



CadQuant Agencies CC | Reg. No.: 2008/241604/23 | Vat. No.: 49 1025 3956 | Member: L.R.Donaldson
P.O.BOX 247 LINKHILLS 3650 | TEL: 031 035 0891 | RIDGE OFFICE PARK | SUITE 5 BLOCK A | 45 RIDGE ROAD HILLCREST
WEB: <http://www.cadquant.com> | EMAIL: info@cadquant.com

INTRODUCTION TO MODELMAKER TRAINING COURSE CONTENT: (Course duration – full day)

1. Security, Setup, Licencing and Configuration.
2. Main Desktop Layouts
3. Setting up and customising.
 - a. Main Menu and Help Files
 - b. Sub Menu
 - c. CAD Menu
 - d. Display and Tool Bars
 - e. Settings
 - f. Defaults
 - g. Plotter Pen and Colours
 - h. Parameters
 - i. Shortcuts
4. Data Input
 - a. File Structures
 - b. Importing ASCII, Electronic and Manual Data.
 - c. Manipulation
 - d. Constants
 - e. Codes
 - f. Audit
 - g. Rotation
 - h. Transformations
5. Triangulation
 - a. Creating
 - b. Editing
 - c. Errors
 - d. Display and Break Lines
6. DTM Points.
 - a. Creating
 - b. Information
 - c. Manipulation (Codes, Elevation)
 - d. Creating DTM from a CAD drawing
7. Output of Data
 - a. Plotting
 - b. Exporting to dwg, dxf and dgn
 - c. Plot Scales
 - d. ASCII
 - e. File saving structures.



CadQuant Agencies CC | Reg. No.: 2008/241604/23 | Vat. No.: 49 1025 3956 | Member: L.R.Donaldson
P.O.BOX 247 LINKHILLS 3650 | TEL: 031 035 0891 | RIDGE OFFICE PARK | SUITE 5 BLOCK A | 45 RIDGE ROAD HILLCREST
WEB: <http://www.cadquant.com> | EMAIL: info@cadquant.com

INTRODUCTION TO CAD TRAINING COURSE CONTENT: (Course duration – full day)

1. Cad Menus
 - a. Speed Menu – Cad Entities
 - b. Speed Menu – Cad Other
2. Snap Modes
3. Detailed functions explained:
 - a. Lines
 - b. Text
 - c. Circles
 - d. Hatching
 - e. Dimensions
 - f. Arrows
 - g. Patterns
 - h. Drawing and saving patterns/symbols.
4. Global CAD entity manipulation
5. CAD ID and ManID
6. Loading and positioning DWG/DXF drawings
7. Importing and positioning Images e.g., Tiff, JPG, Google Earth, Sid etc.
8. Working with shape (Shp) files
9. Converting CAD poly line contours to live DTM.
10. Plotting options explained
11. General tips and tricks
12. If time permits:
13. Working with CAD layers
14. Setting up line and text styles
15. Creating user title blocks
16. Creating custom line types



CadQuant Agencies CC | Reg. No.: 2008/241604/23 | Vat. No.: 49 1025 3956 | Member: L.R.Donaldson
P.O.BOX 247 LINKHILLS 3650 | TEL: 031 035 0891 | RIDGE OFFICE PARK | SUITE 5 BLOCK A | 45 RIDGE ROAD HILLCREST
WEB: <http://www.cadquant.com> | EMAIL: info@cadquant.com

INTRODUCTION TO ROAD MAKER TRAINING COURSE CONTENT: (Course duration – full day)

Horizontal Alignments:

- Creating alignments
- Pointing to PI
- Selecting a polyline
- Text Editor
- Working with alignment in Model Maker
- Alignment vs strings and conversion methods

Long & Cross Section data extraction:

Loading and Importing Data into Road Maker:

- File Formats explained.
- Loading Data from Model Maker

Long Sectional Profile Design:

- Working with Vertical PI's

Cross Sectional Profile Design:

- Defining a road profile for single and dual carriageways
- Shoulder Definition and layers
- Layer Definition
- Kerbing
- Super Elevation
- Topsoil strip and replacement.

Volumetric Calculations:

- Mass cut / fill volumes
- Embankments & Clear and Grub
- Road foundation layers
- Sidewalk layers
- Roadbed preparation
- Side drains

Plot:

- Settings (X-Sections, L-Sections, Plan Plotting)
- Exporting CAD and Printing

Reporting:

- Setting out data



CadQuant Agencies CC | Reg. No.: 2008/241604/23 | Vat. No.: 49 1025 3956 | Member: L.R.Donaldson
P.O.BOX 247 LINKHILLS 3650 | TEL: 031 035 0891 | RIDGE OFFICE PARK | SUITE 5 BLOCK A | 45 RIDGE ROAD HILLCREST
WEB: <http://www.cadquant.com> | EMAIL: info@cadquant.com

ADVANCED ROAD MAKER TRAINING COURSE CONTENT: (Course duration – full day)

1. Horizontal Alignments:
 - a. Creating multiple alignments
 - i. Selecting a polyline
 - ii. Converting alignments to strings
2. Strings:
 - a. Service strings.
 - b. General strings
 - c. Pipe Strings
3. Long & Cross Section data extraction:
 - a. Working with Bot files
 - b. Long section and cross sections directly from Bot files
4. Long Sectional Profile Design:
 - a. Parabolic vs circular vertical curves
 - b. Cut and fill optimization.
5. Cross Sectional Profile Design:
 - a. Working with existing roads
 - b. Verge / gabion design.
 - c. Guard Rails
6. Volumetric Calculations:
 - a. Volume split
7. Designing a Road Network:
 - a. Working with networked roads in Road Maker
8. Geometry Analysis
 - a. Speed Profiles



CadQuant Agencies CC | Reg. No.: 2008/241604/23 | Vat. No.: 49 1025 3956 | Member: L.R.Donaldson
P.O.BOX 247 LINKHILLS 3650 | TEL: 031 035 0891 | RIDGE OFFICE PARK | SUITE 5 BLOCK A | 45 RIDGE ROAD HILLCREST
WEB: <http://www.cadquant.com> | EMAIL: info@cadquant.com

STRINGS MAGIC** INDEPTH USE: (Course duration – full day)

1. Introduction
2. Strings Menu
 - i. Strings
 - ii. Strings Speed Menu
3. Add
 - i. Copy
 - ii. Grade
 - iii. Parallel
 - iv. Node+
 - v. Toeline
 - vi. Fillet
 - vii. Alignment
4. Edit
5. Editor
6. Delete
7. Info
 - i. Area 2
 - ii. Display
 - iii. Names
8. Vert
 - i. 3D
 - ii. Copy cad.
 - iii. Relative grade
 - iv. EditZ
 - v. Constant
 - vi. Node delete.
 - vii. Label
 - viii. Grade Node
 - ix. Name
 - x. Node move.
 - xi. Node add.
9. Utility
 - i. Embankment
 - ii. Quick dam
 - iii. Copy to CAD
 - iv. String - DTM
 - v. Services
 - vi. Horizontal to String
 - vii. DTM on Nodes
 - viii. Update dtm
 - ix. Quick dam - Tutorial
 - x. Drape onto DTM
 - xi. Copy to Horizontal
 - xii. Load Ascii
 - xiii. String Long Section
 - xiv. To Cad - Profile format
 - xv. Record Longsection To CAD
10. Clear
11. Files