

# 7 Using the Data Collection Tools

Introduction Carlson SurvCE is a field data collection package with extensive utilities. In this chapter we will explore several major utilities and help you become comfortable with using them in the field.

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Overview At the end of this guide the user will be able to explore the Carlson SurvCE Data Collection Tools which include the following topics:




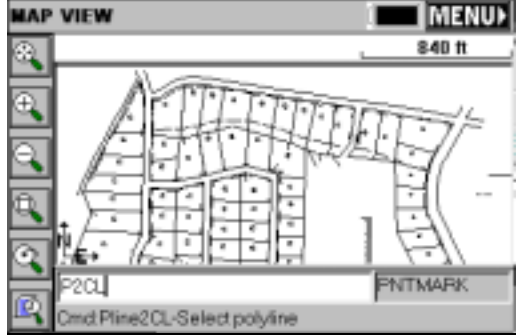
<b>7.1</b>	<b>Understanding Screen Views</b>
7.1.1	The Menu and Map Screens
7.1.2	The Graphic and Text Screens
<b>7.2</b>	<b>Display Controls</b>
<b>7.3</b>	<b>Point Information</b>
7.3.1	Point Labels
7.3.2	Point Descriptors
7.3.3	Point Notes
<b>7.4</b>	<b>Linework</b>
<b>7.5</b>	<b>The Command Line – CADD Commands</b>

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## 7.1 Understanding Screen Views

Screen Views There are four important icons that control which view you are in.

### 7.1.1 The Menu and Map screens

Description	Screen
<p></p> <p>The <b>MENU</b> button, when pressed, will always exit the current program and return the user to the main menu.</p>	
<p></p> <p>The <b>MAP</b> button, when pressed, will open a window allowing the user the flexibility of editing and creating data via CADD commands.</p> <p>CADD commands are explained in further detail later in this chapter, <i>7.5 The Command Line</i>.</p>	

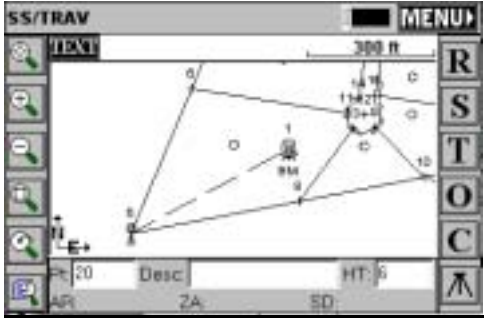
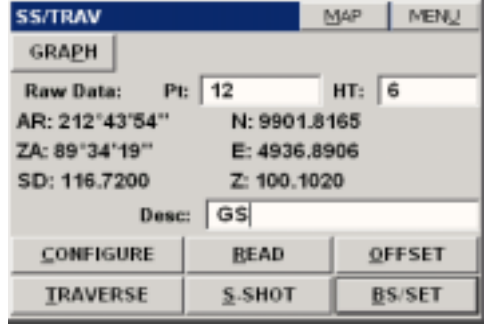
*End of The Menu and Map screens*

## 7.1 Understanding Screen Views, Continued

### 7.1.2 The Graphic and Text screens

The Graphic and Text screens

When you are in a data collection screen, the Graphic and Text screens can be viewed.

Description	Screen
<p data-bbox="430 661 592 724"><b>GRAPH</b></p> <p data-bbox="430 751 812 877">The <b>GRAPH</b> button lets you graphically see data plotted to the screen as the points are collected.</p>	
<p data-bbox="430 1054 511 1102"><b>TEXT</b></p> <p data-bbox="430 1129 812 1255">The <b>TEXT</b> button lets you view the position and coordinate information updated for each point collected.</p>	

*End of The Graphic and Text screens*






## 7.2 Display Controls

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User Display      The User Display includes the control for Zoom functions and the Point Display options.

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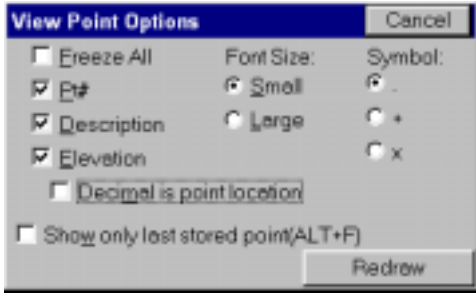
Zoom Icons      The Zoom functions are:

Icon	Description
	<b>Zoom Extents:</b> Zooms to the extents of the map, showing all points and objects.
	<b>Zoom In:</b> Zooms in 25% of screen view
	<b>Zoom Out:</b> Zooms out 25% of screen view
	<b>Zoom Window:</b> Zooms in to user definable rectangular area on screen.
	<b>Zoom Previous:</b> Zooms to the previous view - maximum up to 50 stored

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Point Display      Set the Point information to be viewed in Graphic screen.

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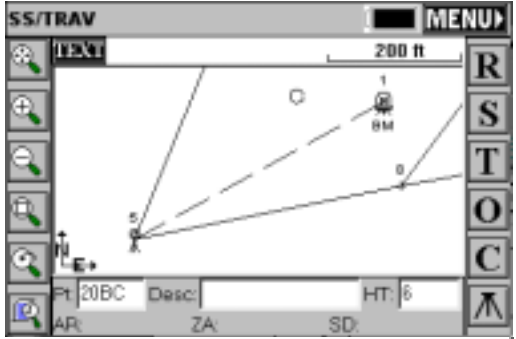
Icon	Screen
	<p><b>View Point Options:</b> This opens a dialog box where you can select which point information is to be seen on the screen.</p> 

*End of Display Controls*

## 7.3 Point Information

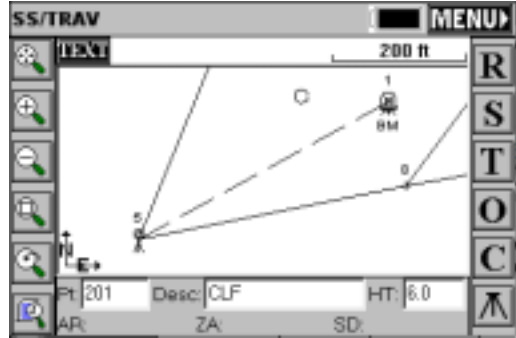
Point Information Point information can include alphanumeric point labels, descriptors from a Feature Code table, and notes saved to a text file.

### 7.3.1 Point Labels

Description	Screen
<ul style="list-style-type: none"> <li>Enter the desired label (point ID) into the "Pt:" field.</li> </ul> <p><b>Notes:</b></p> <ul style="list-style-type: none"> <li>A point entered as <b>BC20</b> will increment to <b>BC21</b>.</li> <li>A point entered as <b>20BC</b> will increment to <b>20BD</b>.</li> </ul>	

*End of Point Labels*

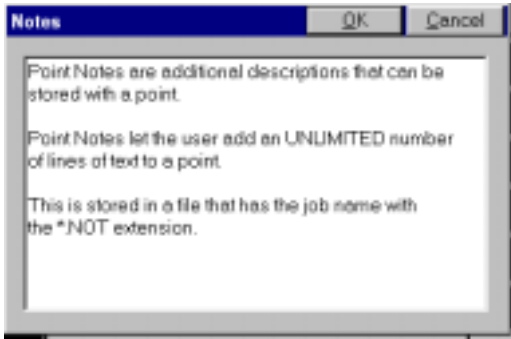
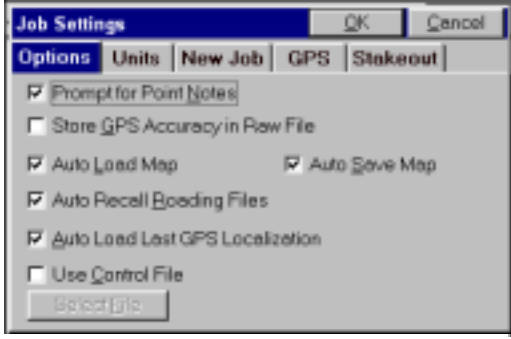
### 7.3.2 Point Descriptions

Description	Screen
<p>When collecting data, enter the Code or Description into the "Desc:" field.</p> <p><b>Notes:</b> Point descriptions can be up to 32 characters long and do not have to come from a pre-determined Feature Code List.</p> <p>If using a feature code list, when the user stores the point, the program will compare the description against the selected Feature Code List and apply the appropriate information.</p>	

*End of Point Descriptors*

## 7.3 Point Information, Continued


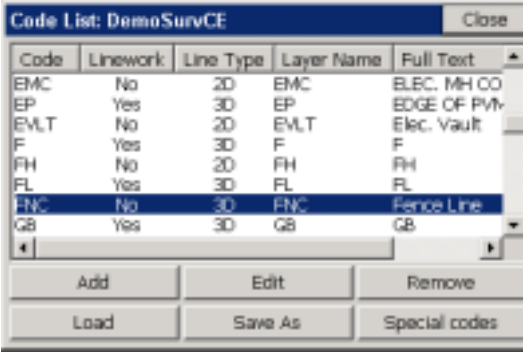
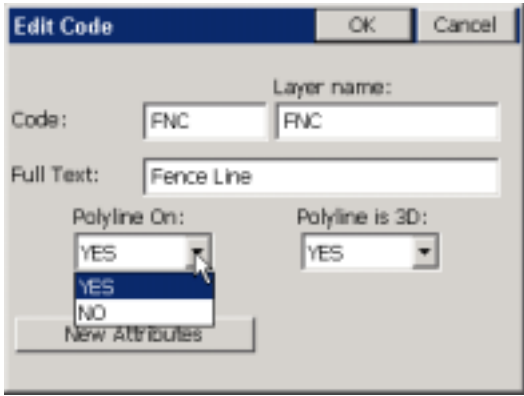
### 7.3.3 Point Notes

Description	Screen
<p>The "Notes" box allows the user to add unlimited lines of text to a particular point, beyond the standard 32 characters of a description.</p> <p>The "Notes" box opens with a Hotkey - <b>CTRL W</b> - or for every stored point.</p> <p>Notes added to a point are stored in a text file with the extension <b>*.NOT</b>.</p>	
<p>To enable Notes for every stored point, it must be set in the <b>Job Settings</b> tab, from the <b>File</b> tab in the main menu.</p> <ul style="list-style-type: none"><li>• Select the "Prompt for Point Notes" check box.</li></ul>	

*End of Point Information*


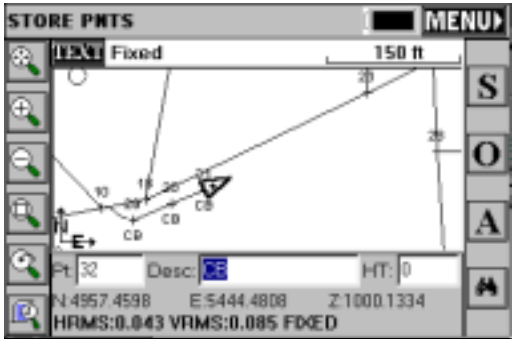
## 7.4 Linework

Linework By using a Feature Code List, linework can be plotted between points collected with the same code.

Step	Action	Display
1	<p>In the Feature Code List, you can enable linework to points as they are plotted.</p> <p>From the SurvCE main menu:</p> <ul style="list-style-type: none"> <li>• Press the <b>File</b> tab.</li> <li>• Press the <b>5 Feature Code List</b> button.</li> </ul> <p>This takes you to the "Code List" screen.</p>	
2	<p>In the "Code List" screen:</p> <p>You will see a column labeled <i>Linework</i>. The option for Linework is either <b>Yes</b> or <b>No</b>.</p> <p>For code <i>FNC</i>, Linework is not enabled. The user can edit this code and toggle this to <b>Yes</b>.</p> <ul style="list-style-type: none"> <li>• Press the <b>Edit</b> button.</li> </ul> <p>This takes you to the "Edit Code" screen.</p>	
3	<p>In the "Edit Code" screen:</p> <p>The user has the option to turn Polylines on or off.</p> <ul style="list-style-type: none"> <li>• Select <b>YES</b> or <b>NO</b> for the code.</li> <li>• Press the <b>OK</b> button after your changes are complete.</li> <li>• Close the Code list and Save changes.</li> </ul> <p>Turn Polyline <i>On</i> by selecting <i>Yes</i> for all Feature Codes which lines should be connected between plotted points.</p>	

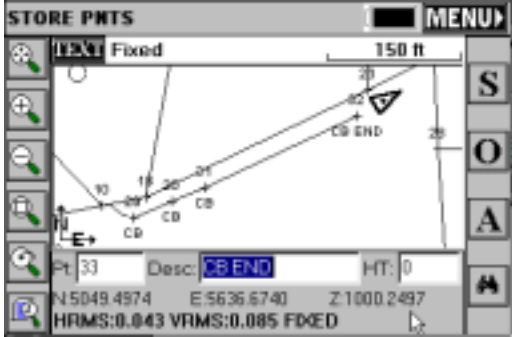
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## 7.4 Linework, Continued

Step	Action	Display
4	<p>Once you have set the Feature Codes for Polylines On, the user is ready to collect data and Linework.</p> <p>From the SurvCE main menu:</p> <ul style="list-style-type: none"> <li>• Press the <b>Surv</b> tab.</li> <li>• Press the <b>1 Store Points</b> (GPS mode) or <b>1 Sideshot/Traverse</b> (TPS mode) button.</li> </ul> <p>This takes you to the "STORE PNTS" screen.</p>	
5	<p>In the "STORE PNTS" screen:</p> <p>The display should look similar to this.</p> <ul style="list-style-type: none"> <li>• Enter a Feature Code in to the "Desc:" field, <i>CB</i> for example.</li> <li>• Record the first point and the point is plotted with Pt Num and Code- without needing to START the line.</li> <li>• Record the second point and you will see a line connecting the two recorded points.</li> </ul>	

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## 7.4 Linework, ContinuedContinued

Step	Action	Display
6	<p>Continuing in the "STORE PNTS" screen:</p> <p>To end a line:</p> <ul style="list-style-type: none"> <li>Enter the Feature Code plus the word <i>END</i> in to the "Desc:" field.</li> </ul> <p>The word <i>END</i> is called a Special Code suffix.</p> <p>There are several Special Code suffixes that control linework.</p> <p>Examples:</p> <p><i>PC:</i> To begin a 3 point curve.  <i>SMD</i> To begin smoothing between points.  <i>END</i> To end linework at a point.</p> <p>For more information on Special Word Suffixes, refer to the <i>Carlson SurvCE Reference Manual</i> under Feature Codes.</p>	

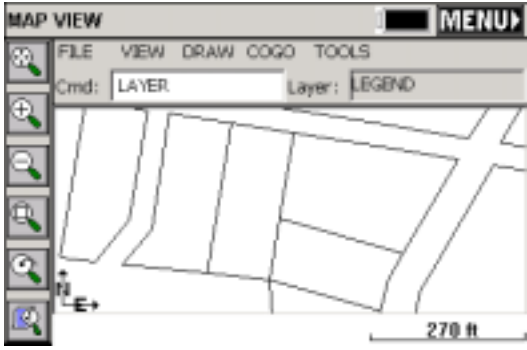
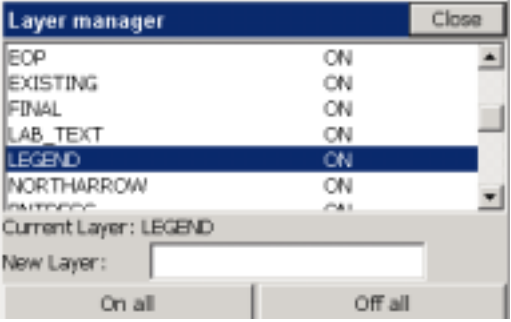
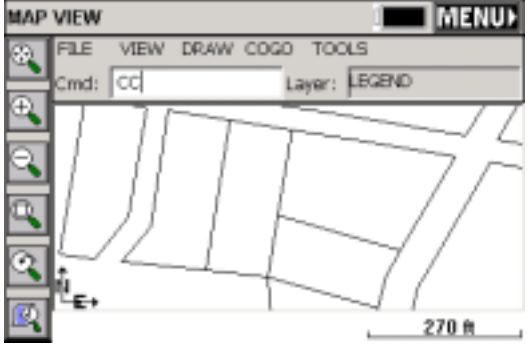
*End of Linework*

## 7.5 The Command Line – CADD Commands

### Executing Commands

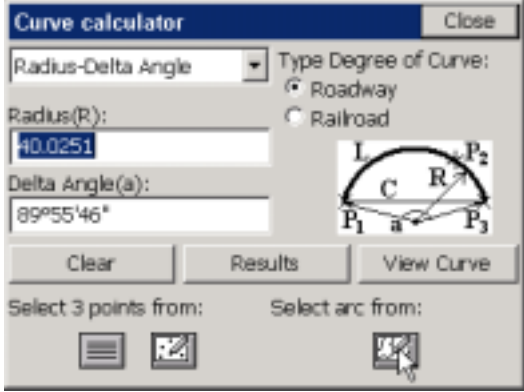
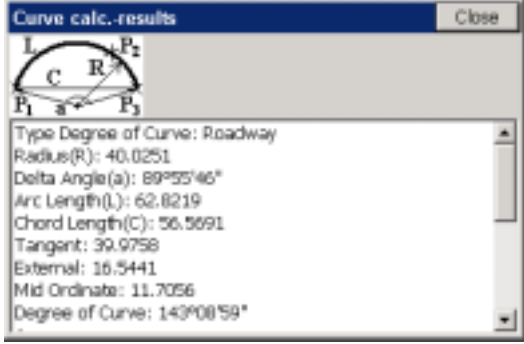
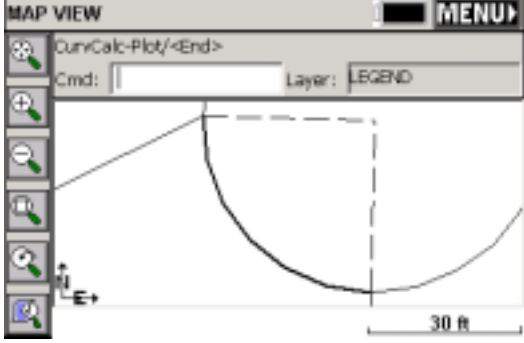
From the “MAP VIEW”, the user has the ability to enter in CADD commands that can create, compute, and edit data from the working job. This function is also known as **CECADD**.

*For a detailed explanation of all commands available, please refer to the Carlson SurvCE Reference Manual, MAP Screen Commands.*

Step	Action	Display
1	<p>The Command line is accessed from the “MAP VIEW” screen. Commands are executed here, either by entering in the command name or the command alias.</p> <ul style="list-style-type: none"> <li>Enter in the command name in the command line, <b>LAYER</b> for example.</li> </ul>	 <p>The screenshot shows the 'MAP VIEW' interface with a menu bar (FILE, VIEW, DRAW, COGO, TOOLS) and a 'MENU' button. The command line contains 'LAYER' and the layer is set to 'LEGEND'. A map of a street layout is visible below, with a 270 ft scale bar.</p>
2	<p>This will bring up the “Layer manager” screen.</p> <p>This command manages layers and layer properties. Layers can be created, deleted, set to current, or turned off/on.</p> <ul style="list-style-type: none"> <li>Press the <b>Close</b> button when finished with Layer manager.</li> </ul>	 <p>The 'Layer manager' dialog box is shown with a 'Close' button. It lists several layers: EOP (ON), EXISTING (ON), FINAL (ON), LAB_TEXT (ON), LEGEND (ON), NORTHARROW (ON), and PARTWALL (ON). The 'Current Layer' is set to 'LEGEND'. There is a 'New Layer:' input field and 'On all' and 'Off all' buttons at the bottom.</p>
3	<p>In the “MAP VIEW” screen:</p> <p>A command can be entered by its name or alias. Above, a name was used and here an alias is shown.</p> <ul style="list-style-type: none"> <li>Enter in the command alias <b>CC</b>.</li> </ul> <p>This takes you to the “Curve Calculator” screen.</p>	 <p>The screenshot shows the 'MAP VIEW' interface with the command line containing 'CC' and the layer set to 'LEGEND'. The map and scale bar are the same as in the previous screenshot.</p>

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## 7.5 The Command Line – CADD Commands, Continued

Step	Action	Display
4	<p>In the “Curve Calculator” screen:</p> <ul style="list-style-type: none"> <li>Enter the curve information.</li> </ul> <p>The user can enter in the curve information or use points from the current Job by selecting from 3 points from the screen or points list.</p> <p>If the arc exists in the current Job as a polyline, the user can select the arc from the “MAP VIEW” screen.</p>	
5	<p>When the necessary values are entered to satisfy a curve calculation, the <b>Solve</b> button appears, or the “Curve Calc. Results” screen opens – this is dependant on whether the information was hand entered or selected from the current job.</p> <ul style="list-style-type: none"> <li>Press the <b>Solve</b> button, if you hand entered curve components.</li> </ul> <p>The “Curve Calc. Results” screen displays all relative information regarding the computed curve.</p>	
6	<p>In the “MAP VIEW” Screen:</p> <p>After closing the “Curve Calc. Results” screen, you are shown the curve solution.</p>	

*End of The Command Line – CADD Commands*