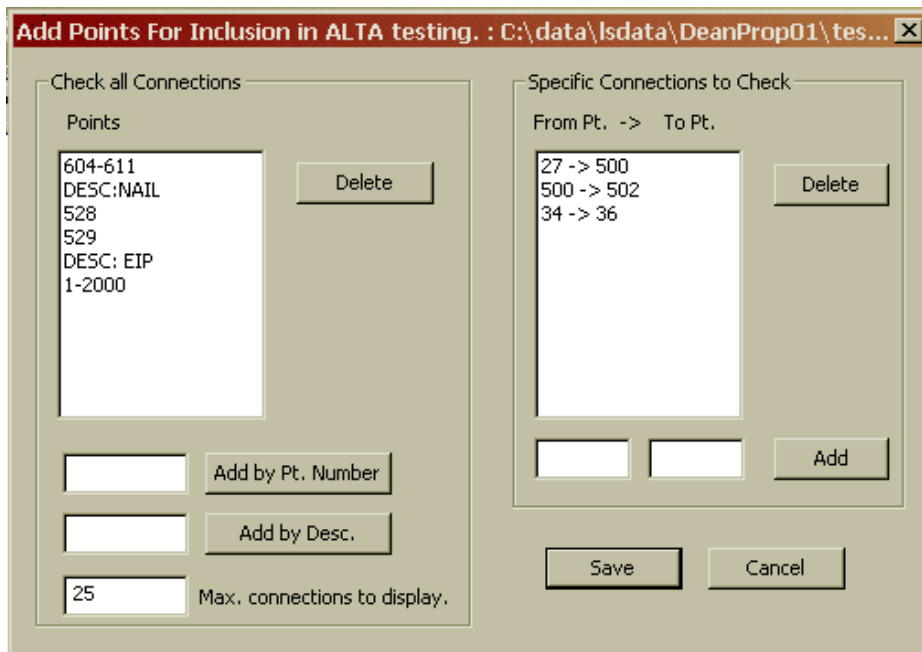


SurvNet provides the ability to generate reports that give the surveyor the information needed to determine if his survey is within ALTA positional tolerances. It is required that the user define which points are to be included in the ALTA testing. The points to be included for ALTA testing are defined in an .Alt file.

There are two options in the FILE menu that are used to create and edit the ALTA, .alt, files: "Open ALTA, Rel. Err. Ellipse File" or "New ALTA, Rel. Err. Ellipse File"

After choosing the ALTA file to be created or edited the following dialog box is displayed.



The above dialog box allows the user to define the points to be included in the ALTA report processing. There are two sections in the .RPT file created through the ALTA reporting. The following report shows the sections of the ALTA report generated by the data in the dialog box. The first section of the report displays only the relative error ellipses between points. The point sequences used in this section come from the list on the right hand side of the above dialog box. The second section of the report performs an ALTA tolerance test and displays only those connections that fall outside of the ALTA tolerances (as set in the ADJUSTMENT tab of the SETTINGS dialog box).

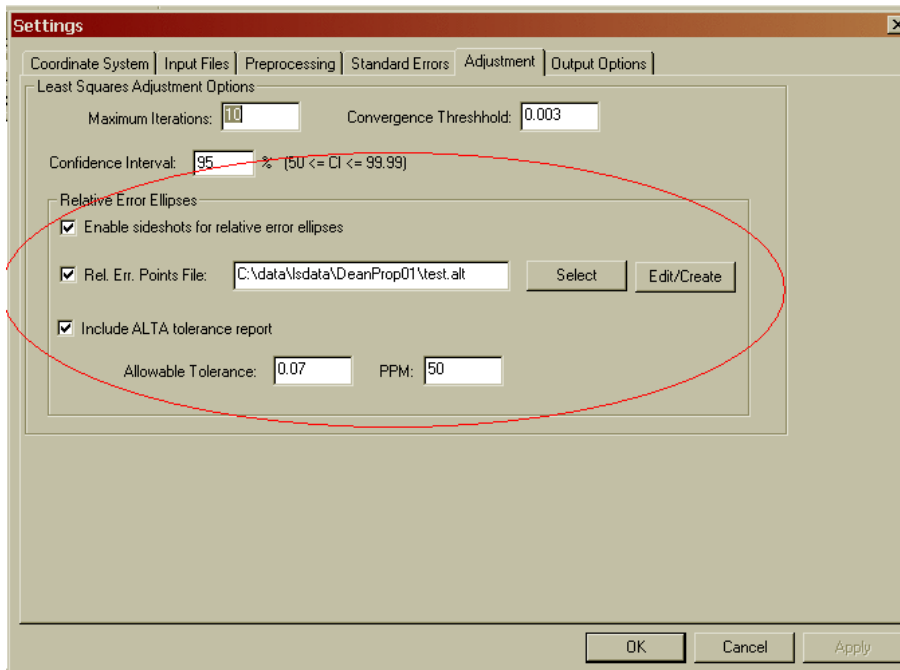
The program first checks the specific point sequences defined by the list on the right side of the dialog box. The program then checks all the connections between all the points listed on the left hand side of the dialog box.

There can be many connections to check if the point list on the left hand side of the dialog box has a lot of points. The user can limit the number of sequences to be displayed that fail the ALTA test by entering a number in the "Max. Connections to display" field.

Notice that you can enter points based on descriptions in the left hand list box. If you wished to check connections between all points with TP, EIP, MON descriptions, enter the descriptions in the edit field and press the 'Add' button. If TP, EIP, and MON represented traverse points, existing iron pipes and monuments then ALTA testing would be performed on those point types.

After you have created the .ALT point file you need to set a few project settings. These settings define the ALTA tolerances, specify the .ALT file to be used, and define the type of reporting to be generated. The 'Adjustment' tab sheet within the project 'Settings', has a relative error ellipse section where the ALTA report settings are located.

All the ALTA reporting settings reside within the Relative Error Ellipse box. If there are any side shots that need to be included in the ALTA testing the 'Enable side shots for relative error ellipses' check box must be checked.



The 'Rel. Err. Points File:' check box must be checked, and an .ALT file must be chosen to get an ALTA report. The .ALT file defines which points will be included in the ALTA reporting. See the previous discussion on the creation of the .ALT file if you are unsure of how to create an .ALT file.

Check the 'Include ALTA tolerance report' check box to create the ALTA tolerance checking report section. If an .ALT file has been chosen then the relative error section of the report will always be generated.

Next make sure the appropriate tolerance and PPM has been defined. The ALTA standards define their positional standard as .07 plus 50 PPM. Additionally, the ALTA standards require that the computations be performed to a 95% confidence. The confidence interval is set in the 'Confidence Interval:' edit field.

In the ALTA report created if the "Ratio Actual/Allowable" is 1.0 or less, the positional tolerance of the two points have passed the ALTA standards.

The first part of the report labeled "Specific Connections" will show all selected connections whether they passed or failed.

The second part of the report, labeled "All Connections" will only show the connections that "failed" (we chose to see the worst 25).

The following is a sample ALTA report:

Relative Error and ALTA Tolerances

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Alta Tolerance Report ,Specific Connections, 95% Confidence Interval

Sta.	Sta.	Dist.	Actual Semi Major	Allowable Semi Major	Ratio Actual/Allowable	Semi Minor	Max. Err.
27	500	204.5030	0.0793	0.0802	0.9890	0.0588 S	85-06'3
500	502	66.8572	0.1132	0.0733	1.5432 0.0842	S	86-05'0
34	36	237.9748	0.0731	0.0819	0.8920	0.0731 N	00-00'0

Alta Tolerance Report ,All Connections, 95% Confidence Interval

Sta.	Sta.	Dist.	Actual Semi Major	Allowable Semi Major	Ratio Actual/Allowable	Semi Minor	Max. Err.
506	556	806.5402	1.0818	0.1103	9.8054	0.2586	S 86-37'4
507	556	827.2364	1.0832	0.1114	9.7268	0.2446	S 86-37'0
505	556	818.7994	1.0779	0.1109	9.7158	0.2386	S 86-48'2
508	556	854.9436	1.0836	0.1127	9.6108	0.2477	S 86-38'3
509	556	880.6338	1.0848	0.1140	9.5129	0.2489	S 86-45'3
521	556	798.2729	1.0387	0.1099	9.4500	0.2318	S 87-22'5
512	556	793.0518	1.0334	0.1097	9.4245	0.2127	S 87-21'3
517	556	907.2084	1.0856	0.1154	9.4106	0.2379	S 87-07'3
510	556	918.6572	1.0861	0.1159	9.3682	0.2525	S 86-52'4
516	556	935.1194	1.0885	0.1168	9.3228	0.2426	S 87-22'
511	556	941.3134	1.0830	0.1171	9.2516	0.2283	S 87-33'4
518	556	962.0899	1.0893	0.1181	9.2231	0.2345	S 87-36'4
550	556	656.1441	0.9453	0.1028	9.1946	0.1952	S 87-09'4
515	556	978.6797	1.0882	0.1189	9.1495	0.2484	S 87-34'1
513	556	981.5606	1.0893	0.1191	9.1477	0.2452	S 87-42'0
514	556	985.2691	1.0895	0.1193	9.1349	0.2454	S 87-41'5
519	556	993.3973	1.0904	0.1197	9.1116	0.2388	S 87-32'5
504	556	1004.012	1.0838	0.1202	9.0163	0.2643	S 86-11'2