

Chapter 1

Surveying

Contents	Section A	Procedure for Documenting Planning, Design, Construction, and Checkout of Engineering Conservation Practices	FL12-A-1
	Section B	Criteria for the Planning and Designing of Dry Hydrants	FL1B - 1
		A. Initial Set-Up of Survey Style in TSC2 Data Collector for Trimble R8/GNSS Survey Equipment	FL1B – 1
		B. Initial TSC2 Data Collector Job Set-Up	FL1B – 3
		C. Initial Survey Equipment Set-Up	FL1B – 4
		D. Setting Up for Collecting Field Survey Data.	FL1B – 10
		E. Site Elevation Calibration.	FL1B – 12
		F. Downloading the Base Files Using Trimble Data Transfer Software	FL1B – 12
		G. Using the Trimble RINEX Converter	FL1B – 13
		H. Set Up Bluetooth Communications for New Receivers or Other Receivers	FL1B – 16
		I. Trimble Virtual Reference Station (VRS) Network Modem Connection Set-Up	FL1B – 16
		J. Trimble Virtual Reference Station (VRS) Network Dial Profile Set-Up	FL1B – 17
		K. Trimble Virtual Reference Station (VRS) Network Survey Style Setup	FL1B – 18
		L. In the Field with the VRS Network	FL1B – 18
		M. Charging the Battery	FL1B – 19
	Section C	Surveying Procedures for Total Stations with Trimble® TSC2 Data Collector	
	Section C-1	Florida Trimble® S6 Series Total Station With Trimble® TSC2 Data Collector	FL1C1 - 1
		A. Initial Setup of Survey Style In TSC2 Data Collector For The Trimble® S6 Series Survey Equipment	FL1C1 – 1
		B. Initial TSC2 Data Collector Job Setup	FL1C1 – 2
		C. Initial Survey Equipment Setup	FL1C1 – 2
		D. Bluetooth Setup	FL1C1 – 3
		E. Setting Up For Collecting Field Survey Data	FL1C1 – 4
		F. Collecting Field Survey Data	FL1C1 – 5
		G. Making A Turn	FL1C1– 6

	H. To End A Survey	FL1C1 – 7
Section C-2	Florida Trimble® 5600 Series Total Station With Trimble® TSC2 Data Collector	FL1C2 - 1
	Initial Setup Of Survey Style In TSC2 Data Collector For The Trimble® 5600 Series Survey Equipment	FL1C2 – 1
	Initial TSC2 Data Collector Job Setup	FL1C2 – 2
	Initial Survey Equipment Setup	FL1C2 – 2
	Setting Up For Collecting Field Survey Data	FL1C2 – 3
	Collecting Field Survey Data	FL1C2 – 3
	Making A Turn	FL1C2 – 4
	To End A Survey	FL1C2 – 4
Section C-3	Florida Nikon DTM-302 Series Total Station With Trimble® TSC2 Data Collector	FL1C3 – 1
	Initial Setup Of Survey Style In TSC2 Data Collector For the Trimble® 5600 Series Survey Equipment.....	FL1C3 – 1
	Initial TSC2 Data Collector Job Setup	FL1C3 – 2
	Initial Survey Equipment Setup	FL1C3 – 2
	Setting Up For Collecting Field Survey Data	FL1C3 – 3
	Collecting Field Survey Data	FL1C3 – 4
	Making A Turn.....	FL1C3 – 4
	To End A Survey.....	FL1C3 – 5
Appendix C - A	Survey Codes	FL1C-A – 1
Section D	Florida AutoCAD Civil 3D Design Procedures	FL1D - 1
	Setting the User Survey Database and Figure Prefix Databases	FL1D – 1
	Importing a TSC2 Job File Into AutoCAD Civil 3D	FL1D – 2
	Translating Survey Database Using an OPUS Solution	FL1D – 4
	Populating Point Groups	FL1D – 5
	Creating a Surface Using Point Groups	FL1D – 5
	Manually Adding Break Lines to a Surface	FL1D – 7
	Creating an Alignment in AutoCAD Civil 3D	FL1D – 8
	Creating a Profile or Profiles from Alignments	FL1D – 10
	Create Sample Lines in AutoCAD Civil 3D to Layout Cross Sections	FL1D – 12
	Create Cross Sections in AutoCAD Civil 3D Using Sample Lines	FL1D – 15

	Creating a Feature Line from Scratch.....	FL1D – 15
	Grading Objects.....	FL1D – 17
	Comparing Surfaces and Cut/Fill Volumes.....	FL1D – 19
Section E	Planimetry Procedure	FL1E - 1

Exhibits	Exhibit FL1E-1	Survey Control Codes	FL1C - 5
-----------------	-----------------------	----------------------	----------

Tables	Table FL1C-1	Survey Control Codes	FL1C - 5
	Table FL1C-2	Survey Field Codes	FL1C – 6
	Table FL1E-1	Planimetry Tolerances	FL1E - 2
	Table FL1E-2	Stadia Reduction Tables	FL1E - 3
	Table FL1E-4	Map Scale and Equivalents	FL1E - 8

THIS PAGE INTENTIONALLY LEFT BLANK