

TABLE OF CONTENTS

- About Us ii**
- Guaranteed Training..... ii**
- Bentley Systems, Inc ii**
- Copyright..... iii**
- Limitation of Liability iii**
- Trademarks iii**
- Introduction iv**

- Document Conventions iv**
- TABLE OF CONTENTS.....v*

- 1. MicroStation Basics..... 1-3**
 - Minimum Recommended Workstation 1-3**
 - Installation Requirements 1-3
 - Software Prerequisites..... 1-3
 - Minimum Workstation Profile 1-3
 - Directory Changes 1-4**
 - Working Directory..... 1-4
 - Common Data Path..... 1-4
 - Local User Data Path..... 1-4
 - MicroStation Manager 1-5**
 - Bentley New File 1-6**
 - Bentley Tools / File History 1-7**
 - Bentley Directory History 1-8**
 - Lab 1 – MicroStation Basics 1-9**
 - Objectives 1-9
 - Start MicroStation 1-9
 - Using MicroStation Manager..... 1-10
 - Create New Design Files..... 1-14
 - Open Existing Files 1-22
- 2. The MicroStation Graphics Environment 2-1**
 - MicroStation Interface..... 2-1**
 - Primary Tools Tool Box 2-2
 - Attributes Tool Box 2-5**
 - Main Tool Frame - 2004 Edition 2-7
 - Main Tool box 2-7

Table of Contents

| | |
|--|-------------|
| Task Navigation Tool Frame..... | 2-8 |
| Positional Keyboard mapping | 2-10 |
| Main tool box..... | 2-10 |
| Task Navigation | 2-11 |
| Main Classic | 2-12 |
| Status Bar | 2-13 |
| Additional Keyboard Focus | 2-13 |
| Tool Settings Window | 2-14 |
| Workmodes | 2-15 |
| DWG Workmode | 2-15 |
| Mouse Mechanics..... | 2-16 |
| Mouse Wheel Preferences..... | 2-20 |
| View Groups..... | 2-21 |
| Dockable and Floating Dialogs..... | 2-22 |
| Docked tools as tabs | 2-22 |
| Transparent Dialogs..... | 2-23 |
| Transparent Dialog Preference..... | 2-24 |
| Lab 2 – MicroStation Design Environment | 2-25 |
| Objectives..... | 2-25 |
| Open the Design File | 2-25 |
| Mouse Mechanics Review..... | 2-25 |
| PopSet | 2-26 |
| Working with Dialogs | 2-29 |
| Transparent Dialogs | 2-33 |
| Positional Keyboard Mapping | 2-36 |
| 3. Viewing Your Drawing | 3-1 |
| Viewing | 3-1 |
| Workspaces Preferences - View Options..... | 3-1 |
| View Rotation..... | 3-2 |
| View Control Tool box..... | 3-2 |
| View Attributes | 3-3 |
| Lab 3 – Viewing your Drawing | 3-4 |
| Objectives..... | 3-4 |
| Open the Design File | 3-4 |
| Using the Viewing Tools | 3-5 |
| Mouse and View Control..... | 3-10 |
| View Attributes | 3-11 |
| 4. Enhancements | 4-1 |
| Drawing File Enhancements..... | 4-1 |
| Design File Settings | 4-1 |
| Colors | 4-2 |
| Color Books | 4-5 |
| Drawing Scale..... | 4-6 |

| | |
|---|-------------|
| Tool Enhancements | 4-7 |
| Place Line | 4-7 |
| Place Arc..... | 4-7 |
| Cells..... | 4-8 |
| AccuDraw | 4-10 |
| Manipulate..... | 4-11 |
| Modify | 4-15 |
| Lab 4 – Enhancements | 4-16 |
| Objectives | 4-16 |
| Open the Design File..... | 4-16 |
| Design File Settings..... | 4-16 |
| Color Table..... | 4-17 |
| Color Books | 4-19 |
| AccuDraw | 4-21 |
| Gradient Fill..... | 4-29 |
| | |
| 5. Selection and Information | 5-1 |
| Element Selection..... | 5-1 |
| Handles | 5-2 |
| Fences..... | 5-4 |
| Copy/Move Fence Contents..... | 5-4 |
| Saved Fences..... | 5-4 |
| Measuring..... | 5-4 |
| Element Information | 5-5 |
| Lab 5 – Selection and Information..... | 5-7 |
| Objectives | 5-7 |
| Open the Design File..... | 5-7 |
| Measure | 5-7 |
| Element Info Edits | 5-11 |
| Handles | 5-13 |
| Fences..... | 5-21 |
| | |
| 6. Levels | 6-1 |
| Level Manager | 6-1 |
| Level Display | 6-2 |
| Lab 6 – Levels | 6-3 |
| Objectives | 6-3 |
| Open the Design File..... | 6-3 |
| Update Levels from Library | 6-4 |
| Change Priority..... | 6-5 |
| Change Transparency | 6-6 |
| | |
| 7. Annotations | 7-1 |
| Text | 7-1 |
| Inserting Symbols | 7-1 |
| Superscript and Subscript..... | 7-2 |
| Text Fields | 7-3 |

Table of Contents

| | |
|--|-------------|
| Edit Text and Data Fields..... | 7-4 |
| Spell Checker..... | 7-5 |
| Annotation Tools | 7-5 |
| Cloud..... | 7-5 |
| Detailing Tool box | 7-6 |
| Place Note | 7-6 |
| Dimensioning..... | 7-7 |
| Dimension Style dialog..... | 7-7 |
| Lab 7 – Annotations | 7-8 |
| Objectives..... | 7-8 |
| Open the Design File | 7-8 |
| Text Fields..... | 7-8 |
| Place Note | 7-15 |
| Cloud Tool | 7-16 |
| 8. Models and Cells..... | 8-1 |
| Models..... | 8-1 |
| Model Properties | 8-2 |
| New Model Properties | 8-2 |
| Cells..... | 8-3 |
| Annotation Scale | 8-3 |
| Attachments..... | 8-4 |
| Lab 8 – Models and Cells..... | 8-5 |
| Objectives..... | 8-5 |
| Open the Design File..... | 8-5 |
| Model Annotation Scale..... | 8-5 |
| Model Properties | 8-7 |
| Cell Annotation Scale..... | 8-8 |
| Model Filters..... | 8-10 |
| Place Annotation Cells..... | 8-11 |
| 9. Referencing..... | 9-1 |
| Enhanced References dialog..... | 9-1 |
| Reference Attachment Settings | 9-2 |
| Reference File Types | 9-3 |
| Reference Set key-ins | 9-3 |
| Lab 9 – Referencing..... | 9-4 |
| Objectives..... | 9-4 |
| Open the Design File | 9-4 |
| Attach Reference | 9-5 |
| Treat Attachment as Element for Manipulation | 9-6 |
| 10. Printing | 10-1 |
| Printer Drivers..... | 10-1 |
| Print dialog box..... | 10-4 |
| Rasterized | 10-4 |

| | |
|---|--------------|
| Use Full Sheet | 10-5 |
| Print Destination | 10-6 |
| Print Preferences | 10-7 |
| 3D Plotting Options | 10-8 |
| Pentables..... | 10-9 |
| Pen Table Options..... | 10-9 |
| Priority..... | 10-11 |
| Transparency | 10-11 |
| Batch Printing..... | 10-12 |
| Print Preferences..... | 10-12 |
| Printer Properties | 10-13 |
| Display Properties..... | 10-14 |
| Lab 10 – Printing | 10-15 |
| Objectives | 10-15 |
| Open the Design File..... | 10-15 |
| Define the Print Boundary | 10-15 |
| Change Transparency | 10-19 |
| Create a Pen Table..... | 10-19 |
| Print the file to PDF Format | 10-25 |
| 11. Google Earth..... | 11-1 |
| Google Earth Toolbar | 11-1 |
| General Workflow - Export to Google Earth | 11-2 |
| General Workflow – Capture Google Earth Image | 11-4 |
| Google Earth Setup: | 11-4 |
| MicroStation Setup:..... | 11-5 |
| Capture Google Terrain and Image | 11-6 |
| Google 3D Warehouse..... | 11-7 |
| 12.3D and Visualization | 12-1 |
| 3D Basics..... | 12-1 |
| Visualization..... | 12-2 |
| INDEX | i |