

SECTION C2: CIVIL 3D SURVEY IMPORTING AND EXPORTING PROCEDURES

The use of AutoCAD Civil 3D can provide the user greater efficiency when downloading, processing, designing and plotting data. The following procedures instructs the user how to import, create and export survey data. All survey shall be collected in a manner that correlates with Florida Survey coding, while using the components from the Localized Florida Template. Several features within AutoCAD Civil 3D will be useful when downloading and will save office time.

This procedure assumes the user has a basic understanding of AutoCAD Civil 3D. If a more detailed explanation is required, refer to the online Reference Guides (RGuides) located at www.nrcsknowledge.com

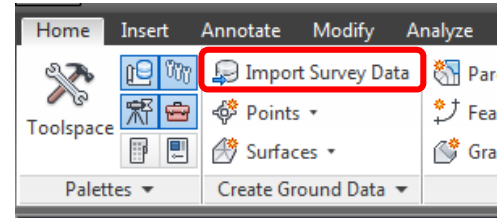
Before using these procedures, user should make sure the following programs and files are up to date on computer. Compatibility issues may arise if any program is not up to date:

- NRCS Civil 3D files – several features have been localized from National Headquarters Civil 3D template including all of the Florida Survey codes, Coordinate systems, and Styles
- Windows Mobile Device Center Program – used to link external devices such as Data Collector (TSC3) data collectors and various Total Stations.
- Geoid Model files (GGF) installed using AutoCAD and Trimble Link menu from Civil3D. (An IT specialist may have to do this)

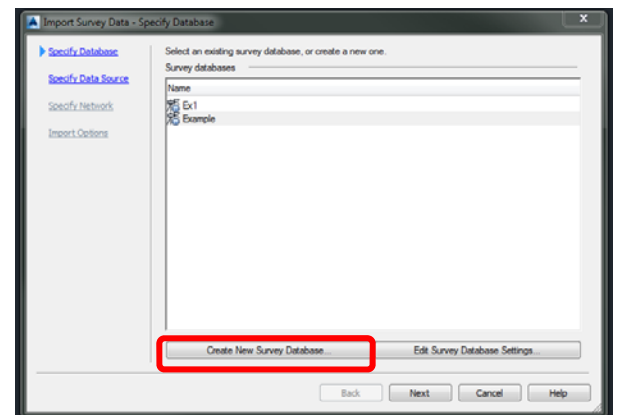
I. IMPORTING A SURVEY CSV FILE USING “IMPORT SURVEY DATA”

A. Open AutoCAD Civil 3D

B. From the Ribbon’s “Home” tab, select “Import Survey Data”



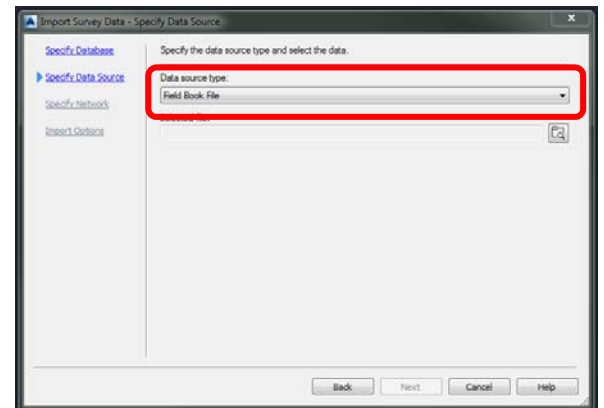
C. Click “Create New Survey Database...” tile button



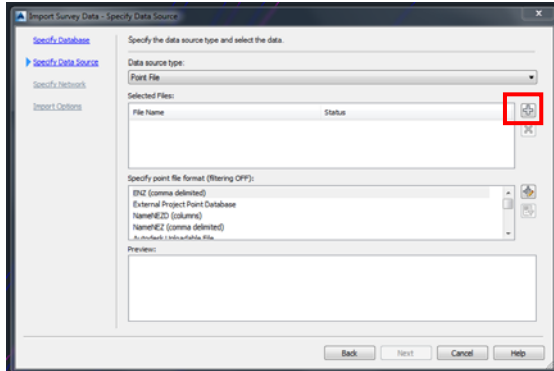
D. Give the Survey Database a name > Click “OK”

E. Click “Next”

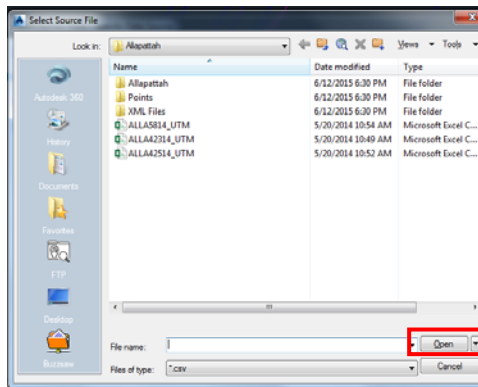
F. Select the “Point File” as the data source type



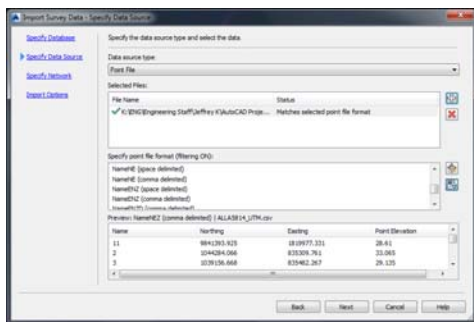
G. Use the “Plus” button to browse for the point file to import.



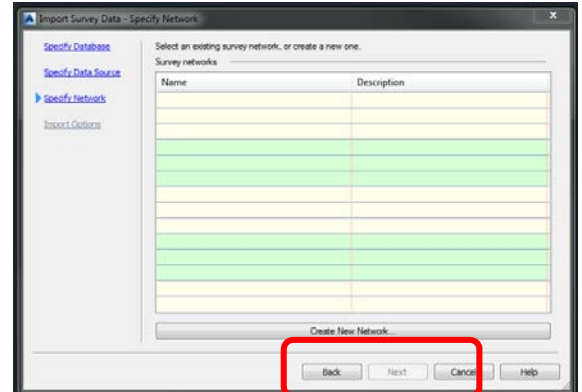
- H. Browse to CSV survey file, select it, and click **“Open”**



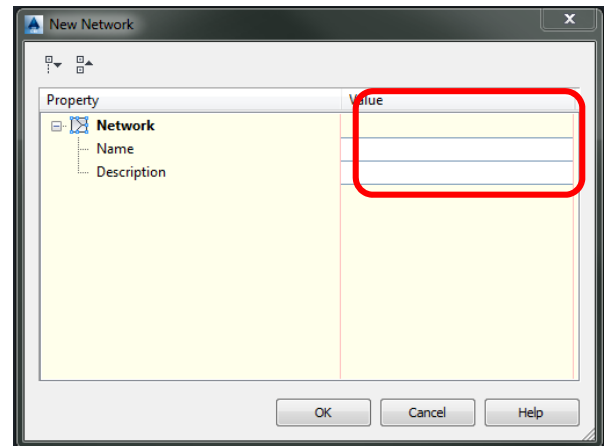
- I. Under Specify Point Format choose the format **“PNEZD”** as this is typical of survey data imported as a CSV or TXT file.



- J. Click **“Next”**
K. Click on the **“Create New Network...”** button

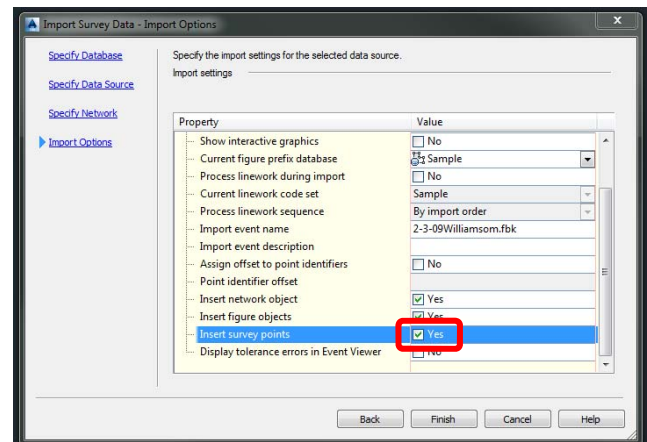


- L. Give the new network a name and description (Date) in the value box.
> Click **“OK”**



- M. Click **“Next”**

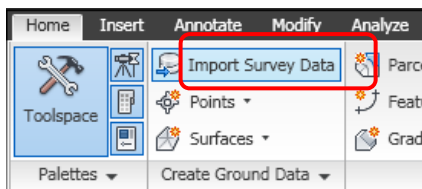
- N. From the **“Import Survey Data – Import Options”** dialog box – make sure that **“Insert Survey Points”** is toggled to **“Yes”**



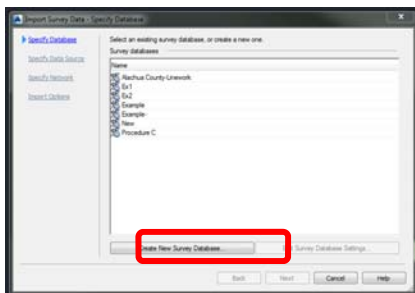
- O. Hit **“Finish”** and the Survey will import into the drawing.
- P. A Survey Database will be created and the survey may be imported into any new or existing drawing.

II. IMPORTING A SURVEY FIELDBOOK FILE USING “IMPORT SURVEY DATA”

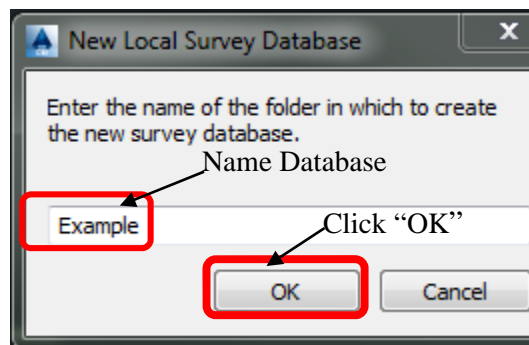
- A. Open Civil 3D
- B. From the Ribbon’s **“Home”** tab, select **“Import Survey Data”**.



- C. Click **“Create New Survey Database...”** tile button.

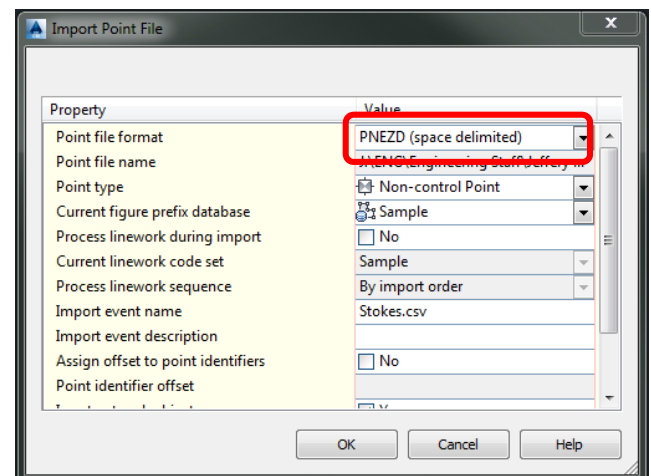


- D. Give the Survey Database a name and click **“OK”**



- E. Specify data source as **“Field Book Data”**.

- F. Importing a Fieldbook, click on the **“Browse”** icon and locate Fieldbook, and Click **“Open”**
- G. The Fieldbook will highlight within the **“Import Survey Data”** dialog box, Click **“Next”**
- H. Click the **“Create New Network”** tile button on the bottom.
- I. Give Network a **“Name”** and a **“Description”** and Click **“Ok”**
- J. Click **“Next”**
- K. Make Sure all Import Information is correct and Click **“Finish”**
- L. Survey will be imported into the Model Space of Civil 3D.



III. CONVERTING A TSC3 DATA COLLECTOR JOB FILE TO A CSV FILE

- A. On the Trimble Device home page select the **“General Survey”** icon
- B. Click on the **“Jobs”** icon
- C. In the **“Jobs”** folder select the **“Import/Export”** tile.
- D. Click on the **“Export Fixed Format”** tile.
- E. In the **“Export Custom Format”** window make sure the file format is

“**Comma Delimited (*.CSV, *.TXT)**” and open the correct file that is needed.

- F. Click the “**Accept**” tile

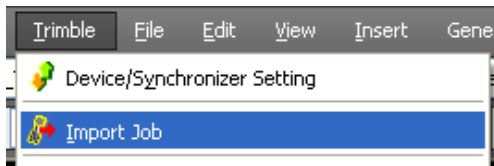
IV. CONVERTING A TSC3 DATA COLLECTOR JOB FILE TO A FIELDBOOK FILE

- A. On the Trimble device home page select the “**General Survey**” tile.
- B. Click on the “**Jobs**” tile.
- C. In the “Jobs” folder select the “**Import/Export**” tile.
- D. Click on the “**Export Custom Format**” tile.
- E. In the “Export Custom Format” window make sure the file format is “**FBK file**” and open the correct file that is needed.

- F. Click the “**Accept**” tile

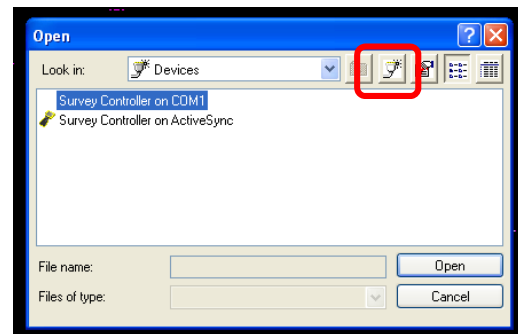
V. IMPORTING A TSC2 JOB FILE INTO CIVIL 3D USING TRIMBLE LINK

- A. Open and save a new drawing in Civil 3D. Place in the proper project folder and give it a file name.
- B. Plug the TSC2 Data collector into the computer.
- C. MS Active Sync will sync Data collector with the computer and will bring up a dialog box notifying the connection between the computer and the Data collector.
- D. In Civil 3D select “**Import Job**” from the “**Trimble**” menu.

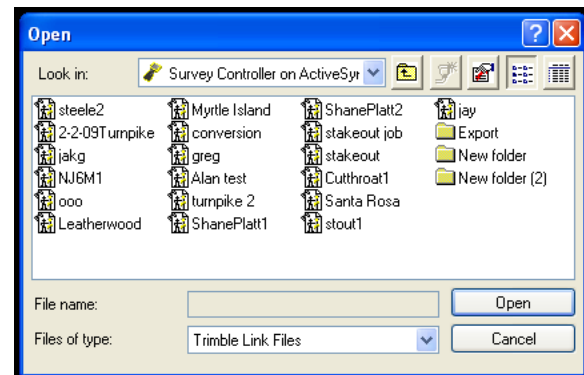


- E. From the list of Devices, select “**Survey Controller on Activesync**”.

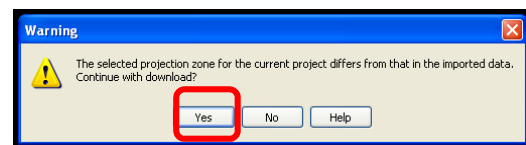
Note: There will be two devices, one mentioned above and a connection device that allows the data collector to use a different Trimble Communications cable to the computers COM1 port called “**Survey Controller on COM1**”.



- F. Once the device is selected, a list of jobs within that device will be displayed.



- G. Select the job to be imported and click “**Open**”
- H. The Job file will then be RECEIVED, and then CONVERTED. *Note: if a warning message opens select “**Yes**” to continue.*



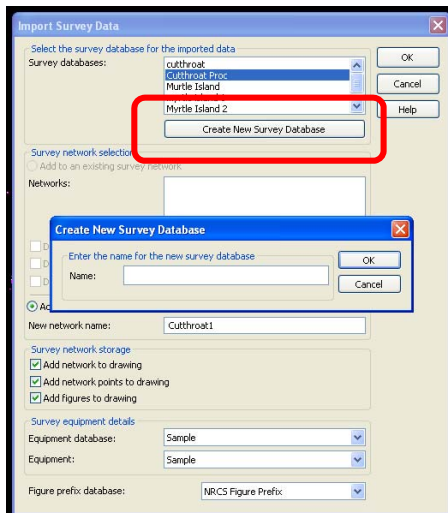
- I. This will open a “**Check In**” dialog box, to view the point number Feature Code, Rod Height, and sometimes

Antenna Type and Antenna method. Click **“OK”** to accept. See Figure B-5.

*Note: if you have two survey job files in one survey database, this is a great place to renumber the survey points before you import them into the drawing. Using the **“Renumber...”** button to perform this. This eliminates the duplicate point issue.*

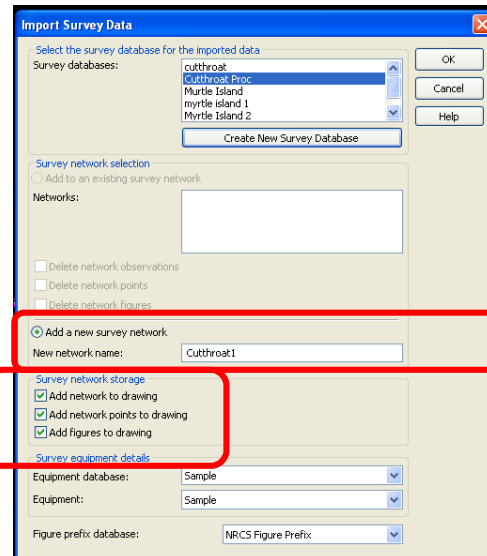
Order	Type	Name	Feature Code	Height	Antenna Type	Antenna Method	Point
1	NEZ	518	Co				
2	NOTE		Modified 11:19:23 AM				
3	NOTE		Old point name G 518				
4	BASE	G 518	Co	7.595			
5	RTK	1000	CP	7.450			
6	BASE	G 518	Co	7.595			
7	RTK	1001	CP	7.450			
8	BASE	1000	CP	7.595			
9	RTK	1724	ng	6.562			
10	RTK	1725	gate	6.562			
11	RTK	1726	gate	6.562			
12	RTK	1727	B Item	6.562			
13	RTK	1728	ten	6.562			
14	RTK	1729	ng	6.562			
15	RTK	1730	B Breakline	6.562			
16	RTK	1731	Breakline	6.562			
17	RTK	1732	ng	6.562			
18	RTK	1733	ng	6.562			
19	RTK	1734	ng	6.562			
20	RTK	1735	B top	6.562			
21	RTK	1736	B Ste	6.562			
22	RTK	1737	B lb	6.562			
23	RTK	1738	top	6.562			
24	RTK	1739	B lb	6.562			
25	RTK	1740	Ste	6.562			
26	RTK	1741	G 518	6.562			

- J. In the Import survey dialog box select **“Create New Survey Database”** and name the survey database. The name of the project will do.

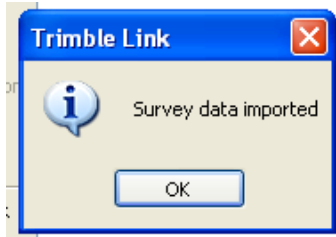


- K. Select **“Add a New Survey Network”** for new surveys. Input a name for the new survey network.

Adding points to an existing survey select **“Add to an Existing Survey Network”** select the network or survey job to add the points to. (Two different .job files same project). You may have to renumber the points with the use of the Check-in to avoid duplicate point numbers.



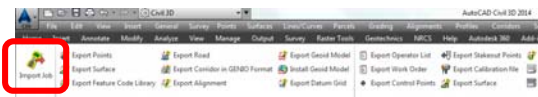
- L. Check all three boxes under **“Survey network storage”**.
- M. Leave **“Survey Equipment Details”** as is.
- N. Select the figure prefix database **“NRCS Figure prefix”** or a figure prefix database that was lined out by the State Office.
- O. Click **“OK”** the points will import.
- P. Two things will happen, the JOB file will convert to an AutoCAD Fieldbook (FBK file, and the fieldbook file will be imported.
- Q. Trimble Link will inform the user of survey data imported. Select **“OK”** to close the window.



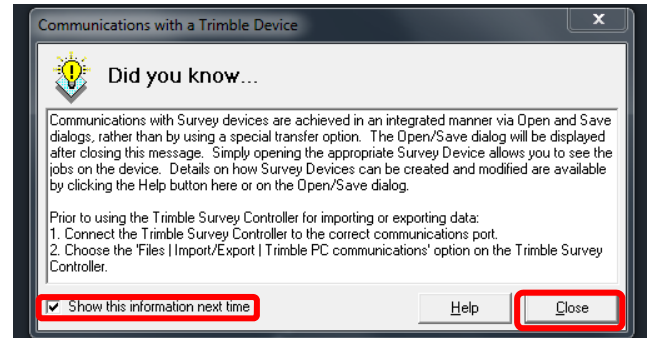
R. Perform zoom extents.

IX. IMPORTING A TSC3 JOB FILE INTO CIVIL 3D USING TRIMBLE LINK

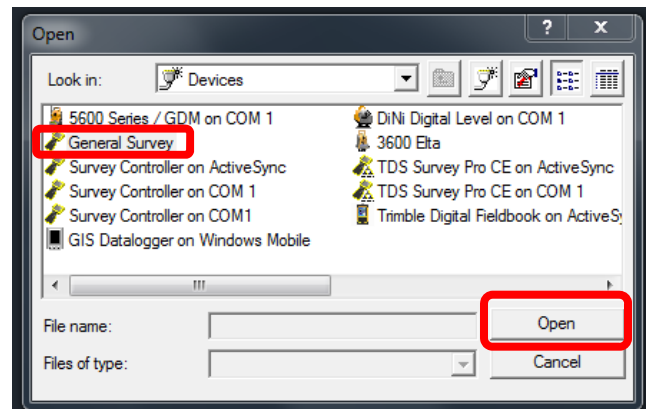
- A. Open and save a new drawing in Civil 3D. Place in the proper project folder and give it a file name.
- B. Plug the TSC3 Data collector into the computer.
- C. MS Active Sync will sync Data collector with the computer and will bring up a dialog box notifying the connection between the computer and the Data collector.
- D. In Civil 3D select **“Import Job”** from the **“Trimble Link”** Ribbon.



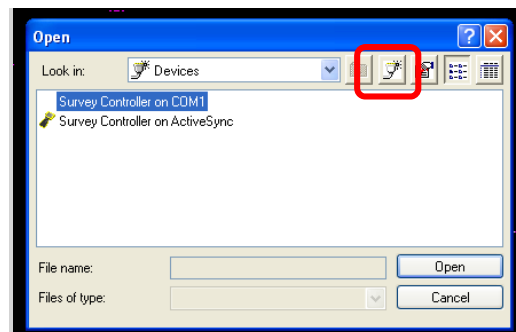
- E. A pop-up window will appear discussing **“Communications with a Trimble Device”** if this is the first time importing a job from the TSC3. Uncheck the **“show this information next time”** box to forgo this step in future import jobs and then click **“Close”**

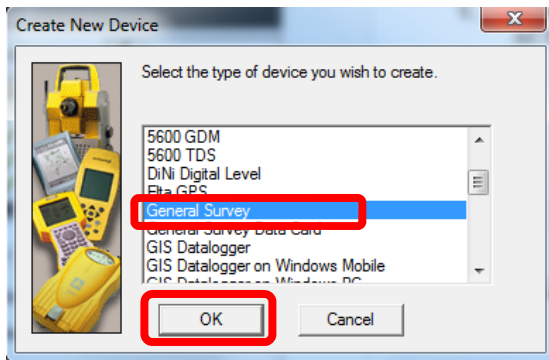


- F. From the list of Devices, select **“General Survey”** and click **“Open”**.

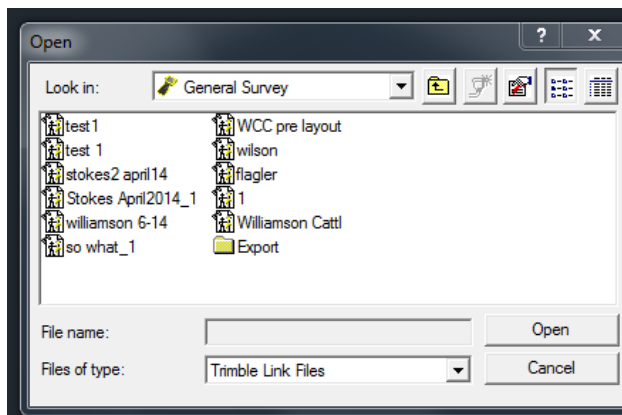


- G. If General Survey is not listed click on the **“Create New Device”** icon. Scroll down to **“General Survey”** and left-click on it. Click **“OK”**

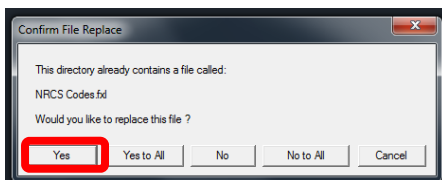




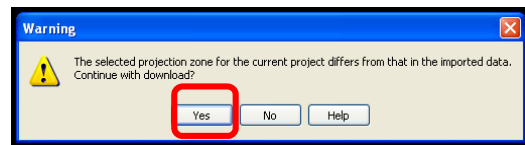
- H. Once the device is selected, a list of jobs within that device will be displayed.



- I. Select the job to be imported and click “Open”
- J. If a “Confirm File Replace” pop-up window appears asking to replace the NRCS Codes.fxl select “Yes”.



- K. The Job file will then be RECEIVED, and then CONVERTED. *Note: if a warning message opens select “Yes” to continue.*

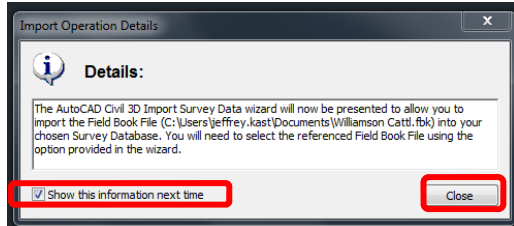


- L. This will open a “Check In” dialog box, to view the point number Feature Code, Rod Height, and sometimes Antenna Type and Antenna method. Click “OK” to accept. See Figure B-5.

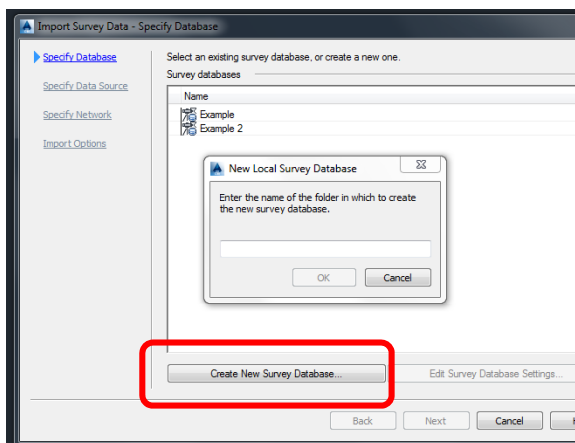
Note: if you have two survey job files in one survey database, this is a great place to renumber the survey points before you import them into the drawing. Using the “Renumber...” button to perform this. This eliminates the duplicate point issue.

Order	Type	Name	Feature Code	Height	Antenna Type	Antenna Method	Prism (mm)
1	NEZ	1	BM17				
2	NEZ	2	BM200				
3	NEZ	3	BM201				
4	STN	3	BM201	4.805			
5	BS	2					
6	FI	2	BM200	6.800			0.0
7	BASE	1	BM17	7.595	RIB GNSS/SPS88a Inl True Vertical		
8	RTK	60000	NG-50	6.562	RIB GNSS/SPS88a Inl Bottom of antenna mount		
9	BASE	1	BM17	7.595	RIB GNSS/SPS88a Inl True Vertical		
10	RTK	60001	NG-50	6.562	RIB GNSS/SPS88a Inl Bottom of antenna mount		
11	RTK	60002	TOE 62	6.562	RIB GNSS/SPS88a Inl Bottom of antenna mount		
12	RTK	60003	TOB 61	6.562	RIB GNSS/SPS88a Inl Bottom of antenna mount		
13	RTK	60004	FEN 600	6.562	RIB GNSS/SPS88a Inl Bottom of antenna mount		
14	RTK	60005	TOB 61	6.562	RIB GNSS/SPS88a Inl Bottom of antenna mount		
15	RTK	60006	TOE 62	6.562	RIB GNSS/SPS88a Inl Bottom of antenna mount		
16	RTK	60007	TOB 61	6.562	RIB GNSS/SPS88a Inl Bottom of antenna mount		
17	RTK	60008	TOE 62	6.562	RIB GNSS/SPS88a Inl Bottom of antenna mount		
18	RTK	60009	DIT 54	6.562	RIB GNSS/SPS88a Inl Bottom of antenna mount		
19	RTK	60010	DIT	6.562	RIB GNSS/SPS88a Inl Bottom of antenna mount		
20	RTK	60011	TOE 62	6.562	RIB GNSS/SPS88a Inl Bottom of antenna mount		
21	RTK	60012	TOB 61	6.562	RIB GNSS/SPS88a Inl Bottom of antenna mount		
22	BASE	1	BM17	7.595	RIB GNSS/SPS88a Inl True Vertical		
23	RTK	60013	TOB 61	6.562	RIB GNSS/SPS88a Inl Bottom of antenna mount		
24	RTK	60014	TOE 62	6.562	RIB GNSS/SPS88a Inl Bottom of antenna mount		
25	RTK	60015	FEN 600	6.562	RIB GNSS/SPS88a Inl Bottom of antenna mount		
26	RTK	60016	NG-50	6.562	RIB GNSS/SPS88a Inl Bottom of antenna mount		
27	RTK	60017	NG-50	6.562	RIB GNSS/SPS88a Inl Bottom of antenna mount		
28	RTK	60018	NG-50	6.562	RIB GNSS/SPS88a Inl Bottom of antenna mount		
29	RTK	60019	NG-50	6.562	RIB GNSS/SPS88a Inl Bottom of antenna mount		
30	RTK	60020	NG-50	6.562	RIB GNSS/SPS88a Inl Bottom of antenna mount		
31	RTK	60021	FEN 600	6.562	RIB GNSS/SPS88a Inl Bottom of antenna mount		
32	RTK	60022	DIKE 101	6.562	RIB GNSS/SPS88a Inl Bottom of antenna mount		
33	RTK	60023	TOB 61	6.562	RIB GNSS/SPS88a Inl Bottom of antenna mount		
34	RTK	60024	TOE 62	6.562	RIB GNSS/SPS88a Inl Bottom of antenna mount		
35	RTK	60025	DIT 54	6.562	RIB GNSS/SPS88a Inl Bottom of antenna mount		
36	RTK	60026	DIT 54	6.562	RIB GNSS/SPS88a Inl Bottom of antenna mount		

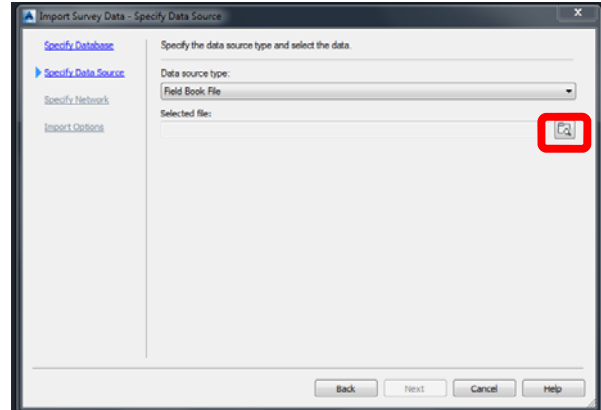
- M. An “Import Operation Details” pop-up window will appear directing the user on where to find the Field Book File which was just created from the step above if this is the user’s first time using this import method. Uncheck the “Show this information next time” box and then click “Close”.



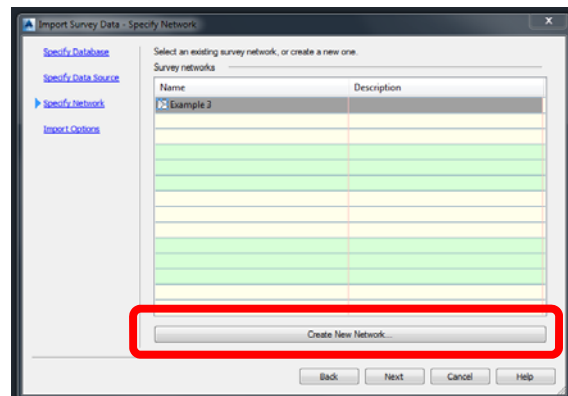
- N. In the Import survey dialog box select **“Create New Survey Database”** and name the survey database. The name of the project will do. Click **“OK”** and then click **“Next”**.



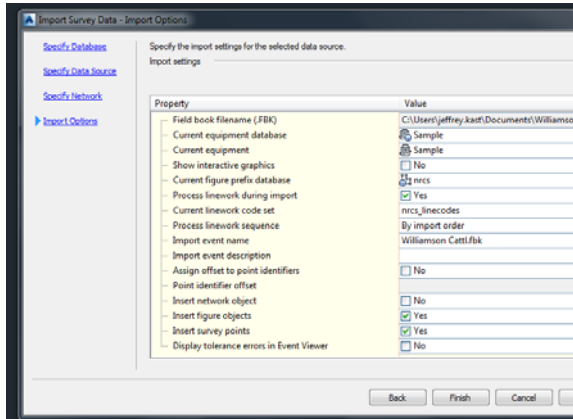
- O. On the Import Survey Data-Specify Data Source dialog box make sure the Data Source type is set to **“Field Book File”**. Click on the Browse icon to search for the Field Book File that was created for the survey job when imported in the previous steps. The Field book File will be on the Computer’s hard drive. Once the file path is found click **“Next”**.



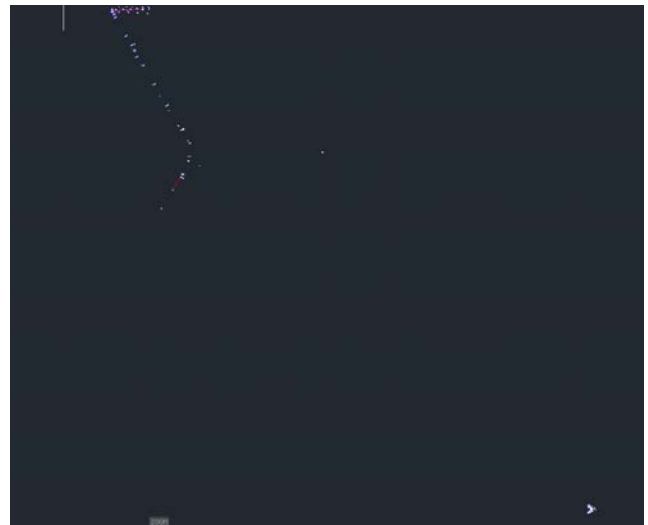
- P. On the Import Survey Data-Specify Network select **“Create New Network”** for new surveys. Input a name for the new survey network and then click **“OK”**. Once the survey network appears in the pop-up window click **“Next”**.



- Adding points to an existing survey select **“Add to an Existing Survey Network”** select the network or survey job to add the points to. (Two different .job files same project). You may have to renumber the points with the use of the Check-in to avoid duplicate point numbers.



- V. Perform zoom extents to see survey data.



- Q. On the Import Survey Data-Import Options check the “**Process linework during import**”, “**Import figure objects**”, and “**Import survey points**” boxes.
- R. Leave “**Current equipment database**” and “**Current equipment**” as is.
- S. Select the current **Florida’s Local Figure Prefix Database**
- T. Select the current “**Linework**” code set
- U. Click “**Finish**” the points will import.

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