










RPS Core Tools






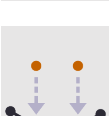

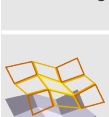

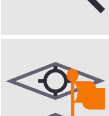
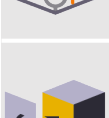

Included in all Toolboxes

Icon	Command Name	Command Description
	TMLStatus	Provides a fast and effective way to manage your RPS command library inside Trumble Business Center. The command connects with the Rockpile Solutions TMLStatus Server, checks available commands and their versions against those installed on your computer and provides tools to download, install, maintain and update your library in an automated way. TMLStatus monitors the commands as they are used and if it identifies any that are out of date, it prompts to run the TMLStatus command to update the library.
	Menu Manager	Manages the RPS Command menus and provides a simple and easy way to switch menu configurations from a light theme to a dark theme. The dark theme is easier on the eyes for those long days of clicking and pointing.
	RPS Settings	Set up Rockpile Solutions settings that are used in a variety of commands, to increase command consistency and reduce dialog clutter
	Show Line Direction	Provides the ability to display the direction of a selected line. The tool establishes the type, colors and size of the direction indicators and whether they are static or dynamic in nature. The Show Direction setup is then used by other RPS commands including Nudge, Place Aligned Blocks etc. where knowing the line direction is important to determine Left or Right offsets or location.
	Voice Command	Provides the ability to use voice input to execute any TBC command. This improves productivity and allows the commands to execute as well as the command dialog to be navigated without mouse movement.










RPS Modeling Toolbox \$395 (Included In RPS All Tools Package \$885)

Provides a powerful toolset to supplement TBC surface, cross section and corridor modeling capabilities. Tools that manipulate and correct surface models, imported PDF or CAD cross section data and corridor models. Tools to enhance model or takeoff drawings and provide enhanced reporting and data output capabilities

Icon	Command Name	Command Description
	Add Isopach	Provides the ability to add back or subtract a percentage of the difference in volume between two surfaces in order to surcharge a surface to allow for settlement or to remove additional material as a percentage of cut depth to allow for over excavation for example.
	Best Fit Linestring	Creates a best fit horizontal and or vertical alignment geometry to a selected 3D linestring. Can be used to define a new alignment and profile for a pavement or regrading surface based on surveyed data along the centerline for example.
	Combine Surfaces	Combines multiple TIN surfaces from a design into a single TIN surface model comprising multiple islands. For example where an over excavation surface on a corridor model comes and goes along the alignment, or where the left embankment and right embankment were designed as separate components and you want to combine them into a single surface for TBC corridor or machine control purposes
	Corridor Cut Sheet Report	Generates a Cut Sheet Report for Project Supervisors that shows full cross section details of slope, elevation, offset, delta elevation and cut/fill for user selected nodes of a corridor cross section material layer surface e.g. Finished Grade. The report generates a section at every defined interval plus all critical locations (PC, PT, VPI etc.) as well as every table and superelevation instruction location.

Icon	Command Name	Command Description
	Cut Fill Labels	Creates additional Cut Fill Labels on a cut fill map in user defined spot locations or along linear features defined in the project.
	Create Slope Indicators	Creates slope indicators (hachures) between two breaklines used in a surface model that represent the top and toe of slope
	Create XLines	Generates section lines (XLines) and labels at defined locations along an alignment with layering and coloring defined by XLinetype (Corridor Intervals, Extra Stations, Typical Section locations, Slope Change locations, Width Change locations, crossing infrastructure (Utilities, Culverts etc.) for the purposes of annotating drawings
	Define Extra Stations	Add additional modeling and reporting stations into corridor models outside of the corridor model and template definition.
	Edit Alignment as Spreadsheet	Capture alignment details in a spreadsheet and then import it into Trimble Business Center using this command. Command also allows the user to open an imported or hand entered alignment in a spreadsheet for checking and analysis.
	Elevation Delta to Corridor	Creates a profile in the alignment profile view for a corridor that shows the delta elevation between a selected 3D line and the selected corridor material surface layer e.g. Finished Grade. Used as a check between survey data and a selected corridor model or to determine the variance of cross slope along an alignment based on survey information.
	Explode Lines	Provides the ability to explode any linework into either all segment elements or into top, bottom and side elements on separated layers (with a break angle control). Perfect for cross section takeoff from CAD or PDF files where e.g. material layers are drawn as closed polygon areas and you need to extract top or bottom of the layer onto separate layers to create models after section conversion.
	Explode Surface	Explodes a selected TIN surface model into 3D lines and or points. The explode process eliminates duplicate lines. The exploded surface can then be edited to remove erroneous data e.g. erroneous triangle sides or to be combined with other data to create a new surface model. Explode process also provides advanced filter controls to facilitate breakline, drapeline and boundary identification and extraction.
	Find Surface Area	Provides a fast and easy way to determine the surface and plan areas of bounded areas on surface models. The surface areas can be defined by collections of 3D breaklines in the surface with the "Sharp and Texture" property, or areas of the surface where surface textures have been defined. The computed areas can be labeled on the drawing using this command.
	Fix Surface Flags	Surface flags appear in surface models where two or more lines or points occur in the same XY location with different elevation values. This tool provides a fast and easy way to resolve surface flags in a model through automated identification and resolution of typical problems at each flag. User can select the highest, lowest, mean or a user defined elevation for the resultant point in the model, and adjust all objects that occur at that location to the defined elevation.
	Geometric Selection	This powerful tool provides geometric selection properties for imported CAD or PDF linework. Initially conceived for the cross section takeoff workflows, this tool provides geometric controls that can be combined for extremely rapid selection and relayering of objects using length, aspect ratio and node count.
	Grid Volume from Boundaries	Computes the volumes between two selected surfaces and within multiple selected boundaries using the grid volume method. The computations are extremely fast, even with a small defined grid interval. This tool is ideal to rapidly compute volumes on projects as an interim step prior to final results using the TIN surface method.

Icon	Command Name	Command Description
	Import Boring Logs	Imports boring log data from a CSV file to create site (Takeoff) or corridor boring logs in order to rapidly build strata layers for earthworks quantity purposes.
	Increment Text	This command creates text that automatically increments between each text placement e.g. for labeling pads, parking bays or for adding station labels to PDF cross sections that have no text to use for section conversion.
	Label Points	This command provides additional drafting capabilities to label point values, delta elevations, slopes, station and offset to selected reference linestrings, alignments or surfaces for construction QA and As Built drawing creation purposes. The command also provides the ability to enter a High and Low tolerance in order to color code the text labels based on their High, Low or in Grade status.
	Nudge	This command provides two main abilities, Nudge Line and Nudge Node. Nudge Line moves a selected line laterally by a defined amount in order to fix a surface model where two lines that define the top and bottom of a vertical wall or face lie on top of each other but separated vertically. Nudge Node is for cross sections where two or more nodes in the cross section lie in the same XY location but are separated vertically.
	Offset Surface	Provides the ability to offset an entire surface or an area of a surface within a clipping boundary to create a new surface model. This is a quick and easy tool to create e.g. Topsoil Strip surfaces from an Existing Ground surface model.
	Offset Slope	Create a new 3D line at an offset and elevation difference to a selected pair of lines where the elevation of the new line is computed by extending the slope defined by the selected pair of lines and applying the elevation difference required. This tool is great for extending pavement or subgrade surfaces where the pavement surface is defined by imported 3D string (lines) data.
	Permit Area Manager	Provides a fast and easy way to manage project permit areas that are open or closed at any time. The tool provides the ability to create boundary areas, assign them attributes of Open or Closed as well as define a maximum value for total open area at any one time. A table can then be placed in the plan view that contains all Permit Areas, their Open / Closed state and a warning if total Open area exceeds the target maximum. Permit Areas are shaded based on their open or closed state.
	Perpendicular Distance to Surface	Compares a selection of 3D measured points to a 3D surface model and determines the shortest perpendicular distance between each point and the surface model. This is a great tool to check measured point data against a design surface for cuttings where the walls of the cutting are steep or near vertical. Generates an Excel report and 3D vector linework showing the computed distances.
	Polyline Character Recognition (PCR)	Processes polyline characters imported from Vector PDF files through to multiline text using a characterization process to identify characters, and sequential data mapping to derive text strings from the interpreted characters. Creates useful text data for elevating, scaling and placing cross sections in 3D as a part of the Cross Section Takeoff workflow
	Point Detail Report	Creates and opens a CSV report in Excel that tabulates a custom selection of values relating to the selected points including local and global coordinates, feature codes, attributes, media files, station, offset, slope and delta elevations to lines, delta elevations to surfaces, siurface slope and direction and more. Feature codes are grouped and reported based on common attribute sets for easy reading. Custom reports can be created and saved for reuse in any TBC project.
	Points to Cloud Report	Compares a selection of points to a point cloud region or scan to determine the nearest scan point to the selected points, and provides a comparison between the derived point pairs. This is a useful tool to compare measured ground check points with computed point clouds from drone surveys to validate drone survey accuracy.
	Points to CSV	Creates a CSV output that reports a selection of points and compares them to a surface and optional alignment and incorporates the points description, layer, point name and attribute information. The cut and fill between the points and surface is also reported.

Icon	Command Name	Command Description
	Points to Grid	Created to support production data from Leica machine control systems, this command allows the user to find the first, last, highest and lowest points in each grid cell from imported data files based on a defined grid pattern (origin, orientation, row and column spacing). The selected data is layered into separate layers so that it can be used to create different surface models.
	Site Improvement Legend	This command creates a legend of site improvements applied to surfaces within the project either for takeoff or data modeling purposes. The legend shows the color of the site improvement and the material layer stack and defined material thicknesses for each site improvement used. This automates the creation of drawings for submittals or for use by site personnel to understand a project.
	Slope Slope Intersect	This command provides the ability to compute 3D lines at the intersection of two slopes defined by two pairs of lines, with or without vertical or perpendicular offsets. The command is ideal for the computations of subgrade and topsoil adjusted embankment surfaces. All necessary offset lines are computed to facilitate rapid creation of the adjusted surface model.
	Surface to Grid	Point clouds can be used to create surface models. The resulting surfaces can be large and are hard to report for QA / QC purposes. This command converts a TIN surface, optionally clipped to a boundary into a grid of points based on a regular or alignment based grid, and computes cut / fill values to a reference surface with applied high and low tolerances for reporting purposes.
	Surface Area by Slope Ranges	Reports the plan and slope areas for cut and fill broken down by specified slope ranges on each of two surfaces. The report uses the isopach computed between the two surfaces (e.g. Existing and Subgrade Adjusted Finished Grade) to determine cut and fill areas and then sums the areas of triangles of both surfaces that fall within the defined slope ranges within the computed cut and fill areas. Ideal for the determination of surface finishing / trim areas in fill scenarios.
	Surface Intersection Linestring	Creates a line along the zero cut/fill line between two selected surface models. The lines created are set to sharp and texture boundary and can be optionally included in either or both of the source surface models.
	Surface to Points	Surface models provided by Engineers for Existing Ground are often derived from point clouds. The imported TINs often cover large areas and have extremely dense triangulation. For modeling purposes the imported TIN and CAD points derived from the TIN are inefficient in TBC. This command provides the ability to convert the TIN back into a point cloud so that it can be more easily and faster handled in TBC. It can also be reduced in size and point density for faster volume computations.
	Track Line Edge	This command allows you to pick an alignment and a selection of linework e.g. for road pavement section lines in order to create the edge lines (pavement edge lines) in the direction of increasing station and / or a boundary around the selected lines. Part of the CAD / PDF cross sections takeoff workflow, this facilitates rapid 3D modeling from converted PDF or CAD cross sections.
	View Filter Override	This command provides the ability to override object colors for plotting purposes. If you want to create a black and white, grey scale or highlighted print or PDF output then this is your tool

For More Information

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Contact your local SITECH Dealer