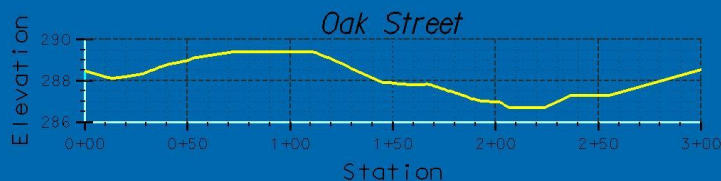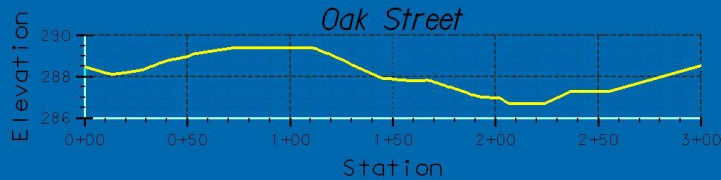# Profiles - Objectives

- What is an InRoads Profile?
- Creating new Profiles
- Sources of Profiling paths
- Display of surfaces & offsets on profiles
- Available Profiling Controls
- Displaying Surface Features on Profiles
- Updating the Profile once it's been cut
- Batch loading & saving InRoads data
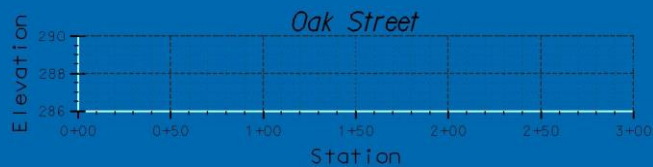

InRoads Profile Defined

- InRoads defines its profile as
  - A graph showing elevation extracted from one or more surfaces along a defined path, such as along an alignment. [InRoads On-line Help file]
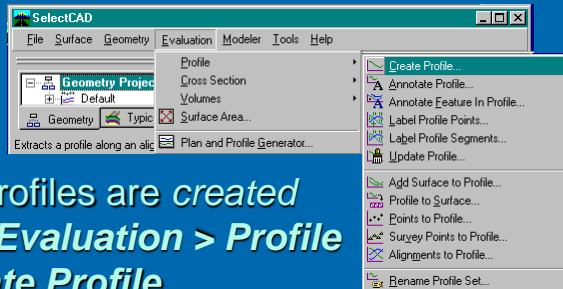
An InRoads Profile

Oak Street

Elevation / Station graph showing elevation values 286, 288, 290 and station values 0+00, 0+50, 1+00, 1+50, 2+00, 2+50, 3+00

- As far as an InRoads Profile is concerned -
  - An InRoads profile refers to an Elev./Sta. '*graph*'
  - An InRoads profile displays <u>DTM</u> <u>data</u>
  - The Vertical Design is <u>not</u> a Profile
  - The Vertical Design is an '<u>overlay</u>' on a profile

An InRoads Profile

Oak Street

Elevation / Station graph showing elevation values 286, 288, 290 and station values 0+00, 0+50, 1+00, 1+50, 2+00, 2+50, 3+00
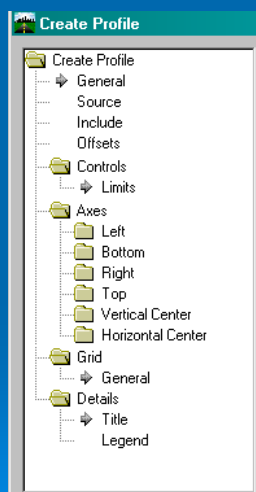
- This is an InRoads Profile
- Does <u>not</u> follow the Pen / Pencil Lock rules
- If anything on this window requires changing – delete the profile / change the command settings / display a new profile window

Profiling

- New Profiles are *created* under ***Evaluation > Profile > Create Profile…***
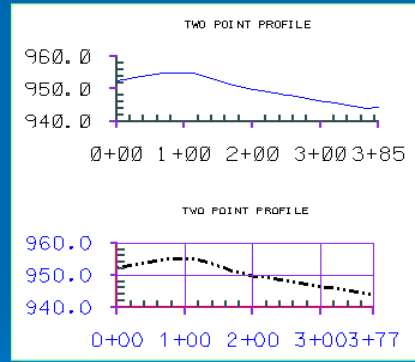- An InRoads Profile is a composite of the DTM data and the Geometry data

Profiling – Set-up

- The profile components are defined on the various tabs
- Set up the ***Controls***, ***Axes***, ***Grid***, …etc. to match required standards
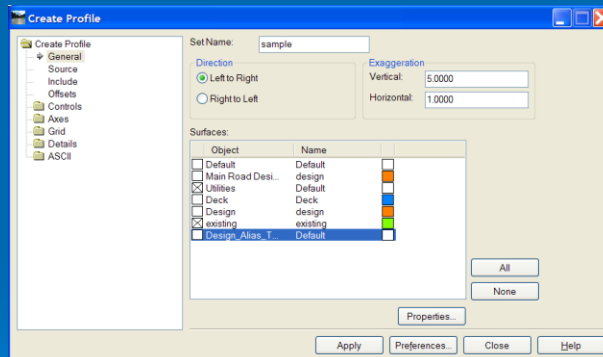- Different profile configurations are named and saved in the *civil.xin* file using the usual *Preferences* button

Different Display Configuration

- Variations in color, fonts, levels, grids, weights, …etc., may be set to conform to departmental display standards
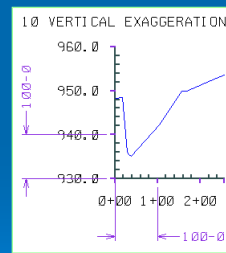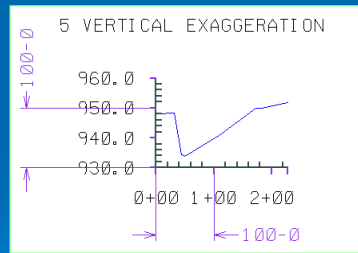- Store these different setups as Preference Sets to be reused later as needed

Profiling – General Leaf

- Define the:
  - *Set Name*
  - *Direction*
  - *Exaggeration*
  - Surfaces to *Display*
- Remember that the DTM *Symbology* is determined by the *Surface Property* of the particular surface
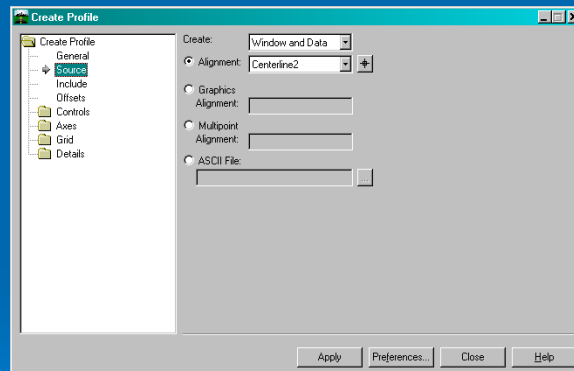
Vertical Exaggeration

- Vertical exaggerations are for display and plotting only, the data is not modified.
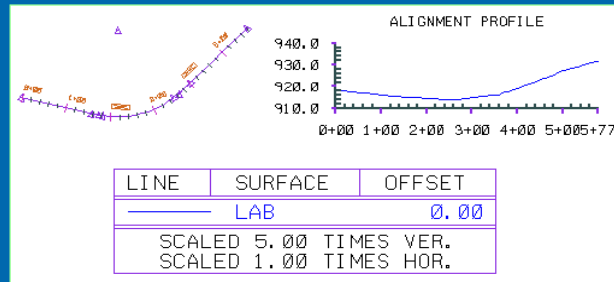
Profile – Source Leaf

- There are 4 Profile Sources:
  - Alignment
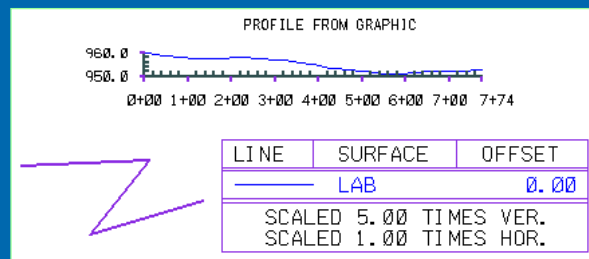 - Graphics
  - Multipoint
  - ASCII file

Profile, Source Alignment

- With *Source* set to ***Alignment***, the selected alignment is profiled when the LL corner of the profile window is located
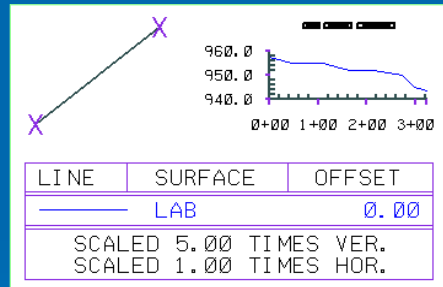
Profile, Source Graphics

- When the *Source* is set to ***Graphic***, the user is first prompted to identify a 'graphic' in the design file and then the LL Profile corner
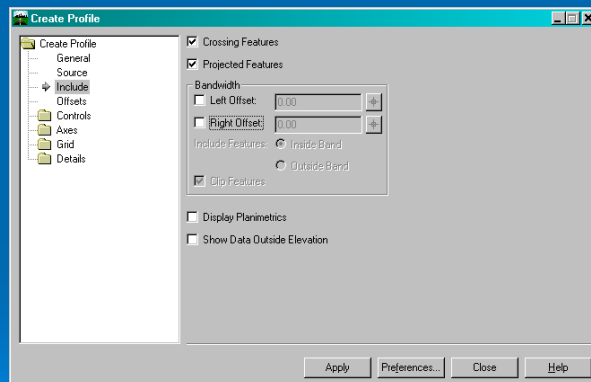
Profile, Source Multi-Point

- With the *Source* set to **Multipoint**, the user can pick any points they wish in the CAD file view.
- *Reset* when done choosing points
- Identify the LL of the Profile window with a data point

LINE	SURFACE	OFFSET
——————	LAB	0.00

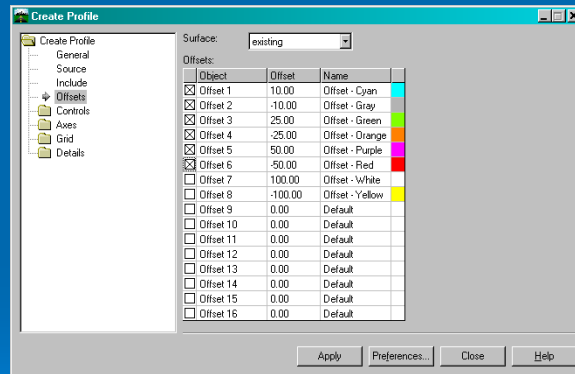SCALED 5.00 TIMES VER.
SCALED 1.00 TIMES HOR.

Profile – Include Leaf

- Include relates to the Features that will be displayed.
  - Crossings
  - Projected
  - Bandwidth
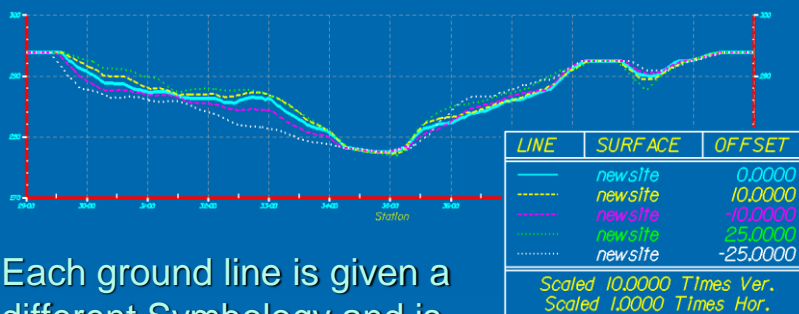 - Planimetrics
  - Show Data Outside

Profiling - Offsets Leaf

- Typically the ground line is shown in the profile window at the centerline
- The *Offsets* tab allow additional surface lines to be shown *offset* from the Profile baseline

---

Profiling - Offsets

LINE	SURFACE	OFFSET
——	newsite	0.0000
------	newsite	10.0000
—·—·—	newsite	-10.0000
········	newsite	25.0000
········	newsite	-25.0000
Scaled 10.0000 Times Ver.		
Scaled 1.0000 Times Hor.		

- Each ground line is given a different Symbology and is wrapped into the Advanced Tab of the Surface Properties

Profiling - Controls

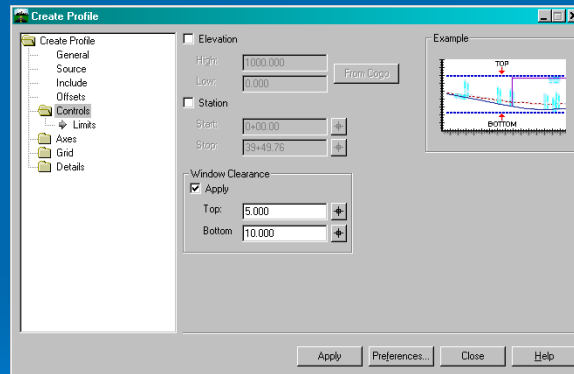- ○ Define:
  - ▲ Any *Limits*
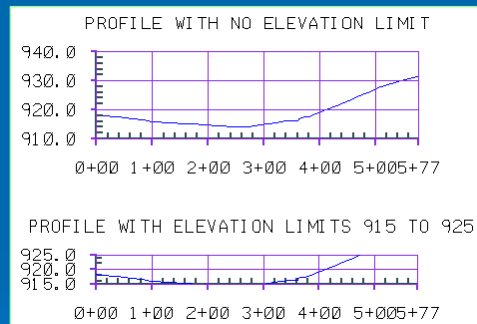   - • Elevation
    - • Station
  - ▲ *Window Clearance*

Elevation Limits

- ○ *Elevation Limits* (vertical right / left axis range of elev.) can be manually set by the user
- ○ Just be aware that it can be set too small and may not show the complete surface info
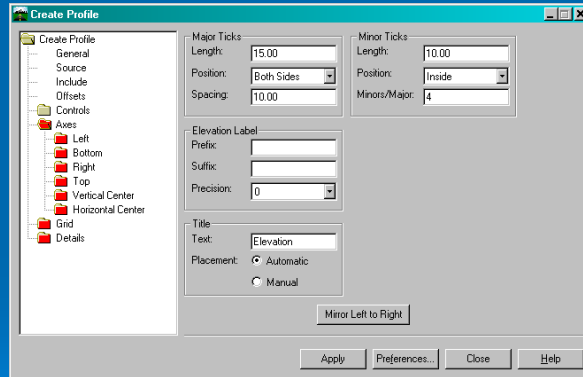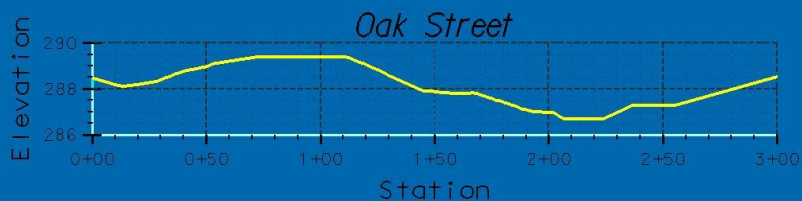
Profile Display (Symbology)

- Symbology:
  - ***Axes***
  - ***Grid***
  - ***Details***
- Axes tab:
  - Left Axis
  - Bottom Axis
  - Right Axis
  - & Other Axes

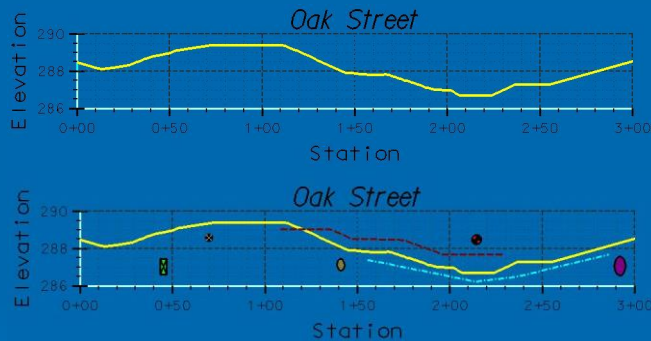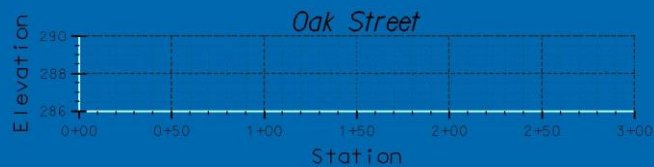# Profile ID Node

- An InRoads Profile:
  - Is typically placed in 'Pencil'
  - Has an ID node at the lower left corner to identify it
  - Is stored graphically in CAD only, not an InRoads file
  - Should be moved as a 'whole', not in pieces
  - Can simply be deleted if not wanted

Surface Data Updating

- Once the Profile is displayed the *Surface Data* can be updated within the profile window
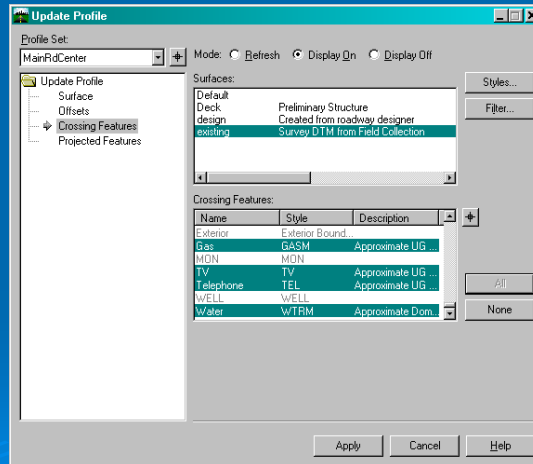
Profile Updating

- The *Grid*, *Axis*, and *Title* information <u>cannot</u> be updated, only the *Surface Data* and the Features inside it
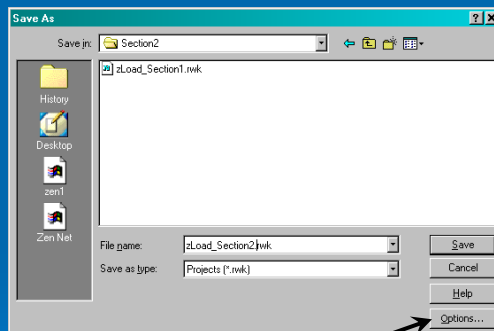- Go to ***InRoads > Evaluation > Profile > Update Profile***

Update Profile

- Choose the *Profile Set*
- Mode:
  - Refresh
  - Display On
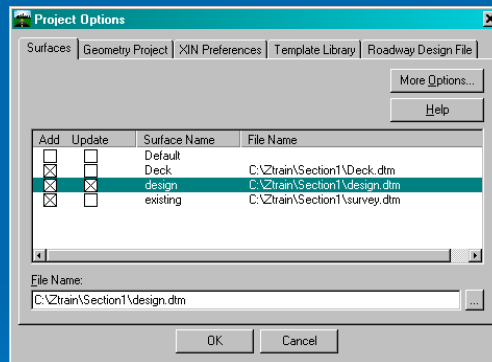 - Display Off
- Surface
- Offsets
- Crossings…
- Projected…

Batch File - Open & Save

- *InRoads* > *File* > *Save As* brings up the 'Save As' dialog box.
- Set the *Save as Type* to **Projects (*.rwk)**
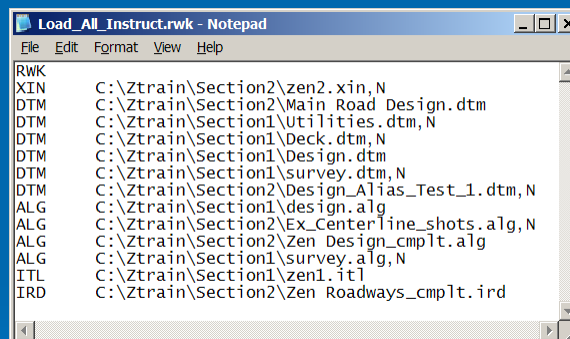- Pick the **Options…** button in the corner

The Project File (.rwk)

- The individual components of the project must be appropriately set on each tab
- This dialog creates an ASCII file that has the locations of the individual files listed

The RWK Text File

- This ASCII file can be viewed and further edited in a simple text editor like Notepad

Profile - Summary

- The Profile, using a *Source* control (align, graphic, data point), displays DTM data along that control
- Profiles can have multiple Surfaces and Offsets
- Surface Properties drive the DTM profile symbology
- Each *Axis* has settings for the *Tick*, *Title*, and *Label*
- Any profile display configurations can be saved and later recalled from the *civil.xin* file
- Display the Profile with the *Pencil Lock* 'on'
- A Profile ID node is placed in the LL of the Profile
- An '.rwk' file can Load & Save data in Batch