation Manager updates

Because job (.job) files created using a previous version of Trimble Access are automatically upgraded when you open them in the latest version of Trimble Access, Trimble Installation Manager no longer upgrades job files as part of the version upgrade process.

The process to upgrade files using Trimble Installation Manager would create a copy of the original files before converting them. Now that Trimble Installation Manager is no longer upgrading the job files, installing a new version of Trimble Access is now faster and requires less disk space. However, there is no backup of the original job files – to keep a copy of the original files that can be used with the earlier version of Trimble Access you must create your own backup copy before opening the job files in the latest version of Trimble Access.

For more information, see Installing Trimble Access in the **Trimble Access Help**.

Resolved issues

- **Sync scheduler dialog hidden**: We have fixed an issue where the **Upload local project to cloud** dialog was sometimes hidden behind other forms when signing in or moving between forms, which meant that the software stopped automatically uploading data.

- **Background image world files**: We have fixed an issue where world files for background images (for example, .jpgw, .pgw or .pngw) were sometimes removed from the controller when the project was synchronized to the cloud.

- **Image naming**: We have fixed several issues with image naming, including:

    - When the **Link to** field is set to **None**, image files are now renamed even if the **Media files** screen is open.

    - When the **Link to** field is set to **Next Point**, an automatically incrementing number is now only added to the end of the image filename if an image with the same name already exists.

    - Placeholder elements for linking to the next point (such as NextPoint, NextCode) now display in the currently selected language.

- **Additional settings from template**: We have fixed an issue when creating a new job where the additional settings from a selected template were not copied over to the new job.

- **Import CSV**: When importing a CSV file with the **Advanced geodetic** check box enabled in the **Cogo settings** screen, the names of the coordinate fields in the **Import** screen now update when you select a different option from the **Coordinate type** field.

- **Error in Trimble Business Center on job import**: We have fixed an error that could result in a "parameter is invalid parameter name : seconds" message when importing a job containing GNSS data into Trimble Business Center.

- **Hours to UTC value**: We have changed the sign of the **HoursToUTC** value written to JXL files on Android controllers, to make it consistent with the value written to JXL files on Windows controllers. HoursToUTC = UTC - local time.

- **DXF export**: We have fixed the following issues when exporting to DXF:

- The attribute name was included with each point or feature as well as the attribute value. Now, only the attribute value is exported.

- A separate layer for each text attribute is now created per feature code. Previously attribute text was always written to layer 0 for each code.

- **Feature symbols**: We have fixed the following issues with drawing feature symbols defined in the feature library file (FXL):

  - Feature symbols defined by the value of an attribute field displayed the symbols for all attribute values rather than the symbol for the selected attribute value.

  - When exporting to DXF, attribute text was always written to layer 0 instead of to the layer for each attribute.

  - Feature symbols that included a half-circle were not drawn correctly in Trimble Access.

- **Layer manager visibility settings**: We have fixed an issue where if **Auto update** was enabled and you toggled through the three possible visibility settings for a file or layer in the **Features** tab before selecting the original visibility setting, then that setting was ignored when you tapped **Accept**.

- **IFC surface display**: We have resolved an occasional issue where tube-like objects were not always displayed correctly.

- **BIM object selection**: We have resolved an issue with some BIM models where **Surface selection mode** was set to **Whole object**, but only a single face was selected and not the whole object as expected.

- **WFS layer color**: WFS layers are now displayed using a consistent color while Trimble Access is open. Previously, changing the layer display in the **Layer manager** or reopening the job would change the display color used for the WFS layer.

- **WMS images**: We have fixed an issue where connections to WMS services would fail to load any background images if the service returned a character set field as part of an image content header.

- **Target height**: We have fixed an issue where the **Target height** field was sometimes missing on the **Measure topo** form when the instrument was in tracking mode.

- **Measure codes**: We have fixed an issue in **Measure codes** where sometimes the entire contents of the **Code** field were selected when the **Multicode** button was active, and other times the cursor was placed at the end of the **Code** field when switching between **Measure** forms using a function key.

- **Staking polyline with IFC attributes**: Attributes saved to a polyline created from an IFC file are now stored with the points recorded when staking the polyline.

- **Staking to a DTM**: When staking relative to a DTM with a **Perp. Dist to DTM** delta you will no longer see an obviously erroneous delta value when reviewing the job. This was only an issue when your measured position was a long distance from the DTM.

- **Reselecting staked out items in the map**: We have fixed an issue where if you staked out a line, arc or polyline where the new staked points used the names of previously deleted staked points, then after storing the item you could not immediately reselect the item in the map after deselecting it.

- **Rectangle control code**: After measuring a three-point rectangle, subsequent points are no longer joined to the created rectangle.

- **Improved display of arcs**: Arcs defined in a horizontal alignment are now drawn as true arcs. Previously they were draw as a series of short straights. This was a display issue only and did not effect stakeout.

- **0 gon values**: We have fixed an issue where angle values of 0 gon were sometimes shown as 400 gon. Now they are consistently shown as 0 gon.

- **NTRIP v2.0 servers**: We have fixed issues where Trimble Access would not show a source table from an NTRIP v2.0 server if the server did not specifically declare it was a source table in the NTRIP header **Content-Type** field, or where correction data from a mountpoint was not used if the **Content-Type** field was not provided by the server in the response to the mountpoint stream request.

- **SX camera view**: We have fixed an issue when using a Trimble SX10 or SX12 scanning total station where sometimes the view from the wrong camera was temporarily shown when you switched camera views in the software.

- **SX Wi-Fi password prompt**: We have fixed an issue when using a Trimble SX10 or SX12 scanning total station where sometimes the Trimble Access software prompted you to enter a password if you switched from a long range radio connection to a Wi-Fi connection.

- **Resection**: We have fixed an issue where codes keyed in before a backsight measurement was taken during a resection were not being used when measuring the backsight point.

- **ISO Rounds report**: We fixed an issue in the ISO Rounds report where the **Mean out of all sets** column could contain erroneous values when the observations averaged are either side of 360 and 0 degrees.

- **Integrated survey**: If you have configured Function keys to **Auto-switch** between GNSS and conventional surveying, the software now switches reliably between GNSS and conventional surveys when you press the appropriate Fn key.

- **Integrated survey resection points**: A fix recorded in the Trimble Access version 2022.10 release notes was unfortunately incomplete. We believe we have now fixed an issue when performing a resection in an integrated survey, where if you attempted to measure an observation to a point that did not yet exist in the job, when the software switched to the GNSS measure screen it also changed the point name to the next point name in the GNSS point sequence, rather than retaining the name you had entered for the conventional point.

- **Software configuration when running in Japanese**: When installing Trimble Access for the first time in Japanese only the Metric template is created. When running Trimble Access in Japanese the software now only shows units and coordinate systems applicable for Japan.

- **Application errors**: We have fixed several issues that caused occasional application errors when using or closing the software. In particular:

  - Trimble Access would sometimes become unresponsive when using the **Sync scheduler** to automatically upload to synchronize large projects to the cloud.

  - When keying in a line, arc, or polyline where the station interval was too small for the length of the line.

  - When staking a polyline using the **Side slope from polyline** stake method where one or more fields had null values.

  - During stakeout the software would sometimes show an application error "HOOPS Error: Requested shell has non-usable values" and shut down.

- When assigning a feature code to a line where the symbol for the feature code consisted of repeating short arcs.

- When offsetting a closed polyline with duplicate vertices in a DWG file.

- When connected to a Trimble SX10 or SX12 scanning total station, occasionally the software would show there was an error updating wireless settings and would close the **Instrument settings** screen when you attempted to change the Wi-Fi channel.

- When connected to a Trimble SX10 or SX12 scanning total station, sometimes the software would unexpectedly close after you suspended and then resumed the controller when Trimble Access was running and the **Video** screen was open.

- Occasionally the software would lock up on shut down when running on a TCU5 controller connected to a Trimble S Series total station.

- Occasionally the software would show an application error when attempting to configure Wi-Fi settings for a Spectra Geospatial SP80 receiver.

- When calculating an RTK/RTX offset and selecting one of the points from the list instead of keying in the point ID.

- When using stakeout polyline in a job with a Broadcast RTCM coordinate system.

- When selecting the TWD97 coordinate system when running Trimble Access on a TCU5 controller.

- When using a less widely-used Trimble Access app such as Land Seismic, and:
    - Connecting to a receiver that was generating RTX-corrected positions before opening a job.
    - Staking out entities where the app reported live information in custom stakeout fields.

Roads

New features

Auto increment station during stakeout

When staking stations using the **Station on string** or **Skew offset** methods, the new **Auto increment** setting enables you to automate the selection of the next (or previous) station for a more streamlined stakeout workflow.

To enable **Auto increment**, select the stakeout method and then tap ⟋ next to the **Station** field in the **Stakeout** screen to open the **Select station** screen and then select **Sta+** or **Sta-** in the **Auto increment** field. To be able to manually select the required station in the navigation screen, select **No** in the **Auto increment** field.

Station interval settings configured in the **Select station** screen are written to the road file so that the same settings are used if the file is shared with other survey crews.

For more information, see the topic **Stations available for stakeout** in the *Trimble Access Help*.

Two polylines stakeout method

You can now stake out two polylines where features defining a road are represented by polylines but there is no road alignment available. When staking out using the **Two polylines** method the software reports your position relative to the polylines you selected.

Enhancements

Side slope staking

We have made improvements to workflows when staking a side slope, including:

- When adding or editing a side slope at stakeout, the **Slope to next string** and **Slope to previous string** options are now always available, where appropriate, when defining the cut and fill slopes.

- The **H.Dist to hinge point** delta at the navigation screen now displays a valid value. Previously it always displayed **Null**.

- Now after staking a side slope with the **V.Dist to hinge point** delta displayed, if you select another string at the same station that is not a side slope the **V.Dist to hinge point** delta displays **Null** rather than the previous **V.Dist to hinge point** delta value.

Vertical construction offsets

Now, when the stake method is **To the road** or, for 12da files, **Two strings**, and a vertical construction offset has been applied (either vertical or perpendicular), a dashed black line is drawn at the offset value from the road surface.

Relative to DTM offset

Now, when staking a road relative to a DTM and a vertical offset has been applied (either vertical or perpendicular), a dashed green line is drawn at the offset value from the DTM.

Station selection

We have streamlined the workflow when selecting a station from the list during stakeout by removing the **Edit** softkey. Tap ⫸ next to the **Station** field in the **Stakeout** screen to open the **Select station** screen to select the station or to modify the station settings.

Station Method

The station **Method**, **0-based** or **Relative**, is now written to the road file. This ensures that the same method is used if the file is shared with other survey crews.

Consistent station abbreviations for start and end station

Trimble Access now uses **S** to denote the **Start station** and **E** to denote the **End station** for roads so that the same abbreviations are used for lines, polylines, arcs, alignments and roads throughout the software. In previous versions the abbreviations used to denote the start and end station for a road were **RS** and **RE**.

Autodesk Civil 3D LandXML files with multiple roads

To create an Autodesk Civil 3D LandXML file that contains multiple roads, it is important that a *site* is created for each alignment along with the feature lines associated with that alignment. This enables Trimble Access to correctly form each road using the appropriate feature lines. For more information on creating *sites*, refer to the Autodesk Civil 3D help.

For files that include multiple roads and have not been created from sites Trimble Access now prevents the file being imported and refers the user to the appropriate help topic. Previously the file was imported but may not have always correctly formed each road.

For more information, see the topic **To export LandXML string roads from Autodesk Civil 3D** in the *Trimble Access Help*.

Review road

When you tap and hold in the map, the software now displays the graphical **Review** screen, which is consistent with when you tap the **Review** softkey.

12da stake methods

We have removed the **Nearest string** stake method for 12da roads because it is not applicable to a 12da road which is defined by a master alignment only.

Feedback from users was that including the **Nearest string** method was confusing because it suggested that polylines in the 12da file could be staked using this method. This is not the case – polylines can only be staked using the **One string** or **Two strings** methods.

Resolved issues

- **Stakeout deltas**: You can now display the **H.Dist to hinge point** and the **V.Dist to hinge point** deltas when staking a side slope using the **To the string** method.

- **Add side slope during stakeout**: To prevent an invalid side slope being created, now when adding a side slope during stakeout the software will not accept a value of null in both the **Cut slope** and **Fill slope** fields.

- **Station interval settings**: We have improved the handling of long roads that have a small station interval. Now the software will prevent you continuing to stakeout until you have specified an interval suitable for the length of the road.

- **Station list**: You can now select the first station in the list by tapping it. Previously you could only select it by tapping **Accept** or pressing the **Enter** key.

- **Additional point selection**: We have resolved an issue where the **Select** softkey was no longer available and was replaced by the **Cross slope** softkey once you had selected an additional point. Now both the **Select** softkey and the **Cross slope** softkey are available.

- **Construction offsets**: When staking a road defined by only a horizontal alignment, the dashed green linework representing the construction offsets is now drawn correctly. Previously it was drawn incorrectly, but this was a display issue only — the target and navigation deltas were correct.

- **Skew offset**: After staking a station on a string where the selected string is not the alignment, if you change the stake method to **Skew offset** and tap the **Sta+/Sta-** softkey, the target now moves to the correct station on the alignment string. Previously the target moved to the station on the previously staked string.

- **Staking to a DTM**: When staking relative to a DTM with a **Perp. Dist to DTM** delta you will no longer see an obviously erroneous delta value when reviewing the job. This was only an issue when your measured position was a long distance from the DTM.

- **LandXML conversion to RXL**: We have reinstated the workflow where you are required to save a LandXML road as an RXL road if you wish to edit the road. The workflow is accessed from the **Define** menu.

- **LandXML string roads**: We have fixed several issues with LandXML string roads, including:

- You could not select a string when editing a LandXML string road.

- You could not set a LandXML string road to not visible in the **Layer manager** if the file included one or more surfaces.

- **LandXML filter alignments by name**: We have fixed the workflow that enables you to filter alignments by name match when staking out a LandXML road from the menu.

- **GENIO road station symbols**: We have fixed an issue where, after staking an RXL road with the **Available stations** set to **Horizontal curve**, there were no station symbols displayed in the map for a GENIO road.

- **Application errors**: We have fixed several issues that caused occasional application errors when using or closing the software. In particular:

  - During stakeout the software would sometimes show an application error "HOOPS Error: Requested shell has non-usable values" and shut down.

  - When editing a LandXML string road where the road was set to not visible in the **Layer manager** and you then tapped the **Strings** option and tapped **Accept**.

  - When editing a LandXML string road and then de-selecting the road using the tap and hold menu.

  - When using a 12da file where the horizontal alignment is defined only by a transition.

Tunnels

New features

Stake out the tunnel alignment

Trimble Access 2023.00 provides two new methods for staking the alignment defined in a TXL file. You can stake out to the alignment, or stake out a station on the tunnel alignment.

For more information, see the topic **To stake out the tunnel alignment** in the *Trimble Access Help*.

TXL files now shown in Video feed

When connected to a Trimble SX10 or SX12 scanning total station, TXL files that are shown in the map are now also shown when viewing the video screen.

TXL station display improvements

Station labels are now shown perpendicular to the alignment and outside any visible tunnel surfaces.

Selecting tunnels in map

Tunnels can now be selected by tapping on surfaces as well as the alignment.

Outline display mode

Outline display mode now adds a cross-section based on design station interval - down to a minimum station length of 5m.

Tunnel drive through

You can now view an automated 3D drive through of the tunnel definition, similar to the drive through function in Trimble Access Roads. To start drive through, tap the tunnel in the map, tap **Review** and from the plan view tap **3D drive**.

Enhancements

Review Tunnel

When you tap and hold in the map, the software now displays the graphical **Review** screen, which is consistent with when you tap the **Review** softkey.

Resolved issues

- **Station interval method**: When the method is set to **Relative** and the tunnel includes a station equation, stations computed after the equation are now always relative to the **Start station**. Previously, stations computed after the station equation were relative to the station at which the station equation occurred.

Supported equipment

Trimble Access software version 2023.00 communicates best with the software and hardware products listed below.

> **NOTE –** For best performance, hardware should always have the latest available firmware installed.

For more information on recent software and firmware versions, refer to the **Trimble Geospatial Software and Firmware Latest Releases document**.

Supported controllers

Windows devices

The Trimble Access software runs on the following Windows® 64-bit devices:

- Trimble TSC7 controller
- Trimble T7, T10, or T100 tablet
- Supported third-party tablets

For more information on supported third-party tablets, go to **Trimble Access Downloads** and click **Support Bulletins – Trimble Access** to download the **Trimble Access 2021 on 64-bit Windows 10** bulletin.

Android devices

The Trimble Access software runs on the following Android™ devices:

- Trimble TSC5 controller
- Trimble TDC600 handheld
- Trimble TDC650 handheld GNSS receiver (only with Trimble Access subscription)
- Trimble TCU5 controller

A small number of features are not supported when running Trimble Access on an Android device. For more information, see the section **Tips for Android devices** in the *Trimble Access Help*.

Supported conventional instruments

Conventional instruments that can be connected to the controller running Trimble Access are:

- Trimble scanning total stations: SX12, SX10
- Trimble VX™ spatial station
- Trimble S Series total stations: S8/S6/S3 and S9/S7/S5
- Trimble mechanical total stations: C5, C3, M3, M1
- Trimble SPS Series total stations
- Spectra® Geospatial total stations: FOCUS® 50/35/30
- Supported third-party total stations

The functionality available in the Trimble Access software depends on the model and firmware version of the connected instrument. Trimble recommends updating the instrument to the latest available firmware to use this version of Trimble Access.

> **NOTE –** Connections to the SX10 or SX12 are not supported when using the TCU5 controller or the TDC600 model 1 handheld.

Supported GNSS receivers

GNSS receivers that can be connected to the controller running Trimble Access are:

- Trimble integrated GNSS surveying systems: R12i, R780, R12, R10, R8s, R8, R6, R4, R2
- Trimble modular GNSS surveying systems: R750, R9s, NetR9 Geospatial, R7, R5
- Trimble SPS Series GNSS Smart Antennas: SPS986, SPS985, SPS985L, SPS785, SPS585
- Trimble SPS Series GNSS modular receivers: SPS85x
- Trimble Alloy GNSS Reference Receiver
- Trimble TDC650 handheld GNSS receiver
- Spectra Geospatial integrated GNSS receivers: SP85, SP80, SP60
- Spectra Geospatial modular GNSS receivers: SP90m
- FAZA2 GNSS receiver
- S-Max GEO receiver

> **NOTE –** Because Spectra Geospatial receivers use different GNSS firmware to other supported receivers, not all functionality in the Trimble Access software is available when a Spectra Geospatial receiver is in use. For more information, refer to the support bulletin *Spectra Geospatial receiver support in Trimble Access*.

Installation information

License requirements

To install Trimble Access 2023.00, licenses are required for the General Survey app as well as for each Trimble Access app you want to use.

- **Perpetual licenses**

  Perpetual licenses are licensed to the controller. The controller must have a Trimble Access Software Maintenance Agreement valid up to **1 April 2023**.

- **Subscriptions**

  Subscription licenses are assigned to an individual user. When used with a subscription license, you can install Trimble Access 2023.00 onto any supported controller.

For more information, see **Required software licenses** in the **Trimble Access Help**.

Don't have a current license? You can still try out the software

If you do not have the required licenses you may be able to try out the software for a limited time.

The options are:

- Create a **48-hour license** for Trimble Access if you are not able to sign in and use your subscription or if you have purchased a perpetual license but it has not yet been assigned to your controller.
- Create a **30-day Demonstration license** for Trimble Access if the controller does not have a current perpetual license. This type of temporary license is available on supported Windows and Android controllers.
- Create a **30-day Trial license** for specific Trimble Access apps if the controller has a current perpetual license, but no license for the specific app you want to try. This type of temporary license is available only on supported Windows controllers.

For more information, see **Installing a temporary license** in the **Trimble Access Help**.

Installing or upgrading Trimble Access

To install the software to your controller, use the appropriate Trimble Installation Manager for your controller operating system:

- Trimble Installation Manager for Windows
- Trimble Installation Manager for Android

For more information, see **Installing Trimble Access** in the **Trimble Access Help**.

> **NOTE –** Job (.job) files created using a previous version of Trimble Access are automatically upgraded when you open them in the latest version of Trimble Access. Once jobs are upgraded they can no longer be opened in a previous version. For more information, see **Using existing jobs with the latest version of Trimble Access** in the **Trimble Access Help**.

Learning resources

To learn more about Trimble Access software features and how to get the most out of the software, visit the resources below.

Trimble Access Help Portal

The **Trimble Access Help Portal** is available at **help.trimblegeospatial.com/TrimbleAccess/** and includes the full contents of the on-board *Trimble Access Help* in 14 languages. It also provides links to other useful resources, including the *Trimble Installation Manager Help*, *Trimble Sync Manager Help*, and the Trimble Access YouTube channel.

You can view the **Trimble Access Help Portal** from any computer that has an Internet connection, without needing to have the Trimble Access software installed. You can also view it from your mobile phone, or from the controller running Trimble Access if you chose not to install the on-board help.

Trimble Access Help

The *Trimble Access Help* is installed with the software when you select the **Language & Help Files** check box in Trimble Installation Manager. To view the installed help, tap ≡ in the Trimble Access software and then select **Help**. The *Trimble Access Help* opens, taking you right to the help topic for the current screen in the Trimble Access software.

Trimble Access YouTube channel

The Trimble Access YouTube channel provides a large number of videos highlighting useful software features. Watch videos on recently added features or take a look at one of the playlists to explore a specific area of the software.

We post new videos regularly, so make sure to click **Subscribe** on the Trimble Access YouTube channel page to get notified when new videos are available.

Trimble Access Apps

The Trimble Access software suite offers surveyors and geospatial professionals a range of specialized field applications designed to make fieldwork easier. With an easy-to-use interface, optimized workflows, and real-time data synchronization, the Trimble Access software suite enables you to accomplish more every day. Improve your competitive edge by selecting the applications that best suit the work that you do.

Trimble Access apps supported on Windows devices

The following Trimble Access apps are supported when running this version of Trimble Access on a **supported Windows device**:

- Roads
- Tunnels
- Mines
- Land Seismic

- Pipelines

- Power Line

- Katastermodul Deutschland

- Monitoring

- AutoResection

- BathySurvey

> **NOTE –** Changes to the Trimble Access apps that are supported can change after release. For up to date details, or details on apps supported with previous versions of Trimble Access, see *Trimble Access App availability*.

Trimble Access apps supported on Android devices

The following Trimble apps are supported when running this version of Trimble Access on a **supported Android device**:

- Roads

- Tunnels

- Mines

- Pipelines

- Power Line

- Katastermodul Deutschland

- Monitoring

- AutoResection

- AllNAV Rounds

> **NOTE –** Changes to the Trimble Access apps that are supported can change after release. For up to date details, or details on apps supported with previous versions of Trimble Access, see *Trimble Access App availability*.

Legal information

For a complete list of legal notices relating to this product, go to **help.trimblegeospatial.com/TrimbleAccess/** and click the **Legal information** link at the bottom of the page.