Overview: Stake the location and elevation of known points at specific locations.
- A file (.txt or .csv) containing control points & stakeout points must be uploaded to the T10 or TSC7.
- Points could also be keyed in manually.
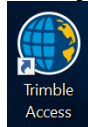- Note the *Point Names* of any Control Points & Stakeout Points that you will need to locate.

Equipment: Trimble T10, TSC7, Total station or GNSS receiver, Trimble Access v2022.01

Setting up & Stakeout Points

These instructions are based on a *Stakeout.txt* (or .csv) file already having been uploaded to the survey controller.

Start a New Job
1. Turn the Trimble Device on by pressing the power button.

2. Tap the **Trimble** button or Tap *Start… Trimble Access*.
3. Tap an existing Project and Tap *Open*
    a. Start a new project by Tapping *New*, Input a new project name and Tap *Create*.
4. Tap on *New* to create a new job.
5. Input the new *Job name*
6. Set Template as **NRCS-GPS (or nrcs-tstat for a Total Station)**
7. Verify that the *Coordinate system* and *Units* are correct.
8. Tap *Layer manager… Point files*
9. Select the file with your exported survey points. E.g. **Stakeout.txt**.

    A check mark inside a square indicates the points in the file are visible and selectable.
10. Tap Accept.
11. Tap Accept.

Stakeout Points
1. Tap ≡
2. Tap *Stakeout*
3. Tap the appropriate network E.g. **IARTN_R12**.
4. Tap *Points*
5. Tap *Add*
6. Tap *Select from list*
7. If linked points do not appear, Tap *Filter* and checkmark *Linked File Points*. Tap Accept.
8. Tap on the names in the list to Checkmark them. Tap *Add*
9. Highlight the point to stake
10. Tap *Stakeout*

11. Follow directions to location of point. If you want to see the direction arrow and it is not

    visible, drag the ⦀ to the left until the direction arrow appears.
12. Once Target is at acceptable location <u>Tap</u> Measure.
13. <u>Input</u> *As-staked Name* E.g {*SO1004*} for StakeOut and a *As-staked code*.
14. <u>Tap</u> Enter
15. <u>Tap</u> Store
16. <u>Select</u> next point from list and repeat.
17. When done with Stakeout <u>Press</u> ESC.

<u>Recheck Control Points</u>
18. Before ending the survey, **return to the control points** and take a 2nd shot on those points. Compare the coordinates to the earlier results.

Overview: Stake the location and elevation of a line created from 2 points with elevations. Horizontal and vertical offsets can be used.

- Use the AutoCAD C3D instructions "Creating and Exporting Survey Points" starting at Step 1. Create points that you need to make a line for staking (ex. pipe inlet and pipe outlet). Use the Properties to review the Northing, Easting and Elevation for each point to make sure they are correct.
- Determine the details of any Control Points that you will need. They can be linked from the original survey or from a coordinate text file of control points that has been uploaded to the Trimble unit.
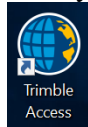
Equipment: Trimble T10, TSC7, Total station or GNSS receiver, Trimble Access v2022.01

Setting up & Stakeout Lines

These instructions are based on a *Stakeout.txt* (or .csv) file already having been uploaded to the survey controller.

Start a New Job
1. Turn the Trimble Device on by pressing the power button.

2. Tap the **Trimble** button ![Trimble Access] or Tap *Start… Trimble Access*.
3. Tap an existing Project and Tap *Open*
   a. Start a new project by Tapping *New*, Input a new project name and Tap *Create*.
4. Tap on *New* to create a new job.
5. Input the new *Job name*
6. Set Template as **NRCS-GPS (or nrcs-tstat for a Total Station)**
7. Verify that the *Coordinate system* and *Units* are correct.
8. Tap *Layer manager… Point files*
9. Select the file with your exported survey points. E.g. **Stakeout.txt**.

   A check mark inside a square ☑ indicates the points in the file are visible and selectable.
10. Tap Accept.
11. Tap Accept.

Key In Lines based on Points
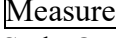1. Tap ≡
2. Tap *Key In…*
3. Tap *Lines…*
4. Under *Line Name,* input a name for the line *(E.g. Pipe)*
5. Under *Code*, input a code for the line (*E.g. SMP).*
6. Under *Method*, Tap *Two Points*
7. Under *Start point*, Tap ▸ Tap *List*
8. If linked points do not appear, Tap *Filter* and checkmark *Linked File Points*. Tap Accept.

9. <u>Tap</u> on the name of the first point for the line (E.g. *Pipe Inlet*)
10. <u>Tap</u> on *End point*, <u>Tap</u> ▸ <u>Tap</u> *List*
11. <u>Tap</u> on the name of the last point for the line (E.g. *Pipe Outlet*)
12. <u>Tap</u> Calc
13. <u>Tap</u> Store
14. <u>Tap</u> Esc to get back to the General Survey Screen

<u>Stakeout Lines using Station & Offset</u>
15. <u>Tap</u> ≡
16. <u>Tap</u> *Stakeout*
17. <u>Tap</u> the appropriate network E.g. ***IARTN_R12***.
18. <u>Tap</u> *Lines*
19. Under *Line Name,* <u>Tap</u> ▸⋯ <u>Tap</u> *List*
20. <u>Tap</u> the name of the line you created earlier from the list
21. Under *Stake*, <u>Tap</u> *Station/offset from line*
    i. <u>Scrolling</u> down allows you to change the *Station Interval*, *H. Offset*, and *V. Offset*
    ii. *Station Interval*: for staking pipes every 20 ft works well (E.g. *20.000ift*)
    iii. *H. Offset:* horizontal offset is used when you need to offset the original location of the line left or right a specified distance (E.g. if the pipe alignment was moved 10 left of the original location during construction)
    iv. *V. Offset:* vertical offset allows you to raise or lower the line from the original location
    v. <u>Click</u> Start
    vi. Orientation is relative to the line as looking in the direction of **increasing** stationing.
    vii. When staking a line make sure to be on the correct stationing by going forward or backwards along the line until it displays 0.0 AND make sure to go left or right until it displays 0.0
    viii. Once Target is at acceptable location <u>Tap</u> Measure.
    ix. Input As-staked Name E.g {SO1004} for StakeOut and a Code.
    x. <u>Click</u> Store
    xi. Select next point from list and repeat by using the Sta + or Sta- to change the stationing, or just input the station value that you want to be at.
22. When done with Stakeout <u>Press</u> ESC.

<u>Stakeout to the nearest location along the line</u>
23. <u>Tap</u> ≡
24. <u>Tap</u> *Stakeout*
25. <u>Tap</u> *Lines*
26. Under *Line Name,* <u>Tap</u> ▸⋯ <u>Tap</u> *List*
27. <u>Tap</u> the name of the line you created earlier from the list
28. Under *Stake*, <u>Tap</u> *To the line*
29. <u>Tap</u> *Start*

30. The display shows you the station you are at and the cut or fill. <u>Click</u> Measure if you want to save surveyed point.
31. When done with Stakeout <u>Press</u> ESC.

<u>Recheck Control Points</u>
32. Before ending the survey, **return to the control points** and take a 2nd shot on those points. Compare the coordinates to the earlier results.

<u>Quit out of Survey as normal.</u>