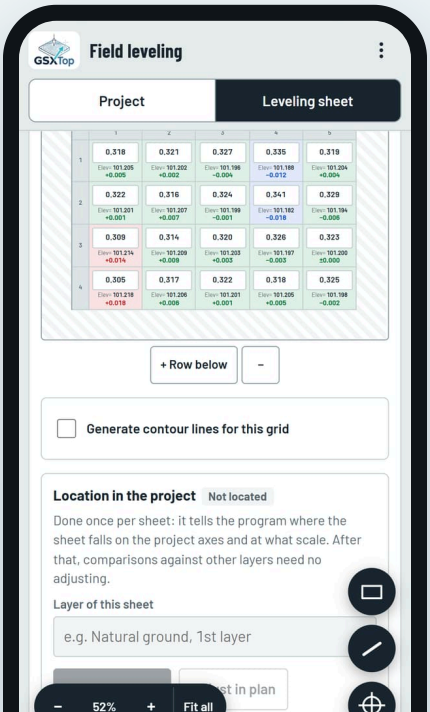
Field leveling

A complete, step-by-step guide to record, check and deliver your leveling



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INTRODUCTION

01 Welcome to GSXtop

GSXtop is the level book in your phone. You enter readings on site and instantly know each point's elevation, how much it is below or above the design and whether it is within tolerance. When you finish, you deliver a professional PDF report without moving anything to a computer.

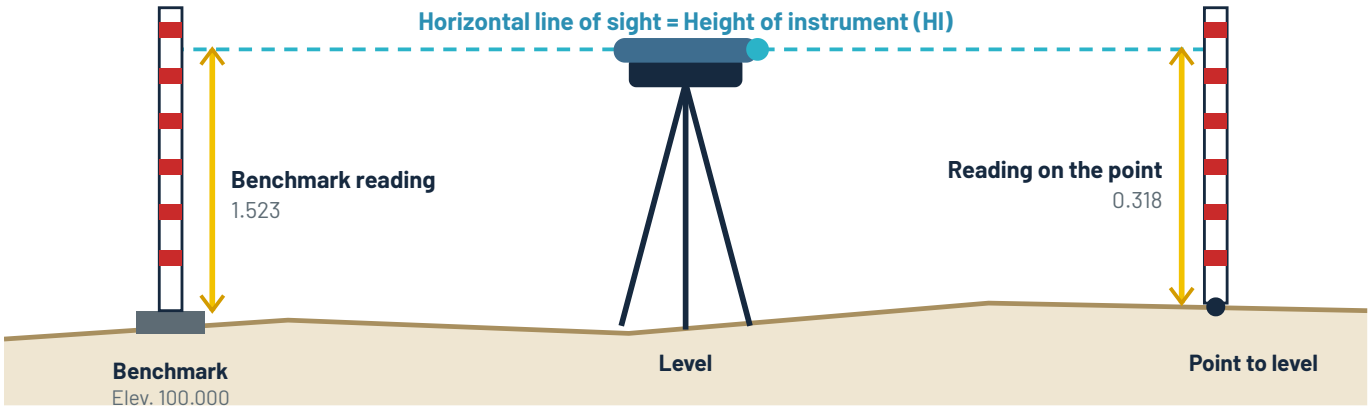
No internet
Works on site, with no signal. No account or sign-up needed.

Your data is yours
Everything is saved on your phone. Nothing is sent to any server.

Ready to deliver
PDF reports with your name, your logo, 3D view and profiles.

How the app calculates (differential leveling)

With the level set up, you first read the staff on a **benchmark** of known elevation. That gives the **height of instrument** (the elevation of the line of sight). Then each reading on a point is subtracted from that height to get its elevation.



HI = Benchmark + Benchmark reading **Elevation = HI − Reading**

Difference = Elevation − Design

With the example in the drawing: HI = 100.000 + 1.523 = **101.523**. If you read 0.318 on a point, its elevation is 101.523 − 0.318 = **101.205**. If the design asks for 101.200, the difference is **+0.005** (5 mm above).

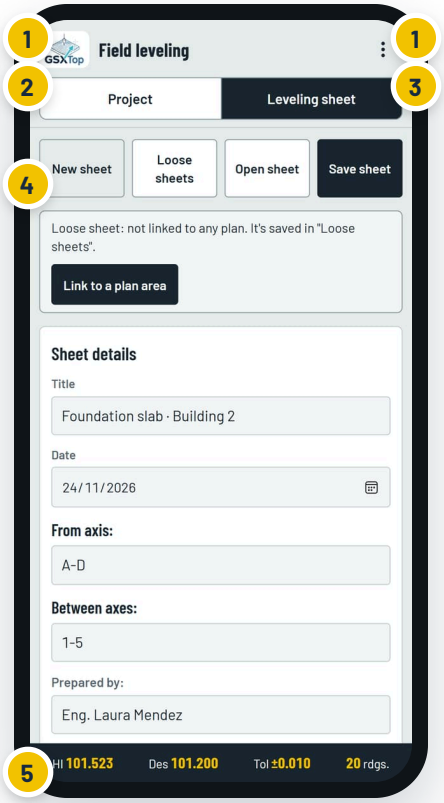
No math needed
You only type the benchmark, the benchmark reading, the design and the readings. The app calculates everything else as soon as you type each number.

FIRST STEPS

02 Get to know the screen

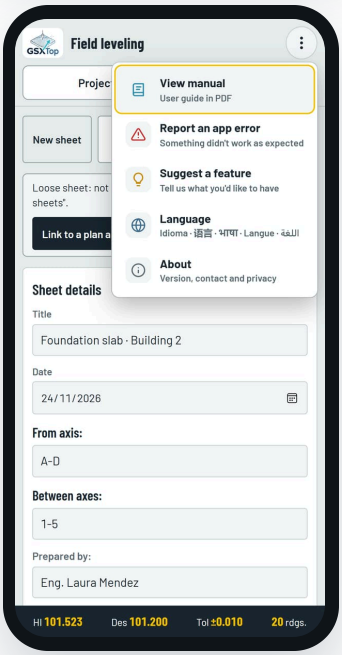
The whole app works from a single screen with two tabs. What you type is saved automatically, so you can close the app at any time without losing anything.

1. **Logo and options menu (⋮).** The three dots in the corner open the menu with the manual, error reports, suggestions, language and app information.
2. **Project tab.** Here you build the whole site: axes, walls, earthwork and footing plans. Each plan area has its own sheet.
3. **Leveling sheet tab.** Where you enter readings, either as a grid or linear.
4. **Sheet buttons.** New sheet, Loose sheets (those not on a plan), Open sheet and Save sheet as a file.
5. **Data bar.** Always visible at the bottom: height of instrument (HI), design elevation, tolerance and how many readings you have.



Options menu ⋮

Option	What it does
View manual	Saves this manual as a PDF on your phone and opens it.
Report an app error	Opens your email with a message ready to send us, including the app and phone version.
Suggest a feature	Tell us what you'd like GSXtop to do.
Language	Switches the app among 10 languages. PDF reports come out in the same language.
About	Installed version, website, support email and privacy policy.



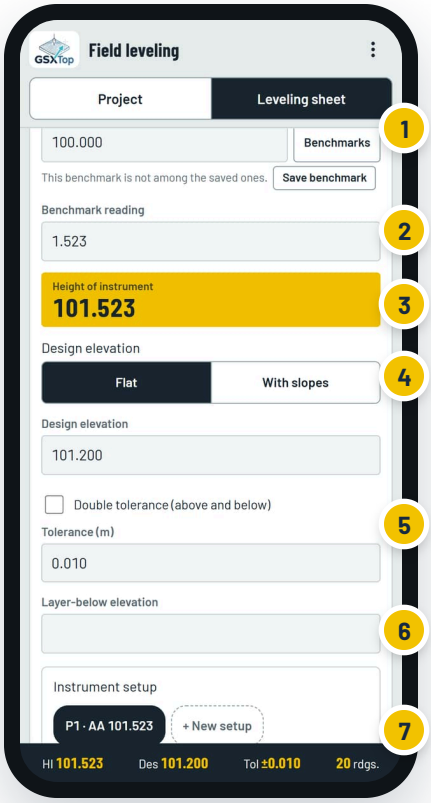
Options menu open

> **Installed version**
> At the very bottom of the app you see "GSXtop · version …". The same version is printed in the bottom-right corner of every PDF report.

STEP BY STEP

03 Grid sheet

For slabs, pads, earthworks and subgrades: points are arranged in rows and columns. Start by filling in the sheet and leveling details.



A. Sheet details

Type the **title** (for example "Foundation slab · Building 2"), the **date**, the axes it covers (**From axis** and **Between axes**) and who **prepared** it. All of this appears in the report header. Your name is remembered for the next sheets.

B. Leveling details

1. **Benchmark:** the known elevation you start from. With the **Benchmarks** button you choose a saved one or save the current one.
2. **Benchmark reading:** what you read on the staff over the benchmark.
3. **Height of instrument:** appears by itself in the yellow box (benchmark + reading).
4. **Design elevation:** *Flat* if the whole area goes to the same elevation, or *With slopes* to give different elevations by row or column (they can be interpolated).
5. **Tolerance:** how much is allowed above or below the design (0.010 = 1 cm). Turn on *Double tolerance* if the margins above and below are different.
6. **Layer-below elevation** (optional): if you know it, the report calculates the layer thickness.
7. **Instrument setup:** if you move the level, add a new setup (page 7).

Save your benchmarks

After typing a benchmark tap **Save benchmark** and give it a name (for example "BM-1 north corner"). On the next sheet you just tap **Benchmarks** and pick it, without typing it again.

Entering readings

C. Build the grid

Choose **Rows and columns** (for example 4 × 5) or **By axes** (from axis A to D and from 1 to 5, with how many intermediate points). With **+ Row below** and **–** you add or remove rows on the fly.

D. Type the readings

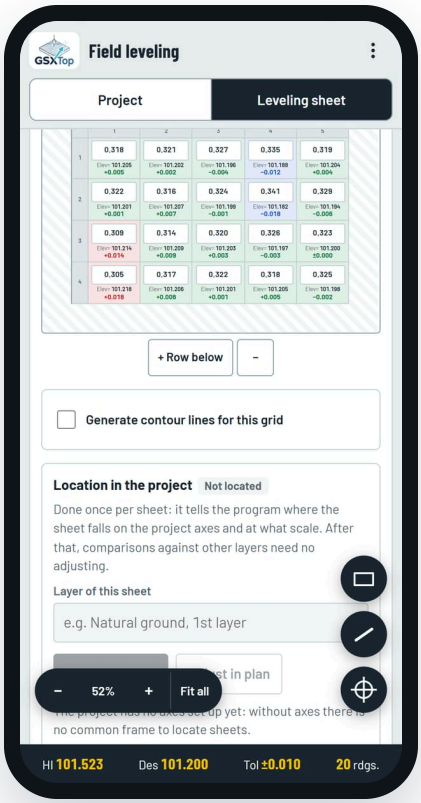
Tap a cell and type the reading **without the decimal point**: on the fourth digit the app adds the point and moves to the cell below by itself.

You type	The app saves	How it moves on
1255	1.255	By itself, on the fourth digit
0318	0.318	By itself, on the fourth digit
945 + Enter	0.945	With Enter or by tapping another cell

E. Read the colors

Each cell shows the calculated elevation (**Elev=**) and below it the difference against the design:

Color	Meaning
Green	Within tolerance: the point is fine.
Red	High: there is extra material, it must be cut or lowered.
Blue	Low: material is missing, it must be filled.



Grid with tolerance colors

See the whole grid

Use the zoom buttons (– 100 % +) and **Fit all** to check the complete grid on screen.

Made a mistake?

Tap the cell and type the reading again. To delete all readings, the app asks you to confirm by holding the button down, so nothing is deleted by accident.

RESULTS

04 Summary and instrument setups

Below the grid you have the summary, which updates with every reading, and the tools to deliver.

Summary

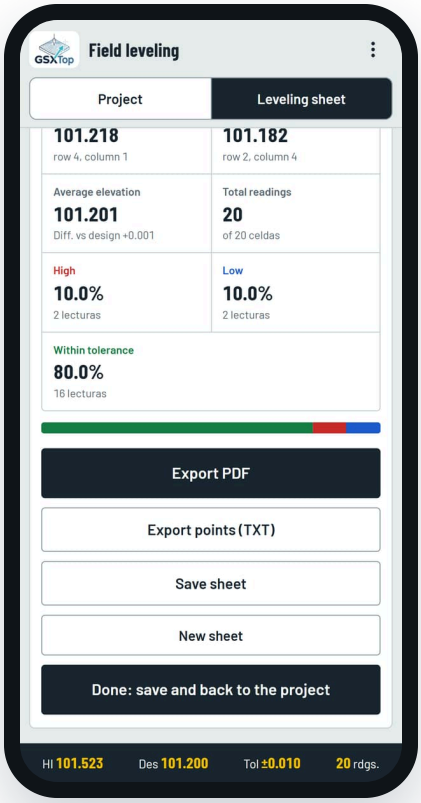
- **Highest and lowest elevation**, with the row and column where they are.
- **Average elevation** and its difference against the design.
- **Total readings** entered versus the grid cells.
- **Percentage of high, low and within-tolerance points**, with a color bar.

Final buttons

Button	What it does
Export PDF	Creates the report, tells you its name and where it is saved (Downloads) and opens it.
Export points (TXT)	List of points with number, X, Y and Z for your surveying or CAD software.
Save sheet	Saves the sheet as a file to back it up or share it.
Done: save and back	If the sheet belongs to a plan area, it saves it there and returns to the project.

Instrument setups

If you move the level, tap **+ New setup** and type the benchmark and reading of the new position. Readings you enter from then on are calculated with the new height of instrument and tagged **P2**, **P3**... To go back to the first one, tap **P1**.



Summary and delivery buttons

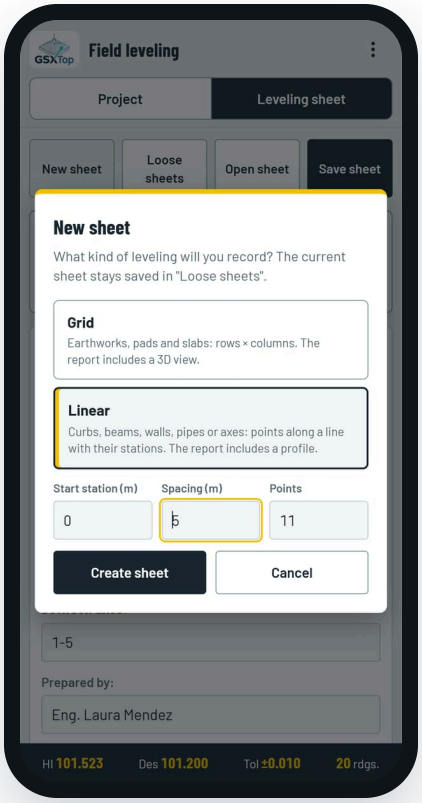
Advanced tools

- **Contour lines:** draws contours over the grid at the interval you choose.
- **Location in the project:** tells the app where the sheet falls on the site axes.
- **Level comparison:** compares this sheet against a previous survey (for example, natural ground) and calculates thicknesses and sections.
- **Comments:** notes printed on the report.

STEP BY STEP

05 Linear leveling

For curbs, beams, walls, pipes, channels or axes: points run along a line and each one has its station.



New linear sheet

Create the sheet

1. On the Leveling sheet tab tap **New sheet**. The sheet you had stays saved in "Loose sheets".
2. Choose **Linear**.
3. Type the **starting station**, the **spacing** between points and how many **points** there are. For example: from 0 m, every 5 m, 11 points (0+000 to 0+050).
4. Tap **Create sheet** and fill in the sheet and benchmark details just like in the grid.

Design elevation in linear

Mode	Use it when...
Flat	The whole line goes to the same elevation.
Sloped	The line rises or falls evenly: type the starting elevation and the slope in %.
Per point	Each point has its own design elevation. With *Interpolate design in the gaps* the app fills the points in between.

✓ **Parallel lines**

Checking a channel with its center and both sides? Add parallel lines on the left, right or both sides, with their distance and design offset. All of them are entered in the same table.

Points table and profile

The points table

Each row is a point. Type the **reading** just like in the grid (four digits, no point). On the right you see the elevation, the colored difference and the design elevation at that station.

- **Sta. (m):** leave it empty to use the automatic spacing or type the point's real station.
- **+ button** in the Axis column: marks that an axis crosses at that point.
- **Point number:** tap it to add a reference, insert or remove points.

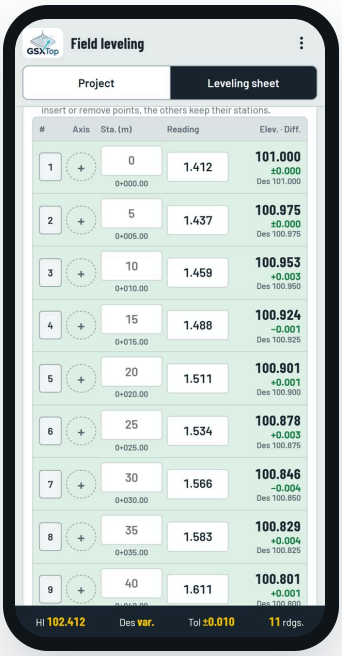
Inserting and removing points

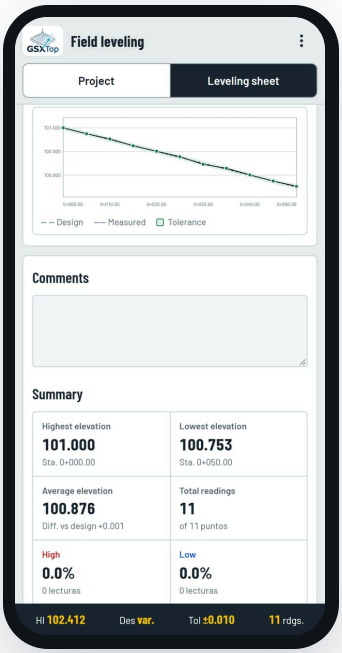
Below the table you have **+ Point at start**, **+ Intermediate point**, **+ Point at end** and **– Remove point**. For an intermediate point you only type its station (for example 12.5) and the app puts it in place. **The other points keep their stations.**

> **Removing a point with a reading**
> If the point already has a reading, the app asks you to tap again to confirm.

Profile

The profile is drawn below: the design line, what was measured and the tolerance band. You can see at a glance where the line goes outside what is allowed. The PDF report includes this profile with a table of stations.



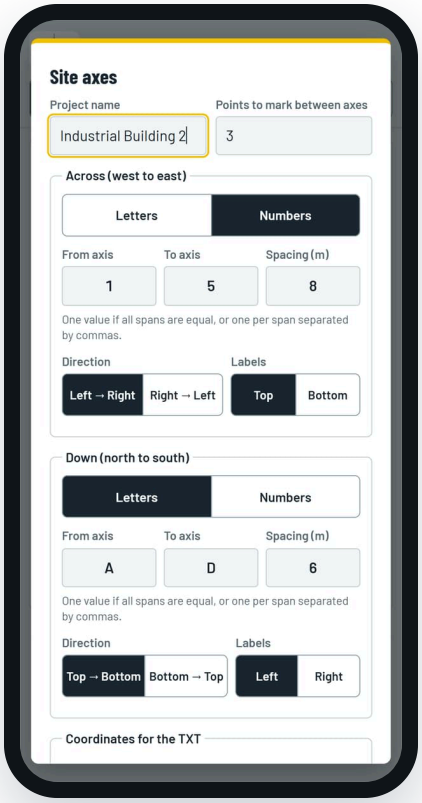


Readings and line profile

THE WHOLE SITE

06 Projects and plans

A project is your site: it keeps its axes, walls, earthwork and footing plans, and all the leveling sheets of each area. Everything travels in a single file.



Setting up the site axes

1. Create the project and its axes

1. On the **Project** tab tap **New project** (or use the one that appears when you open the app).
2. Tap **Set up axes** and type the **project name**.
3. **Across** (west to east): whether the axes are letters or numbers, from axis… to axis… and their spacing in meters. If the spans differ, type them separated by commas: *8, 8, 6.5, 8*.
4. **Down** (north to south): the same for the axes in the other direction.
5. **Points to mark between axes:** how many intermediate divisions you want for tapping points between axes.
6. Tap **Done**. The app draws the grid of axes with dimensions.

> **Coordinates for the TXT**
>
> At the end of the window you can set the X, Y coordinate of the origin so the points file comes out in site coordinates.

2. Draw the walls

In **Walls** mode tap the points the wall passes through, vertex by vertex (it can go diagonally). Tap the last point again to finish, or the first one to close it. Walls show on every plan of the project.

Earthwork plans

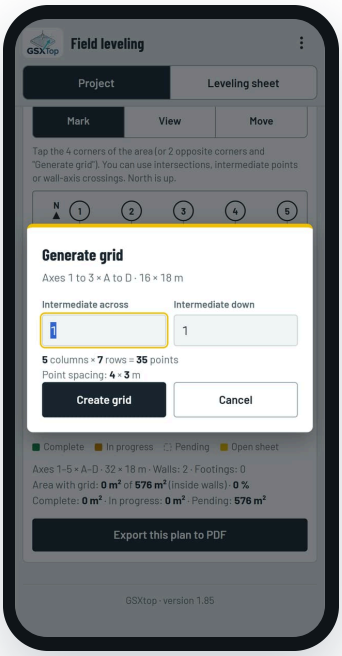
An earthwork plan contains areas; each area has its own grid sheet.

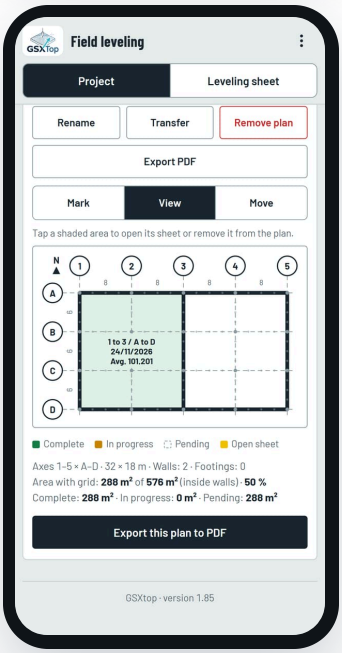
1. Tap **+ Earthwork plan**. "Earthwork 1" is created (you can **Rename** it).
2. In **Mark** mode, tap **2 opposite corners** of the area (or all 4). You can use axis intersections, intermediate points or wall crossings.
3. Tap **Generate grid** and type how many intermediate points you want across and down. The app tells you how many points you get and at what spacing.
4. Tap **Create grid**: the area's sheet opens with the axes already in place. Enter the readings.
5. Tap **Done: save and back to the project**. The area is colored on the plan according to its status.

Area status	Meaning
Complete	All cells have a reading.
In progress	Some readings are missing.
Pending	Marked but without a sheet.

In **View** mode, tap an area to open its sheet. Below the plan you see the total area, how much has a grid and how much is complete.

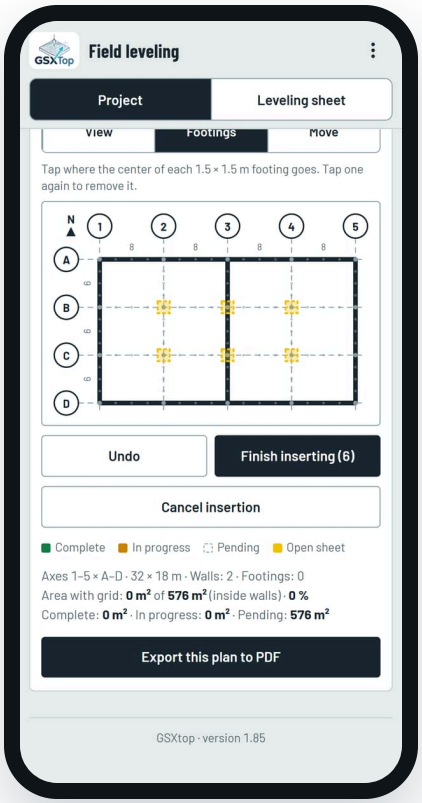
> **Already had a loose sheet?**
> Open it, tap **Link to a plan area** and mark the corners where it was done. It is saved on that plan.





Generating the grid and the completed area

Isolated and strip footings



Inserting a group of 6 footings

Isolated footings

1. Tap **+ Isolated footing plan** and then **New footing group**.
2. Type the **width** (west to east) and **length** (north to south) of each footing, and choose the **reading layout**: 4 corners, 4 corners and center, or another layout you draw.
3. Tap on the plan where the **center** of each footing goes. Tap again to remove it.
4. Tap a footing to enter its readings with its benchmark, design and tolerance. The group has a name, date and comments.

Strip footings

1. Tap **+ Strip footing plan**.
2. Tap the start point (0+000) and keep tapping vertices: each span can run on an axis, parallel or diagonally. The corners become leveling points.
3. Tap **Create strip footing line**: its **linear** sheet opens with the stations already calculated.

Plan tools

- **Move:** moves an area or a footing while keeping its sheet.
- **Transfer:** moves areas or footings to another plan of the project.
- **Remove plan / Delete project:** always ask for confirmation.
- **Export this plan to PDF:** report with the plan, the table of areas and the 3D view of each area.

Entering footings and the 3D report



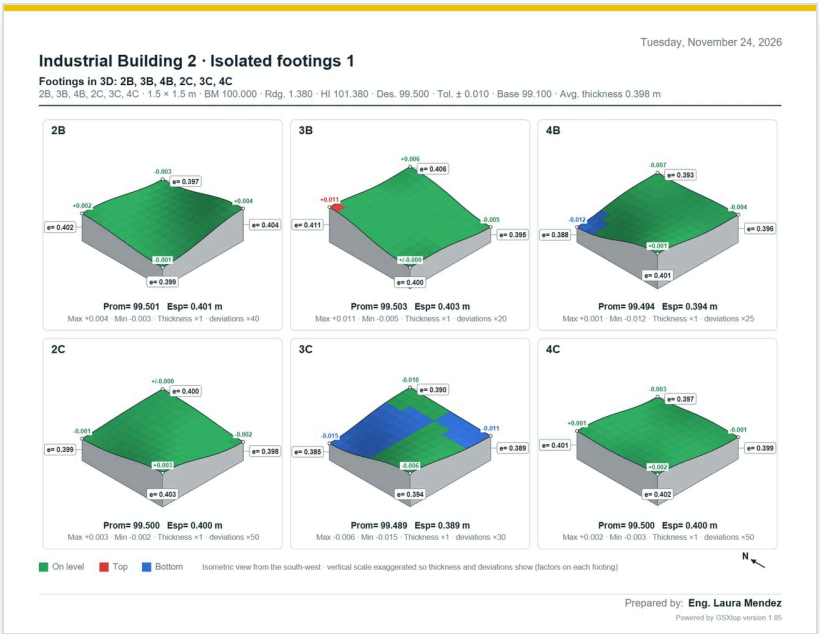
Readings for each footing of the group

Entering the group's readings

1. Tap **Finish inserting** (or tap a footing on the plan): the group window opens.
2. Type the **benchmark**, **benchmark reading**, **design level** and **tolerance**. If you move the level, add an **instrument setup**.
3. Type the **footing base level** (the bottom of the footing). With it, the report calculates the **thickness** at each corner and draws the 3D view.
4. Enter the readings of each footing in the layout order (1 · NW, 2 · NE, 3 · SW, 4 · SE). Each corner shows its elevation and its colored difference.
5. Tap **Export group PDF** and choose how many footings go on each plan page.

The report's 3D view

Each footing is drawn in isometric view: the top face in **green**, **red** or **blue** according to the tolerance, the deviation at each corner and the thickness (**e=**). Below, its average and average thickness. The vertical scale is exaggerated so the differences show.

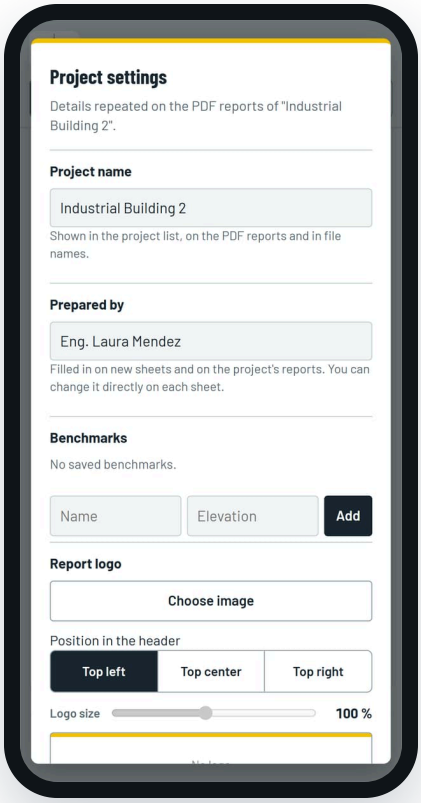


CUSTOMIZE

07 Project settings

On the Project tab tap **Project settings**. What you set here is used on every sheet and report of that project.

Section	What you can do
Project name	Rename it whenever you want. It updates in the project list, the reports and the file names.
Prepared by	The name that signs the reports. It is filled in on new sheets; you can change it on each sheet.
Benchmarks	Save the site benchmarks with their name and elevation. On each sheet you pick one with the **Benchmarks** button. You can edit or delete them.
Report logo	Choose your company's image, its position (left, center or right) and its size. The preview shows how the header looks.
Colors and font	Choose the color scheme and the font of the PDF reports.



Project settings window

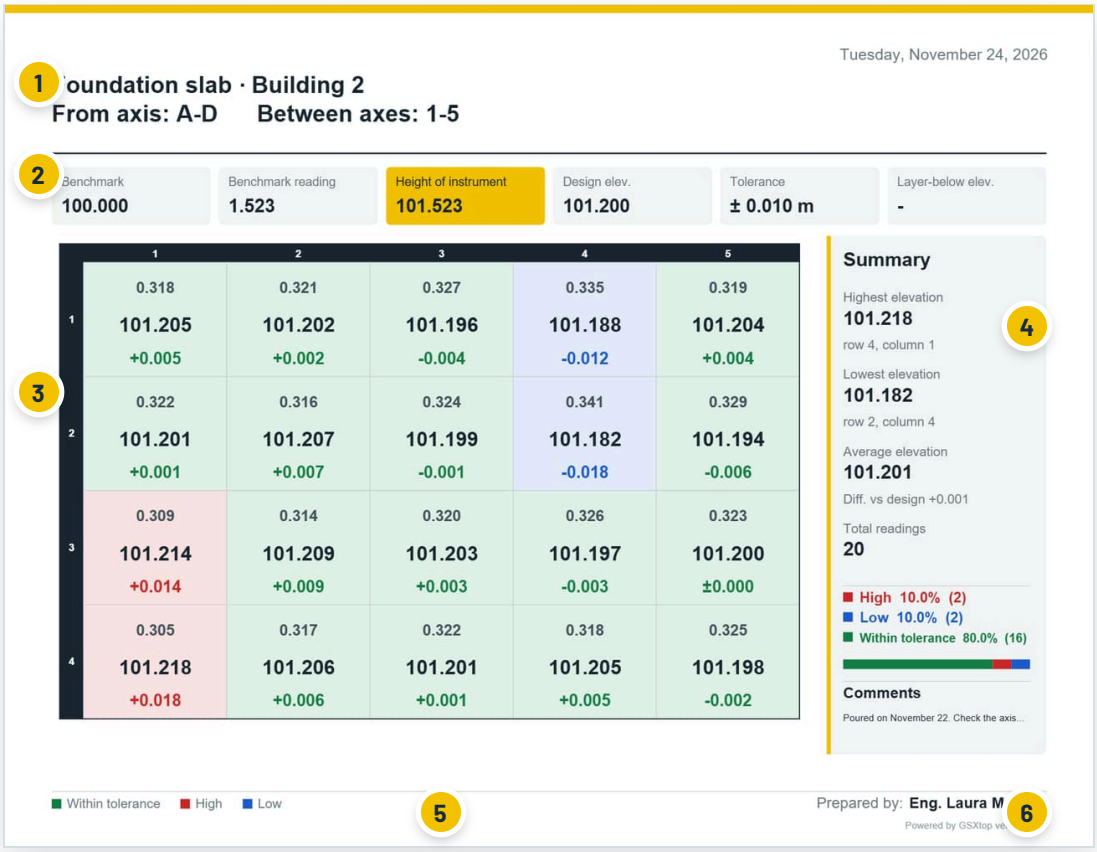
Make your reports look like yours
With your logo and colors, every PDF comes out ready to deliver to the client or the supervisor.

One benchmark, many sheets
If you correct the elevation of a saved benchmark, sheets already recorded keep the value they were done with; only new ones use the corrected value.

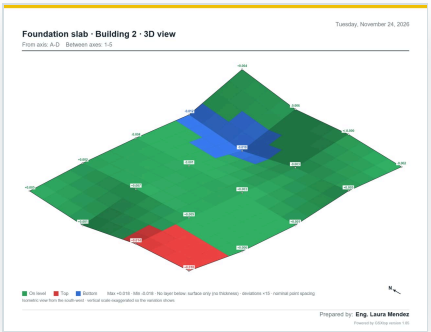
DELIVERY

08 PDF reports

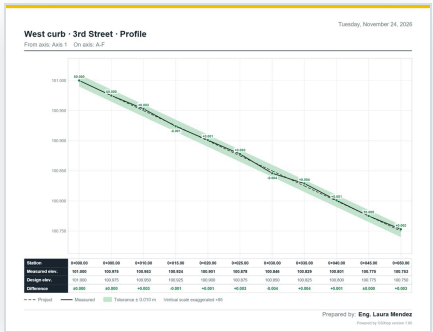
Tap **Export PDF**: the app tells you the file name and that it will be saved in **Downloads**; when you accept, it saves and opens it so you can check it. Once checked, share it by WhatsApp, email or Drive.



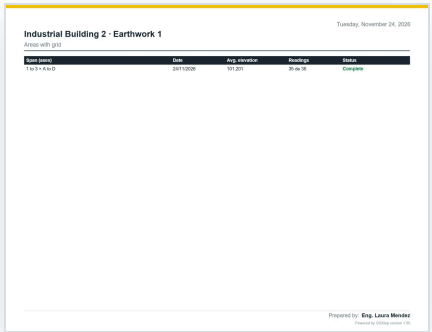
1 · Header: title, axes and date (with your logo if you set one).
2 · Details: benchmark, reading, height of instrument, design and tolerance.
3 · Grid: reading, elevation and difference of each point in color.
4 · Summary: extremes, average, percentages and comments.
5 · Legend of the colors.
6 · Signature: who prepared it and the "Powered by GSXtop" note with the version.



3D view of the grid



Linear leveling profile



Project plan

YOUR INFORMATION, SAFE

09 Save, back up and share

The app saves everything you type by itself. You can also create files to back up your work or move it to another phone.

What	How	What for
Whole project	Project tab › **Save project**	A single file with axes, walls, plans, all its sheets and its loose sheets. It's the best backup.
Open a project	Project tab › **Open**	Loads a saved project (from this or another phone). If the phone has a newer version, it opens as a copy so nothing is lost.
One sheet	Sheet › **Save sheet** / **Open sheet**	Move a single leveling sheet.
Loose sheets	Sheet › **Loose sheets**	Sheets that are not in a plan area. Open them or link them to an area of the current project.
Reports and points	**Export PDF** / **Export points (TXT)**	Deliverables for the client or for your software.

Where are the files?

Android
In the phone's **Downloads** folder. If a file with the same name exists, the new one is saved with "(1)", "(2)"... and is never replaced.

iPhone
In the **Files** app › On My iPhone › GSXtop.

Browser
In your browser's downloads folder (HTML version).

Moving everything to a new phone

1. On the old phone, open each project and tap **Save project**.
2. Send the files to the new phone (WhatsApp, email, Drive or cable).
3. On the new phone install GSXtop, go to the Project tab, tap **Open** and choose each file. The project's loose sheets are recovered too.

Before uninstalling
Uninstalling the app deletes the data saved inside it. Save your projects as files first; files in Downloads are not deleted.

WE'RE HERE TO HELP

10 Help and support

Do I need internet?

No. GSXtop works completely offline. You only need internet to send your files or write to us.

Why is a cell red?

Because the point ended up higher than the design plus the tolerance: there is extra material. Blue is the opposite: material is missing.

I typed 3 digits and it didn't move on

The app moves on by itself at the fourth digit. With 3 digits press Enter or tap the next cell.

I moved the level

Add a new instrument setup (page 7). Earlier readings keep their calculation.

I can't find my PDF

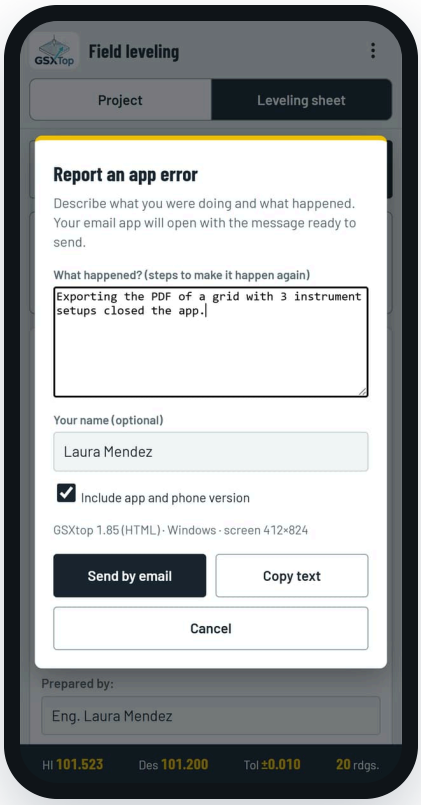
It's in Downloads (Android) or in Files › GSXtop (iPhone). The name includes the project, the plan and the date.

How do I rename the project?

Project tab › Project settings › Project name.

Report an error or suggest a feature

Open the ⋮ menu and choose **Report an app error** or **Suggest a feature**. Write what happened or your idea; the app opens your email with the message ready and includes the app and phone version to help us review it.



Reporting an error from the app

Glossary

Benchmark (BM): point of known elevation.

Reading: what the staff shows over the point.

Tolerance: allowed margin above or below the design.

Instrument setup: each position where the level is set up.

Height of instrument (HI): elevation of the level's line of sight.

Design elevation: the elevation the point must have according to the drawings.

Station: distance along a line (0+050 = 50 m).

Layer below: elevation of the previous layer, to calculate thicknesses.



Field leveling, made simple

Thank you for using GSXtop. Your feedback helps us improve every version.

WEBSITE	SUPPORT	VERSION
gsxsoft.com	soporte@gsxsoft.com	1.85

© 2026 GSXsoft. Screenshots use sample data.