

# Appendix F

## RU-Gas Menu Guide



October 2012



# RURAL GAS BARMENU

## For

# MICROSTATION AND POWERDRAFT V8

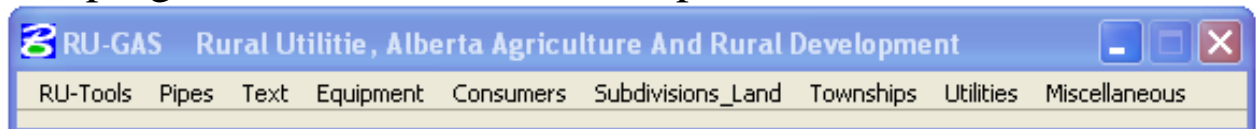
Prepared by:

**Government of Alberta** ■  
Agriculture and Rural Development  
Rural Utilities Division

To Start RU-GAS program within Bentley MicroStation  
V8 or PowerDraft V8:

Key in: **mdl l ru-gas**

The program menu bar will show up:



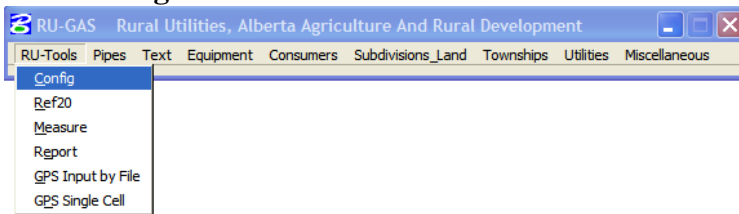


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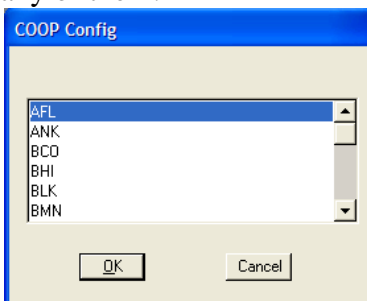
# 1. RU-Tools

## 1.1 Config



### Accelerator Key: c or C

This will open a COOP Config list window for all gas coops to let the user config to any of them:



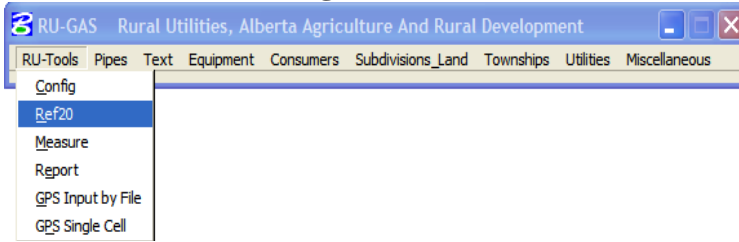
The search path in Microstation workspace for the gas coop will be set as the following:

- Specified coop path + coop name + utl
- Specified coop path + coop name + 300utl
- Specified coop path + coop name + 300lnd
- Specified coop path + coop name + lnd
- Specified coop path + coop name + infill
- Specified coop path + coop name + franchise
- Specified coop path + coop name + sheet
- Specified coop path + coop name + subdivision
- Specified coop path + coop name + cadastral

For Rural Utilities, the specified coop path is default to r:\coops\_v8\. The cadastral path is default to m:\sdw\_land\_bases\w4\.., m:\sdw\_land\_bases\w5\.. and m:\sdw\_land\_bases\w6\... The orthophotos path is default to r:\orthophotos\10tm\10tm\_sid\w4, w5 and w6.

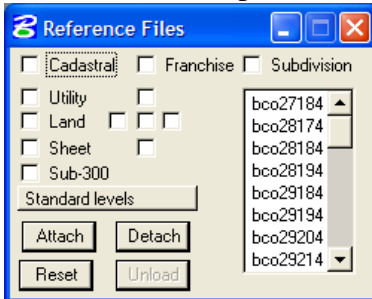
For all other gas coops, the specified coop path is default to c:\coops\_v8\

## 1.2 Ref20 (Run Config first)



Accelerator Key: r or R

Press “Ref20” to open “Reference Files” window:



For every config-ed gas coop, the user will be able to reference the following files:

- Cadastral files;

- Franchise file (one for each gas coop);

- Subdivision file (one for each gas coop);

- Utility files;

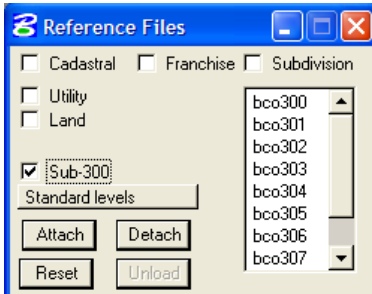
- Land files and

- Sheet files (one sheet file for each gas coop but can be referenced for every township)

Simply put a check mark in the box and pick up files from the right side file list and press Attach, the Ref20 will attach all selected files automatically.

If and only if the opened active dgn file is in the gas coop township list and opened in the specified path, say bco28194.utl or bco28194.i10 or bco28194.lnd, then the user will be able to use the 5 central boxes: north, west, south, east and centre of the active dgn file.

Check on “Sub-300” will change the “Reference Files” window to 300utl:



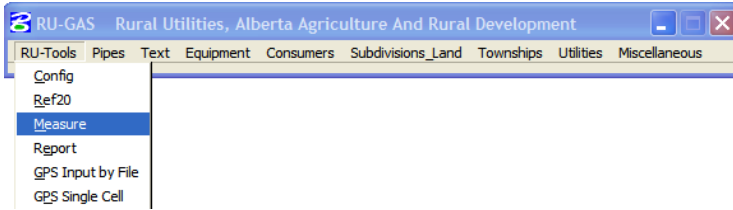


Again, simply put a check mark in the box and pick up files from the right side file list and press Attach, the Ref20 will attach all selected files automatically.

Press Detach will detach all selected files automatically.

Press Reset will blank all check marks.

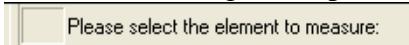
### 1.3 Measure



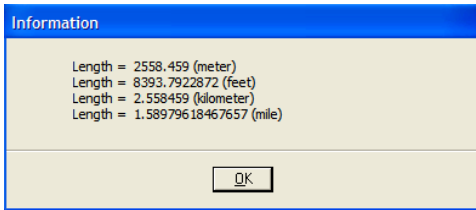
Accelerator Key: m or M

Report parameters of a measured element.

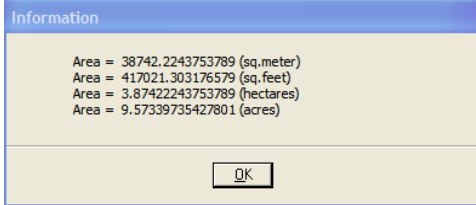
Follow the message after pressing the “Measure” tool:



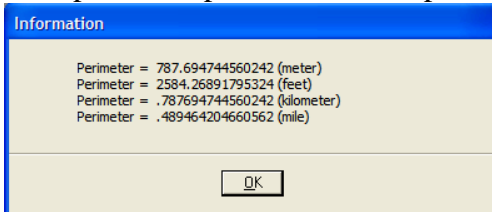
A linear element is selected and its length parameters are reported:



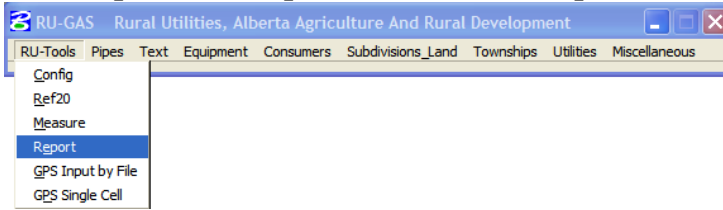
A shape element is selected and its area parameters are first reported:



Then perimeter parameters are reported for the shape:

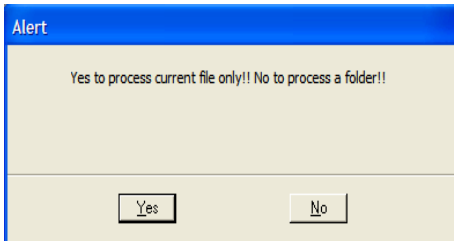


## 1.4 Report( to be updated to statistics report)

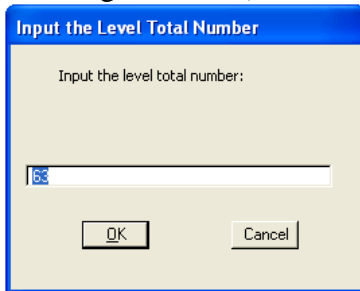


### Accelerator Key: e or E

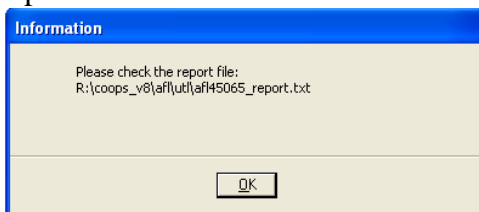
Report the active dgn file information or dgn files information from a folder to an ASCII text file:



After pressing “Yes”, the user will be asked to key in the total level number of the active dgn file: 63 (in this example)



Press “OK” to start. When the processing is done, a message will show up for the report file name and its location:

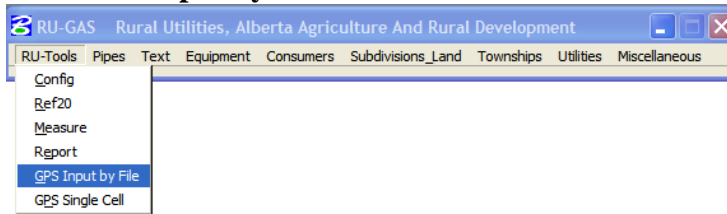


If No is pressed above, then the user will be able to pick up a folder and all dgn files in that folder will be reported to the same ASCII file.

A sample report file:

```
af145065_report.txt - Notepad
File Edit Format View Help
|level color style weight type cell_name
1, -9, -9, -9, CellHeader, 200101
1, 42, 0, 0, Line,
1, -9, -9, -9, CellHeader, RDX
1, 42, 0, 0, Text,
CellHeader Total: 11
Line Total: 11
Text Total: 2
Element_Total: 24
ALL CELLS HAVE -9 FOR COLOR,STYLE AND WEIGHT!!!!!!
Cell Name Total
200101 9
RDX 2
Other_cell: 0
```

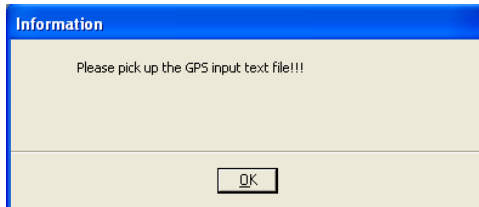
## 1.5 GPS Input by File



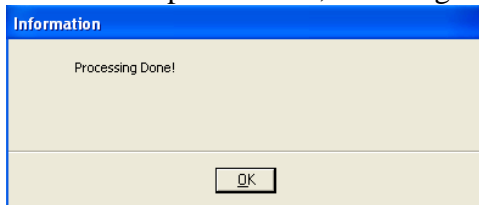
### Accelerator Key: g or G

Import an ASCII file created by “GPS Pathfinder Office”. The ASCII file should be exported through “GPS Pathfinder Office” using a GPS catalogue file which is provided by Alberta Rural Utilities. The purpose to use this GPS catalogue file is to make the GPS tracking features be correctly imported to the active dgn file with the specified symbologies.

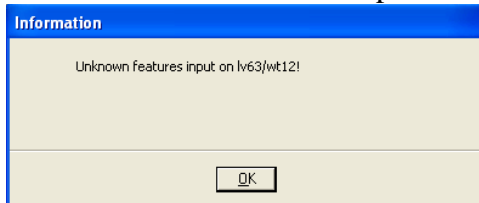
First the user will be asked to select the ASCII file for input:



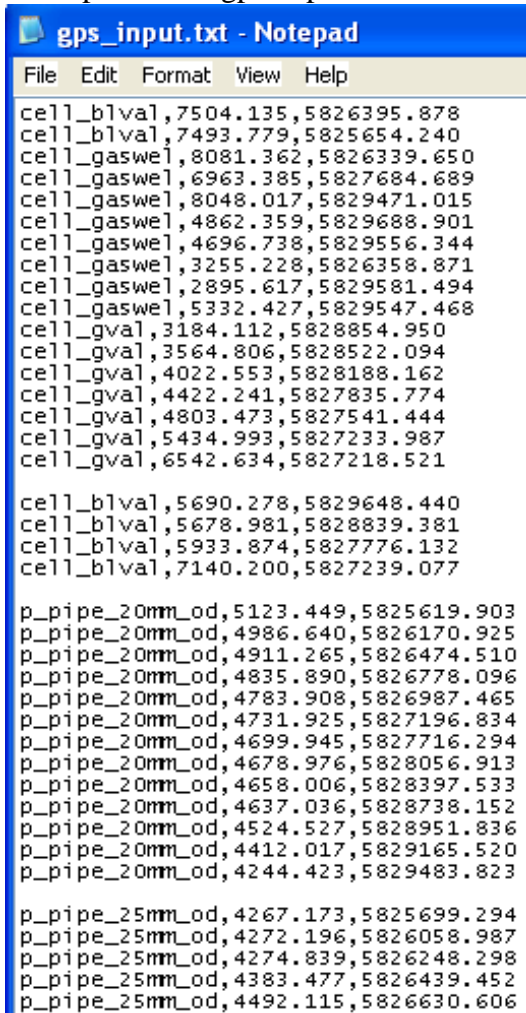
When the import is done, a message box will show up:



The features are specified in the Alberta Rural Utilities digital mapping standard. If a feature is specified in the ASCII file and not followed the standard, then it is an unknown feature and will be put on level 63 and reported as following:



A sample ASCII gps\_input.txt file is listed here:



```
gps_input.txt - Notepad
File Edit Format View Help
cell_blval,7504.135,5826395.878
cell_blval,7493.779,5825654.240
cell_gaswel,8081.362,5826339.650
cell_gaswel,6963.385,5827684.689
cell_gaswel,8048.017,5829471.015
cell_gaswel,4862.359,5829688.901
cell_gaswel,4696.738,5829556.344
cell_gaswel,3255.228,5826358.871
cell_gaswel,2895.617,5829581.494
cell_gaswel,5332.427,5829547.468
cell_gval,3184.112,5828854.950
cell_gval,3564.806,5828522.094
cell_gval,4022.553,5828188.162
cell_gval,4422.241,5827835.774
cell_gval,4803.473,5827541.444
cell_gval,5434.993,5827233.987
cell_gval,6542.634,5827218.521

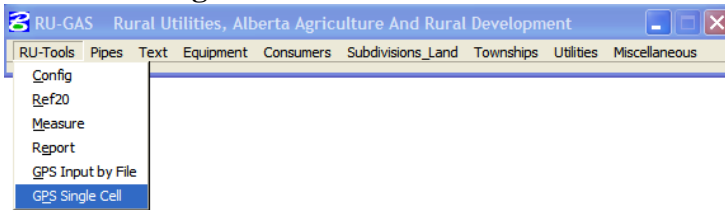
cell_blval,5690.278,5829648.440
cell_blval,5678.981,5828839.381
cell_blval,5933.874,5827776.132
cell_blval,7140.200,5827239.077

p_pipe_20mm_od,5123.449,5825619.903
p_pipe_20mm_od,4986.640,5826170.925
p_pipe_20mm_od,4911.265,5826474.510
p_pipe_20mm_od,4835.890,5826778.096
p_pipe_20mm_od,4783.908,5826987.465
p_pipe_20mm_od,4731.925,5827196.834
p_pipe_20mm_od,4699.945,5827716.294
p_pipe_20mm_od,4678.976,5828056.913
p_pipe_20mm_od,4658.006,5828397.533
p_pipe_20mm_od,4637.036,5828738.152
p_pipe_20mm_od,4524.527,5828951.836
p_pipe_20mm_od,4412.017,5829165.520
p_pipe_20mm_od,4244.423,5829483.823

p_pipe_25mm_od,4267.173,5825699.294
p_pipe_25mm_od,4272.196,5826058.987
p_pipe_25mm_od,4274.839,5826248.298
p_pipe_25mm_od,4383.477,5826439.452
p_pipe_25mm_od,4492.115,5826630.606
```

A blank line between each tracking pipeline is required for the ascii file, but not required for the single cell features.

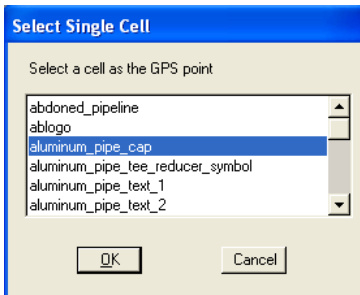
## 1.6 GPS Single Cell



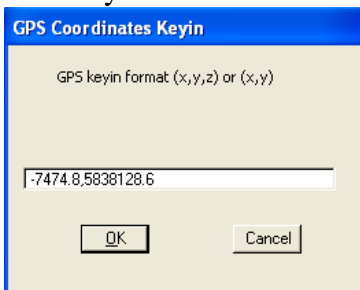
Accelerator Key: p or P

Import a single GPS cell feature.

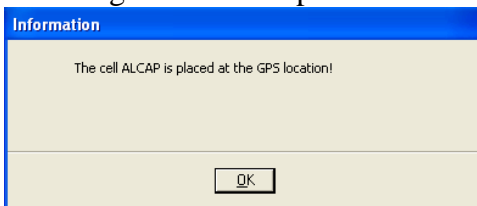
First select a GPS cell feature: aluminum pipe cap (in this example)



Then key in the GPS coordinates manually (follow the given format):



A message will show up:



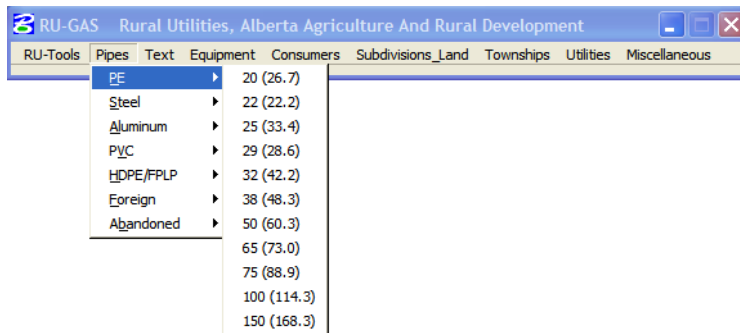
The GPS cell feature will be zoomed to the centre for the user to see after the “OK” button is pressed.





## 2. Pipes

### 2.1 PE



Manually draw PE (polyethylene) pipelines into the active dgn file. Different settings are specified for different PE pipelines.

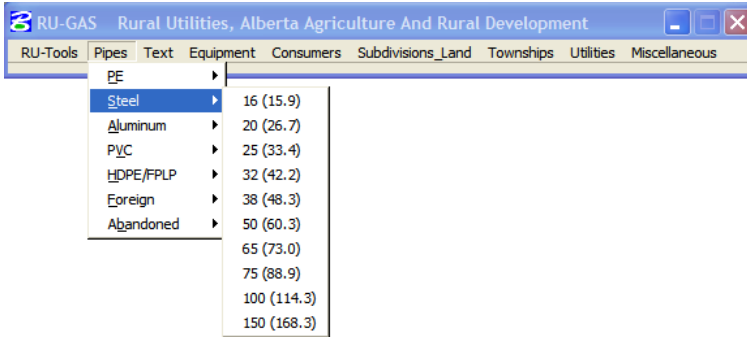
All PE pipeline settings are listed here:

Level	Color	Weight	Line Style	Nominal Size
26	26	3	0	20mm
26	22	3	0	22mm
26	33	3	0	25mm
26	28	3	0	29mm
26	42	3	0	32mm
26	48	3	0	38mm
26	60	3	0	50mm
26	73	3	0	65mm
26	88	3	0	75mm
26	114	3	0	100mm
26	168	3	0	150mm

Follow the message and use the data button to place the PE pipeline:

Place PE pipe (20mm):

## 2.2 Steel



Manually draw steel pipelines into the active dgn file. Different settings are specified for different steel pipelines.

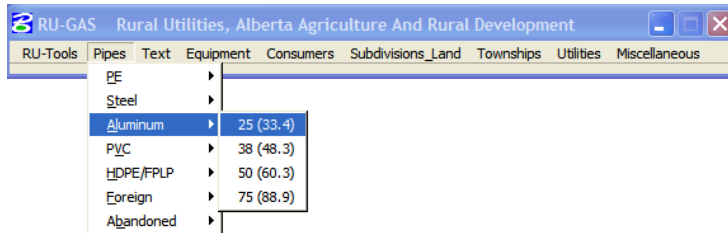
All Steel pipeline settings are listed here:

Level	Color	Weight	Line Style	Nominal Size
20	15	3	0	16mm
20	26	3	0	20mm
20	33	3	0	25mm
20	42	3	0	32mm
20	48	3	0	38mm
20	60	3	0	50mm
20	73	3	0	65mm
20	88	3	0	75mm
20	114	3	0	100mm
20	168	3	0	150mm

Follow the message and use the data button to place the ST pipeline:

Place ST 16(mm) pipeline:

## 2.3 Aluminum



Manually draw aluminum pipelines into the active dgn file. Different settings are specified for different aluminum pipelines.

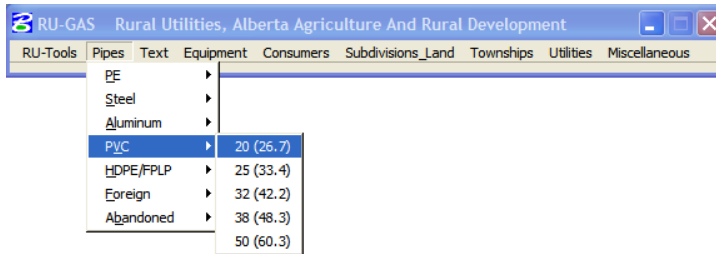
All Aluminum pipeline settings are listed here:

Level	Color	Weight	Line Style	Nominal Size
23	33	3	0	25mm
23	48	3	0	38mm
23	60	3	0	50mm
23	88	3	0	75mm

Follow the message and use the data button to place the AL pipeline:

Place AL pipe (25mm):

## 2.4 PVC



Manually draw PVC pipelines into the active dgn file. Different settings are specified for different PVC pipelines.

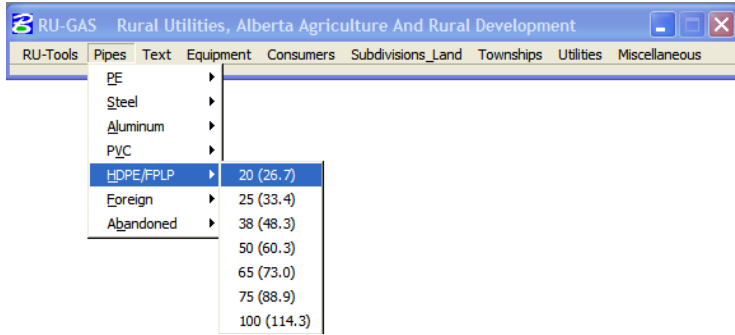
All PVC pipeline settings are listed here:

Level	Color	Weight	Line Style	Nominal Size
29	26	3	0	20mm
29	33	3	0	25mm
29	42	3	0	32mm
29	48	3	0	38mm
29	60	3	0	50mm

Follow the message and use the data button to place the PVC pipeline:

Place PVC pipe (20mm):

## 2.5 HDPE/FPLP – HIGH PRESSURE (LICENSED WITH ERCB)



Manually draw HDPE (high density polyethylene) pipelines into the active dgn file. Different settings are specified for different HDPE pipelines.

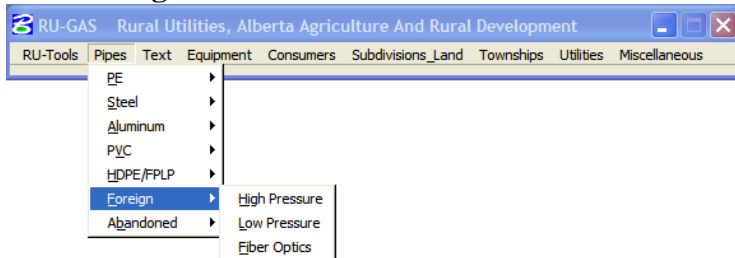
All HDPE/FPLP pipeline settings are listed here:

Level	Color	Weight	Line Style	Nominal Size
34	26	3	0	20mm
34	33	3	0	25mm
34	48	3	0	38mm
34	60	3	0	50mm
34	73	3	0	65mm
34	88	3	0	75mm
34	114	3	0	100mm

Follow the message and use the data button to place the HDPE pipeline:

Place HDPE pipe (20mm):

## 2.6 Foreign



Accelerator Key: h or H

Accelerator Key: l or L

Accelerator Key: f or F

Manually draw foreign pipelines into the active dgn file. Different settings are specified for different foreign pipelines.

All foreign pipeline settings are listed here:

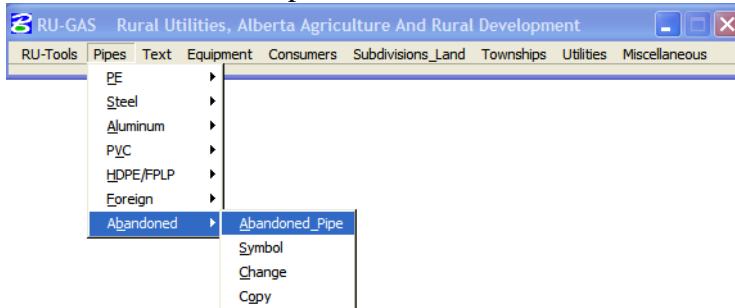
Level	Color	Weight	Line Style	Type
36	62	1	1	high pressure
35	60	1	1	low pressure
36	21	1	1	fiber optics

Follow the message and use the data button to place the pipelines:

Place foreign low pressure:

## 2.7 Abandoned

### 2.7.1 Abandoned\_Pipe



Accelerator Key: a or A

Manually draw abandoned pipelines into the active dgn file.

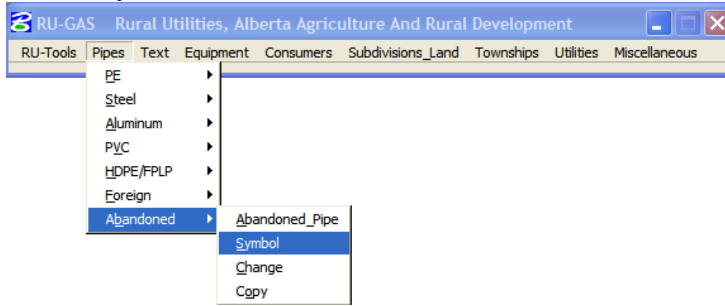
All abandoned pipeline settings are listed here:

Level	Color	Weight	Line Style	Type
38	64	0	3	abandoned

Follow the message and use the data button to place the abandoned pipeline:

Place abandoned pipe:

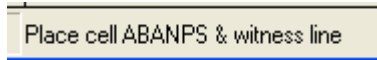
## 2.7.2 Symbol



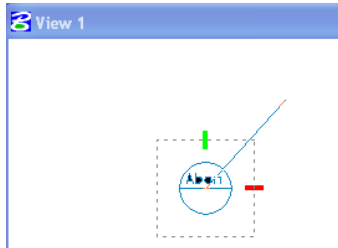
### Accelerator Key: s or S

Place abandoned pipeline symbol cell “ABANPS” and its witness line

Follow the message after pressing the “Symbol” menu:

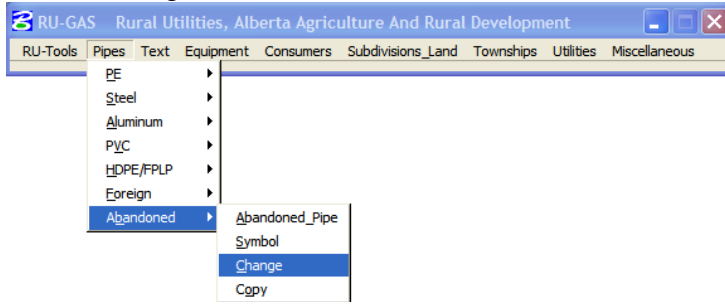


Draw the witness line to the specified location right after placing the cell “ABANPS”:





### 2.7.3 Change



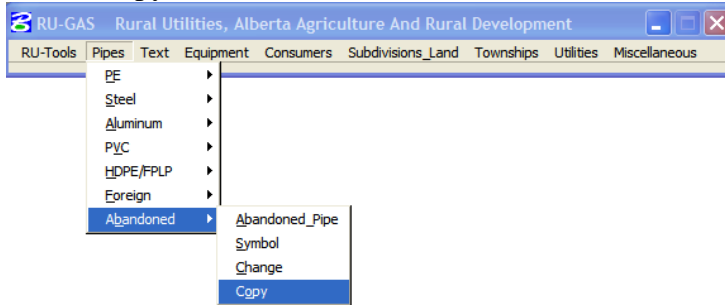
#### Accelerator Key: c or C

Change and only change the selected feature line style to type 3. Nothing else will be changed.

Follow the message after pressing this menu:

Change to abandoned, please select pipe

## 2.7.4 Copy



### Accelerator Key: o or O

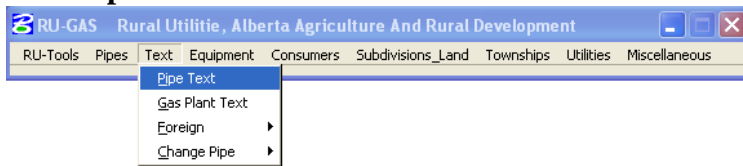
Parallel copy a linear feature at a distance (default 3m, pre-settings may be required to have this function) and then change the copied linear feature line style to type 3.

Follow the message after pressing this menu:

Copy parallel 3m and style to abandoned, please select pipe

## 3. Text

### 3.1 Pipe Text



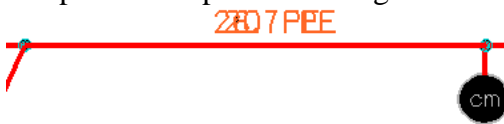
Accelerator Key: p or P

Automatically place texts for the selected pipeline. Different texts are specified based on the pipeline type. The user only needs to select the pipeline.

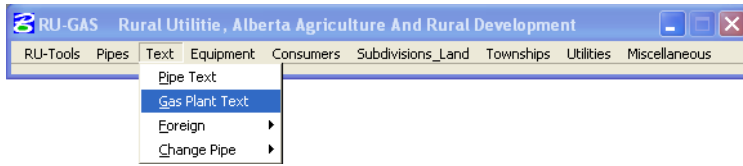
Follow the message after pressing this menu:

Please select pipe to place text/symbol

The placed sample texts along a selected pipeline (20 PE and 26.7 PE):



### 3.2 Gas Plant Text



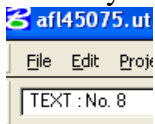
#### Accelerator Key: g or G

Place gas plant cell “GASPLT” and extra text for the cell.

Place the cell first:



Then key in extra text: No. 8 (in this example):

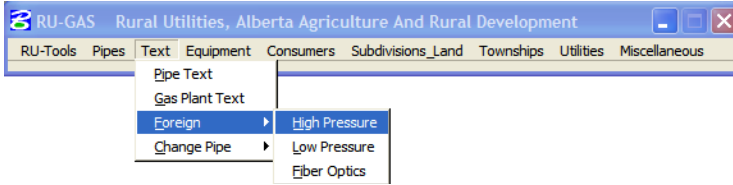


Place the extra text under the Gas Plant cell:



### 3.3 Foreign

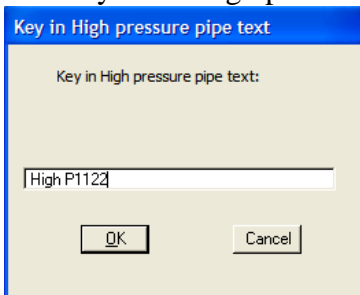
#### 3.3.1 High Pressure



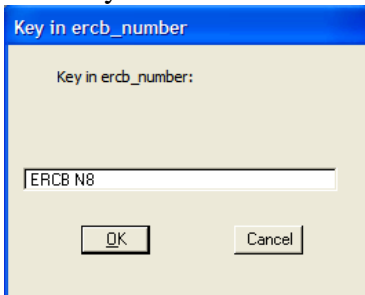
Accelerator Key: h or H

Place text and ERCB number for selected high pressure pipeline.

First key in the high pressure text: High P1122 (in this example)



Then key in the ERCB number: ERCB N8 (in this example)



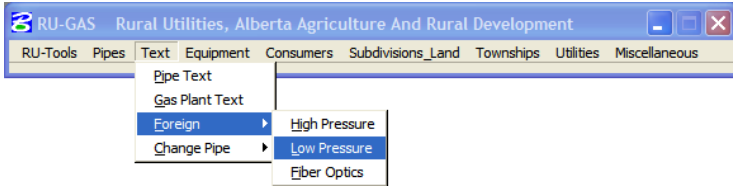
Follow the message to select the pipeline after pressing the “OK” button:

Please select pipe to place text/ERCB #:

The text and ERCB number are placed along the selected pipeline:



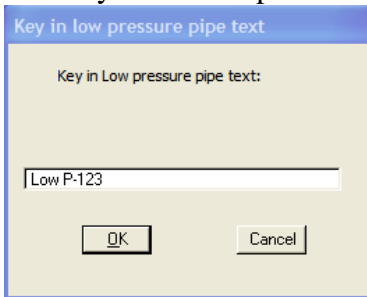
### 3.3.2 Low Pressure



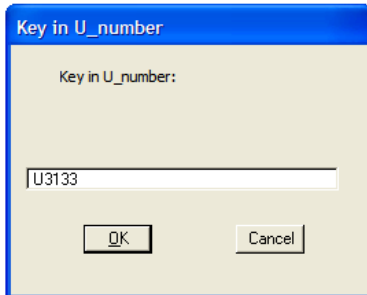
#### Accelerator Key: I or L

Place text and U license number for selected low pressure pipeline.

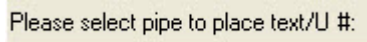
First key in the low pressure text: Low P-123 (in this example)



Then key in the U license number: U3133 (in this example)



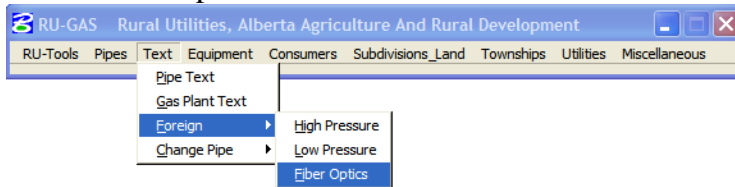
Follow the message to select the pipeline after pressing the “OK” button:



The low pressure text and the U license number are placed for the selected pipeline:



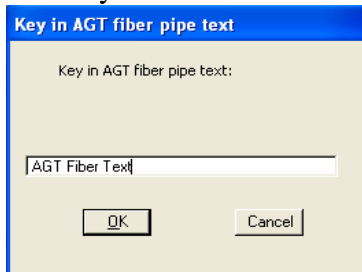
### 3.3.3 Fiber Optics



Accelerator Key: f or F

Place text for Fiber Optics pipeline.

First key in the text for the Fiber Optics pipeline: AGT Fiber Text (in this example)



Follow the message to select the Fiber Optics pipeline:

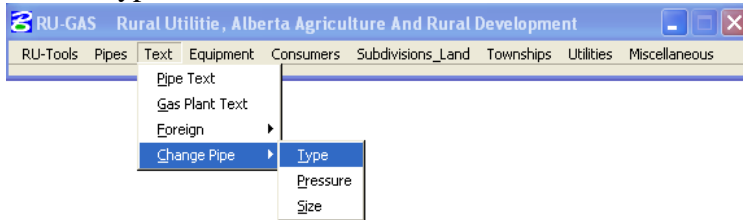
Please select the fiber optics pipe:

The text is placed along the selected pipeline:



### 3.4 Change Pipe

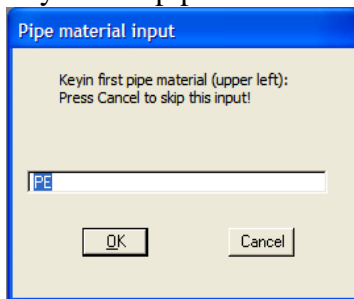
#### 3.4.1 Type



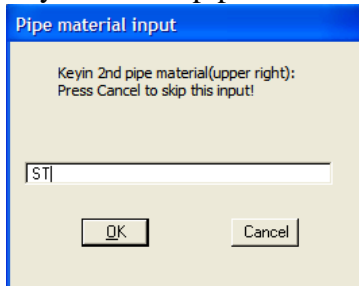
Accelerator Key: t or T

Change pipeline material in cell “chgpm”.

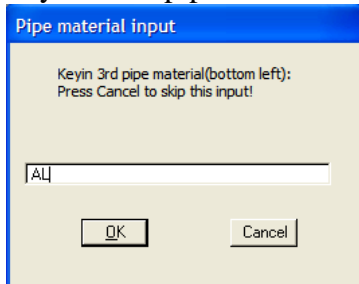
Key in first pipe material: PE (in this example)



Key in second pipe material: ST (in this example)



Key in third pipe material: AL (in this example)





Key in the 4<sup>th</sup> pipe material: PVC (in this example)

Pipe material input

Key in 4th pipe material(bottom right):  
Press Cancel to skip this input!

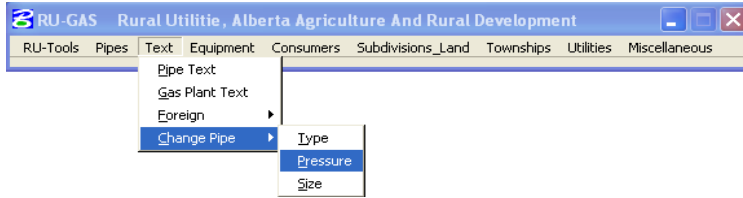
PVC

OK Cancel

The placed cell “chgpm”:

PE	ST
AL	PVC

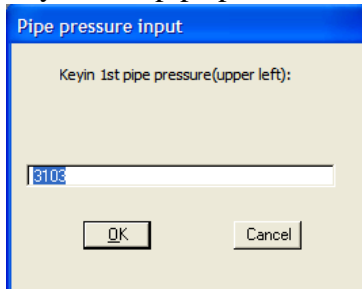
### 3.4.2 Pressure



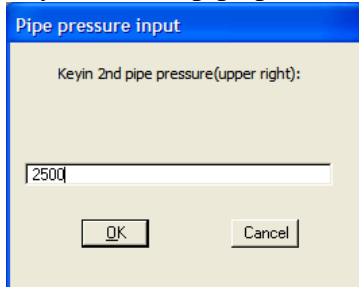
#### Accelerator Key: p or P

Change pipe pressure values in cell "chgrp".

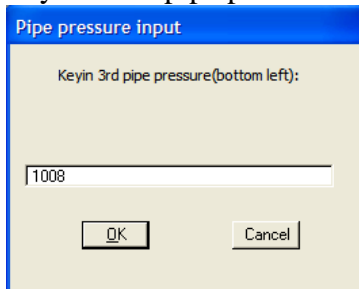
Key in first pipe pressure value: 3103 (in this example), Cancel to skip.



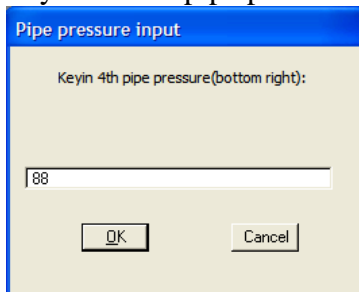
Key in second pipe pressure value: 2500 (in this example), Cancel to skip.



Key in third pipe pressure value: 1008 (in this example), Cancel to skip.



Key in the 4<sup>th</sup> pipe pressure value: 88 (in this example), Cancel to skip.



Pipe pressure input

Keyin 4th pipe pressure(bottom right):

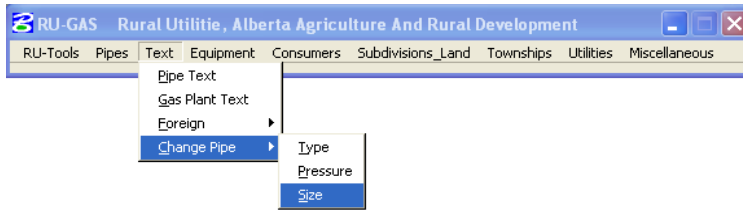
88

OK Cancel

The placed cell “chgr”:

3103	2500
1008	88

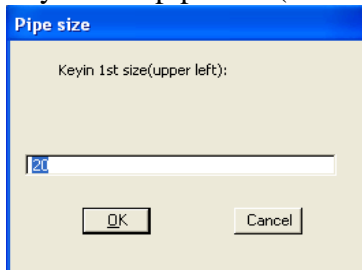
### 3.4.3 Size



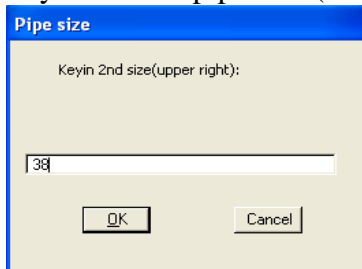
#### Accelerator Key: s or S

Set pipe sizes in both cell “chgps1” and “chgps2”.

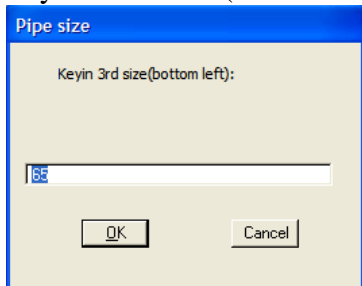
Key in first pipe size (nominal size): 20 (in this example), Cancel to skip.



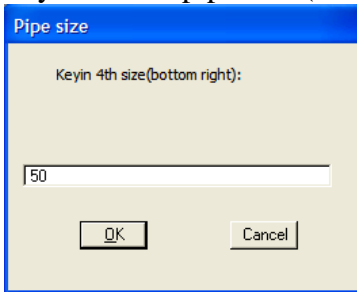
Key in second pipe size (nominal size): 38 (in this example), Cancel to skip.



Key in third size (nominal size): 65 (in this example), Cancel to skip.



Key in the 4<sup>th</sup> pipe size (nominal size): 50 (in this example), Cancel to skip.



The placed cells “chgps1” and “chgps2”:

206.7	38.3
65.0	50.3

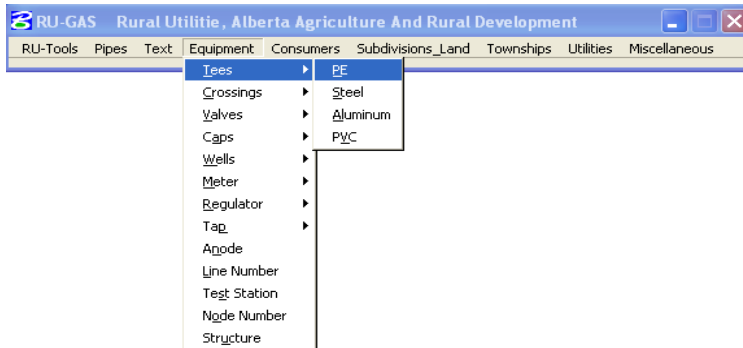
If a nominal size input is not same as specified in the standard, then the real size value will not be in cell “chgps2”.



## 4. Equipment

### 4.1 Tees

#### 4.1.1 PE



Accelerator Key: p or P

Place tee cell “petred”.

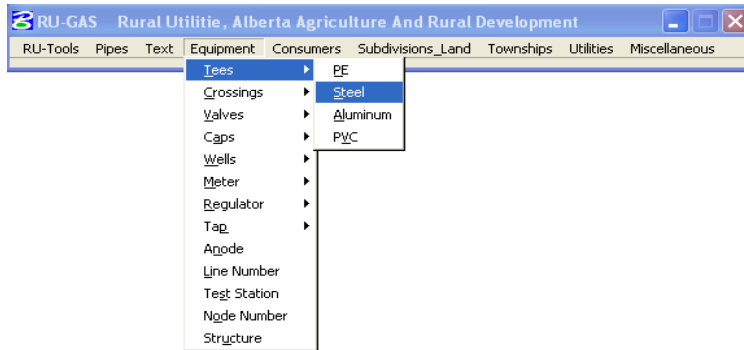
Follow the message after pressing this menu:

Place cell petred:

The placed tee cell “petred”:



## 4.1.2 Steel



### Accelerator Key: s or S

Place tee cell "sttee".

Follow the message after pressing this menu:

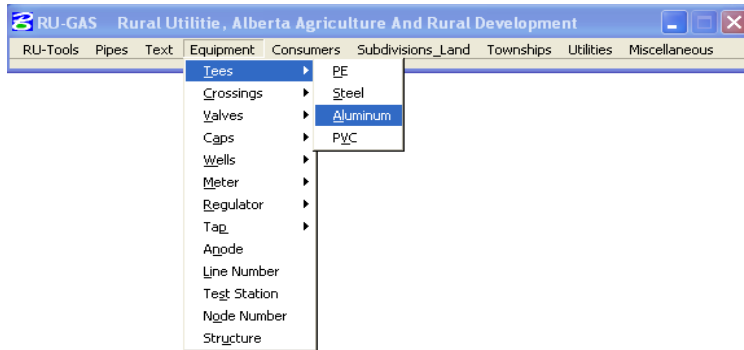
Place cell sttee:

The placed tee cell "sttee":





### 4.1.3 Aluminum



#### Accelerator Key: a or A

Place tee cell “altee”.

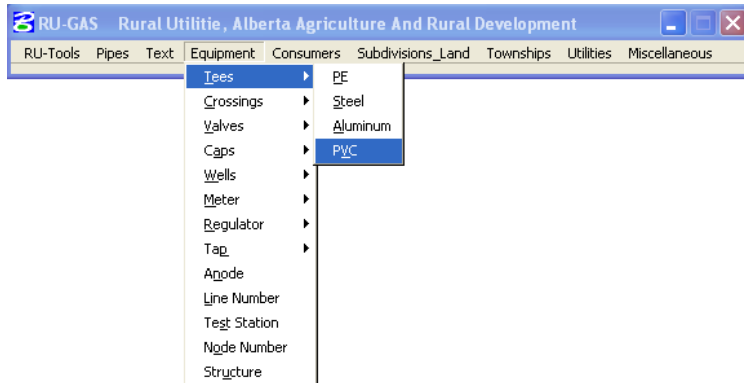
Follow the message after pressing this menu:

Place cell altee:

The placed tee cell “altee”:



#### 4.1.4 PVC



Accelerator Key: v or V

Place tee cell "pvctee".

Follow the message after pressing this menu:

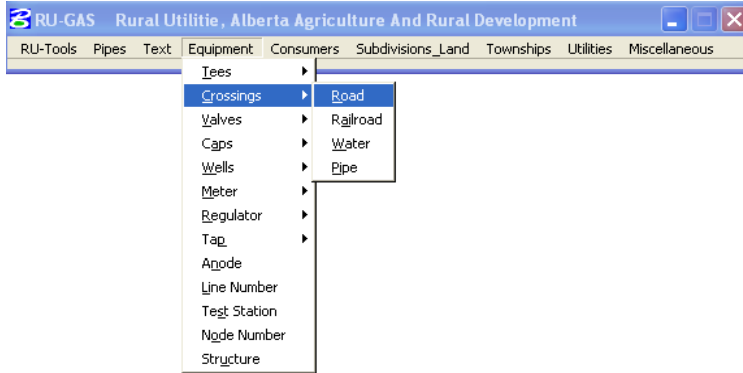
Place cell pvctee:

The placed tee cell "pvctee":



## 4.2 Crossings

### 4.2.1 Road



Accelerator Key: r or R

Place road crossing cell “rdx” and its witness line.

Follow the message after pressing this menu:

Place cell rdx & the witness line:

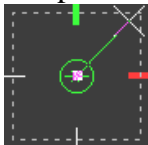
Place the cell first:



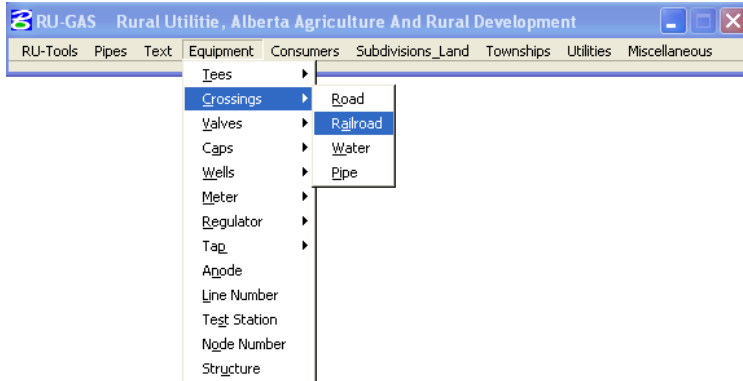
Then follow the message to place the witness line:

Please Specify the End Point of the witness line

The placed road crossing cell “rdx” and its witness line:



## 4.2.2 Railroad



### Accelerator Key: a or A

Place railway crossing cell “rrx”.

Follow the message after pressing this menu:

Place cell rrx & the witness line:

Place the cell first:



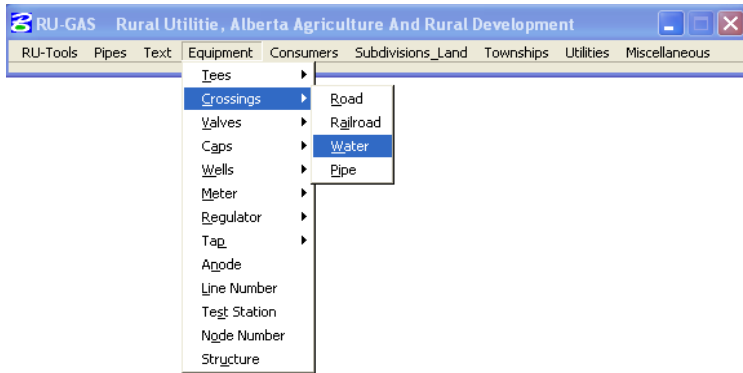
Then follow the message and place the witness line:

Please Specify the End Point of the witness line

The placed railway crossing cell “rrx” and its witness line:



### 4.2.3 Water



#### Accelerator Key: w or W

Place water crossing cell “wcx”.

Follow the message after pressing this menu:

Place cell wcx & the witness line:

Place the cell first:



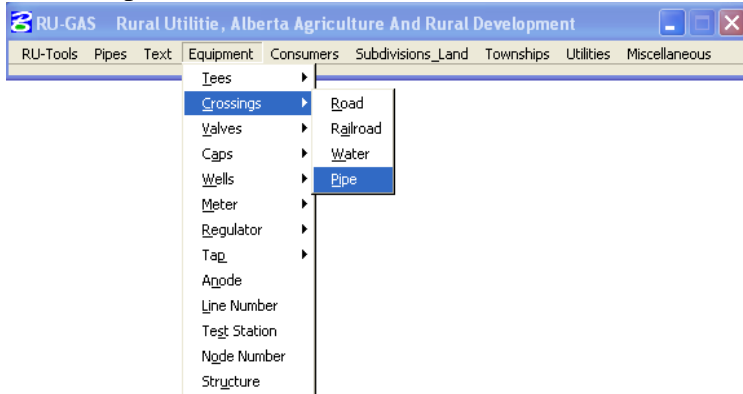
Then follow the message and place the witness line:

Please Specify the End Point of the witness line

The placed water crossing cell “wcx” and its witness line:



## 4.2.4 Pipe



Accelerator Key: p or P

Place pipe crossing cell “pipex” and its witness line.

Follow the message after pressing this menu:

Place cell pipex & the witness line:

Place the cell first:



Then follow the message and place the witness line:

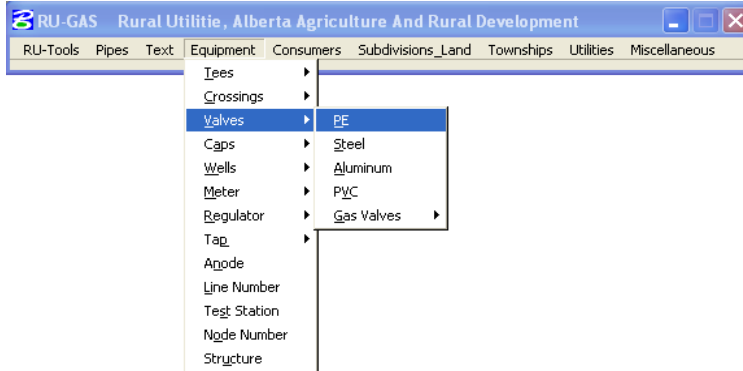
Please Specify the End Point of the witness line

The placed pipe crossing cell “pipex” and its witness line:



## 4.3 Valves

### 4.3.1 PE



Accelerator Key: p or P

Place PE valve cell “peval”.

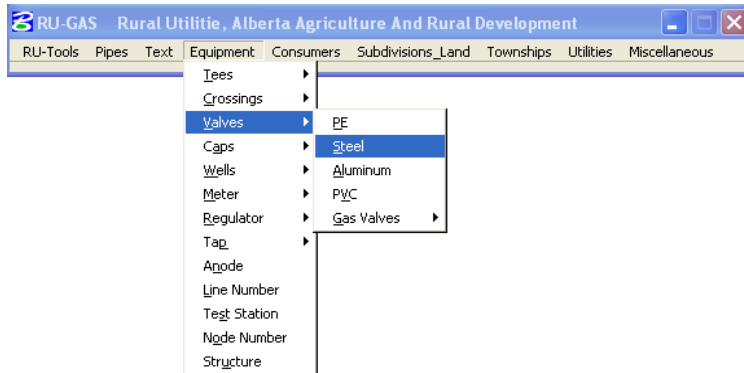
Follow the message after pressing this menu:

Place cell peval:

The placed PE valve cell “peval”:



### 4.3.2 Steel



#### Accelerator Key: s or S

Place steel valve cell “stval”.

Follow the message after pressing this menu:

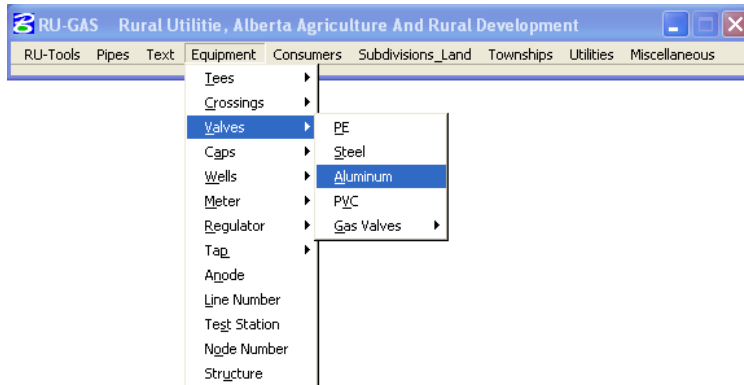
Place cell stval:

The placed steel valve cell “stval”:





### 4.3.3 Aluminum



#### Accelerator Key: a or A

Place aluminum valve cell “alval”.

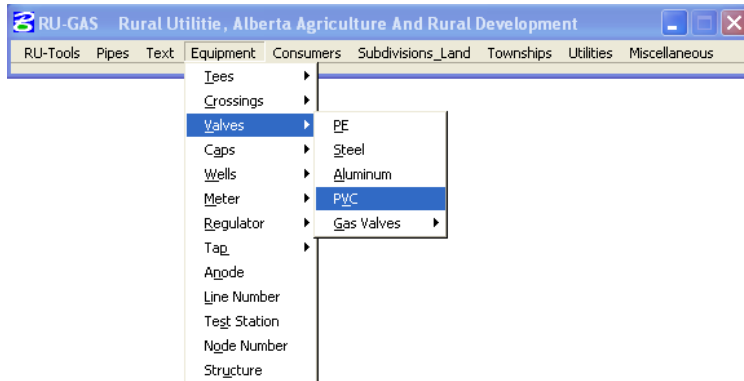
Follow the message after pressing this menu:

Place cell alval:

The placed aluminum valve cell “alval”:



#### 4.3.4 PVC



Accelerator Key: v or V

Place PVC valve cell “pcval”.

Follow the message after pressing this menu:

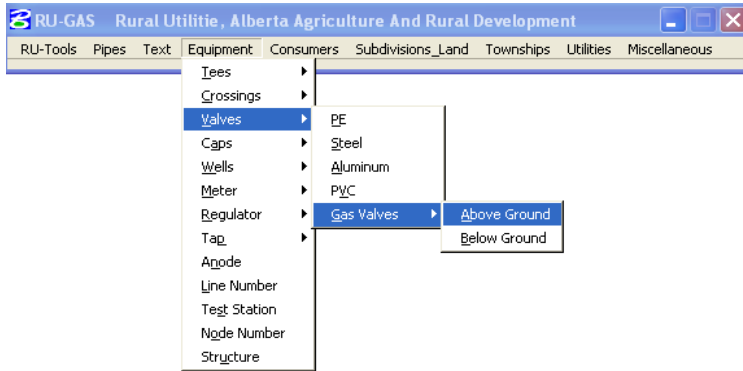
Place cell pcval:

The placed PVC valve cell “pcval”:



## 4.3.5 Gas valves

### 4.3.5.1 Above Ground



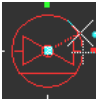
Accelerator Key: a or A

Place above ground gas valve cell “gval” and its witness line.

Follow the message after pressing this menu:

Place cell gval & the witness line:

Place the cell first:



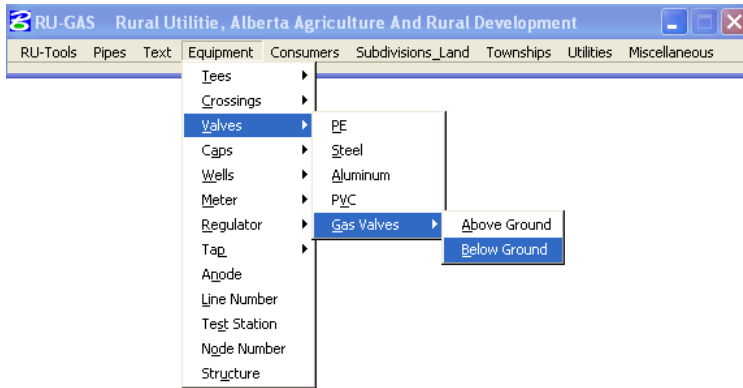
Then follow the message and place the witness line:

Please Specify the End Point of the witness line:

The placed above ground gas valve cell “gval” and its witness line:



### 4.3.5.2 Below Ground



#### Accelerator Key: b or B

Place below ground gas valve cell “blval” and its witness line.

Follow the message after pressing this menu:

Place cell blval & the witness line:

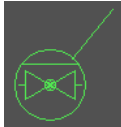
Place the cell first:



Then follow the message and place the witness line:

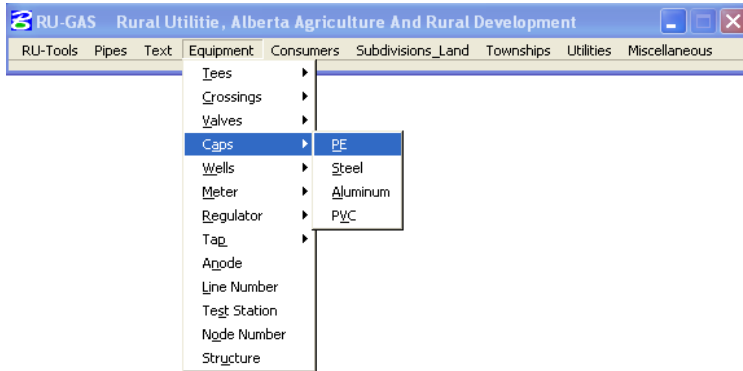
Please Specify the End Point of the witness line:

The placed below ground gas valve cell “blval” and its witness line:



## 4.4 Caps

### 4.4.1 PE



Accelerator Key: p or P

Place PE cap cell “pecap” and its witness line.

Follow the message after pressing this menu:

Place cell pecap & the witness line:

Place the cell first:



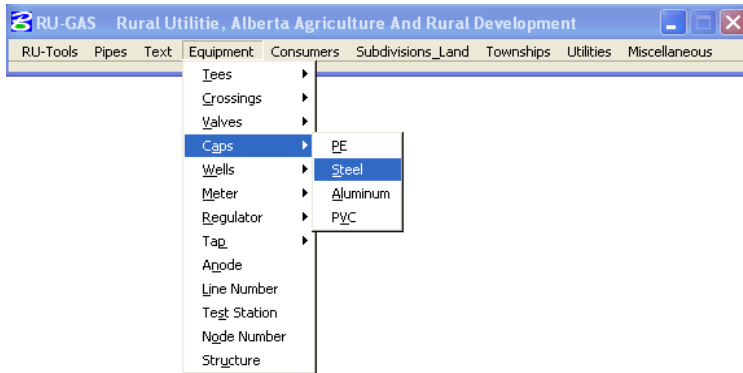
Then follow the message and place the witness line:

Please Specify the witness line End Point:

The placed PE cap cell “pecap” and its witness line:



## 4.4.2 Steel



### Accelerator Key: s or S

Place steel cap cell “stcap” and its witness line.

Follow the message after pressing this menu:

Place cell stcap & the witness line:

Place the cell first:



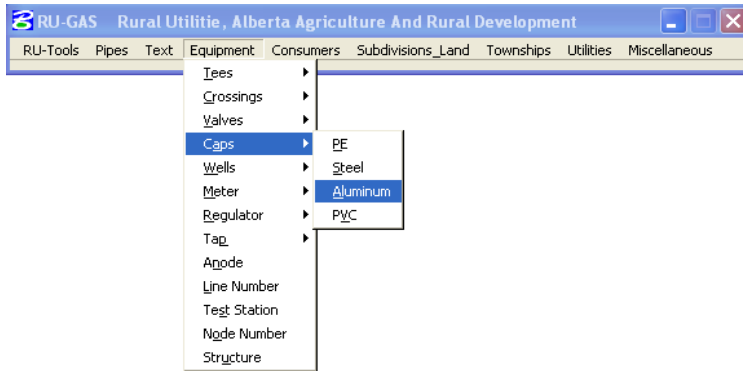
Then follow the message and place the witness line:

Please Specify the witness line End Point

The placed steel cap cell “stcap” and its witness line:



### 4.4.3 Aluminum



#### Accelerator Key: a or A

Place aluminum cap cell “alcap” and its witness line:

Follow the message after pressing this menu:

Place cell alcap & the witness line:

Place the cell first:



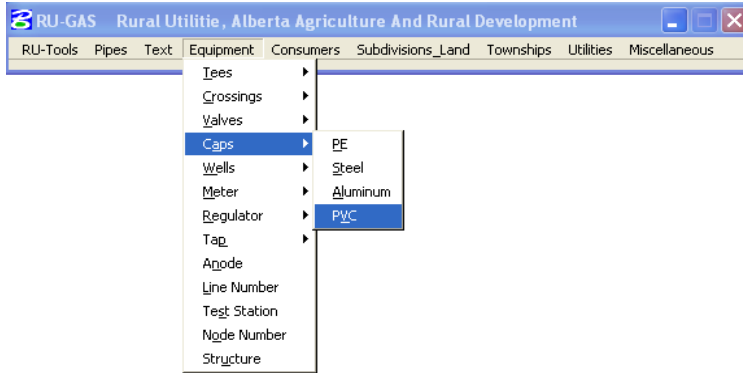
Then follow the message and place the witness line:

Please Specify the witness line End Point

The placed aluminum cap cell “alcap” and its witness line:



#### 4.4.4 PVC



Accelerator Key: v or V

Place PVC cap cell “pvccap” and its witness line.

Follow the message after pressing this menu:

Place cell pvccap & the witness line:

Place the cell first:



Then follow the message and place the witness line:

Please Specify the witness line End Point

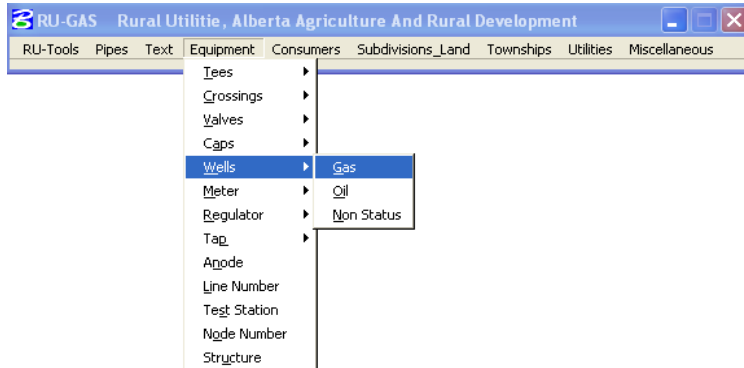
The placed PVC cap cell “pvccap” and its witness line:





## 4.5 Wells

### 4.5.1 Gas



Accelerator Key: g or G

Place gas well cell “gaswel”.

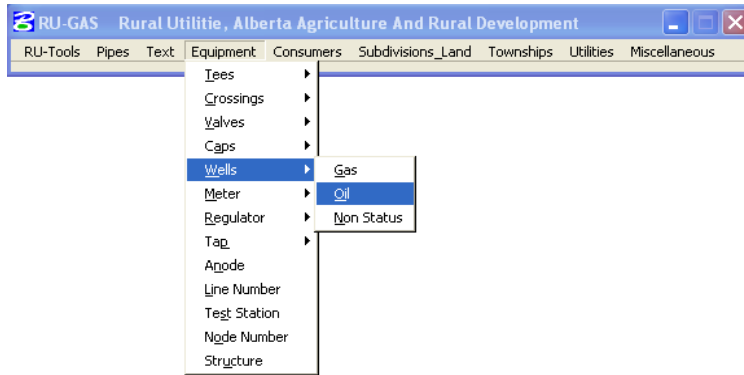
Follow the message after pressing this menu:

Place cell gaswel.

The placed gas well cell “gaswel”:



## 4.5.2 Oil



### Accelerator Key: o or O

Place oil well cell "oilwel".

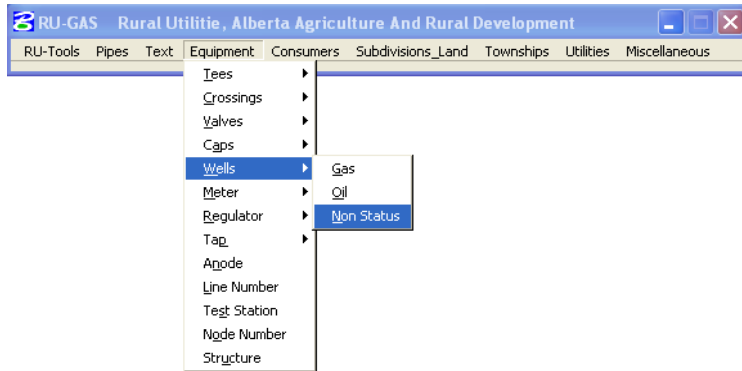
Follow the message after pressing this menu:

Place cell oilwel.

The placed oil well cell "oilwel":



### 4.5.3 Non Status



#### Accelerator Key: n or N

Place non-status well cell “nswell”.

Follow the message after pressing this menu:

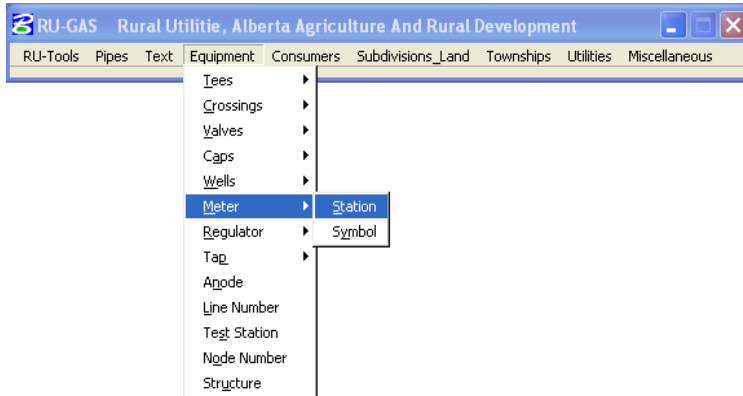
Place cell nswell:

The placed non-status well cell “nswell”:



## 4.6 Meter

### 4.6.1 Station



#### Accelerator Key: s or S

Place meter station cell “tapnod”.

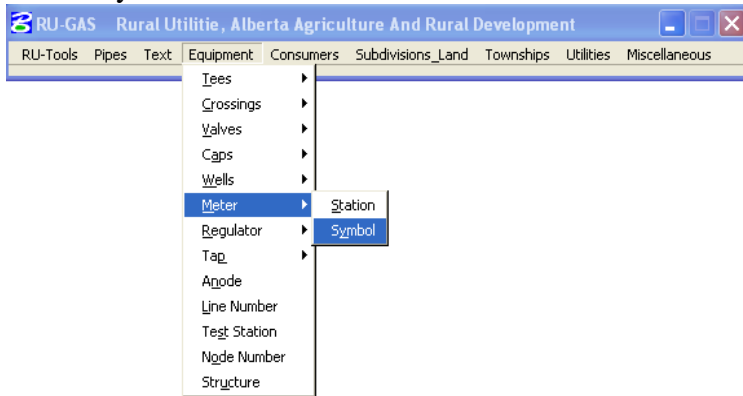
Follow the message after pressing this menu:

Place cell tapnod:

The placed meter station cell “tapnod”:



## 4.6.2 Symbol



Accelerator Key: y or Y

Place meter station symbol cell “mst” and its witness line:

Follow the message after pressing this menu:

Place cell mst & the witness line:

Place the cell first:



Then follow the message and place the witness line:

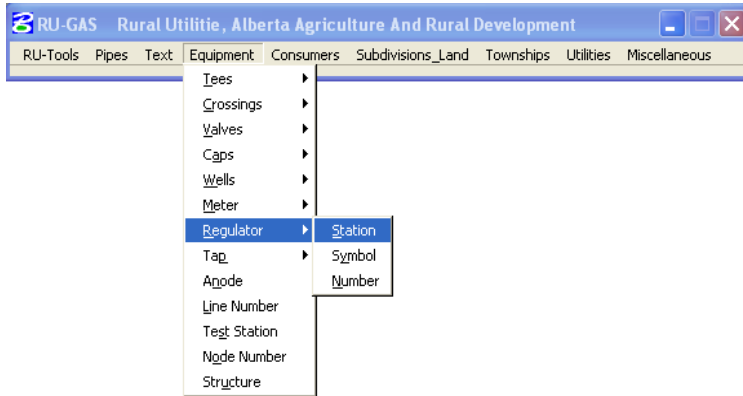
Please Specify the witness line End Point

The placed meter station symbol cell “mst” and its witness line:



## 4.7 Regulator

### 4.7.1 Station



#### Accelerator Key: s or S

Place regulator cell “regnod”.

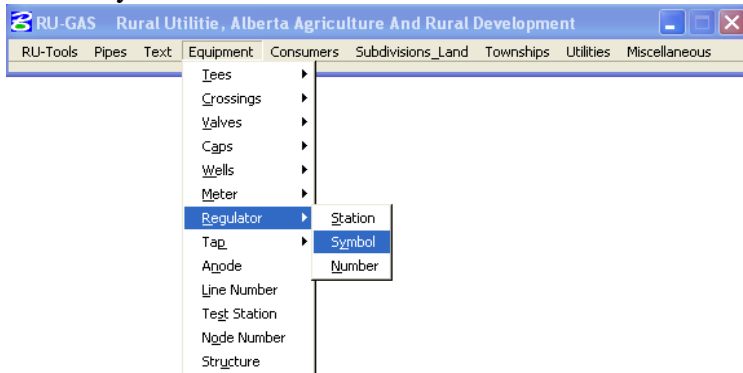
Follow the message after pressing this menu:

Place cell regnod:

The placed regulator cell “regnod”:



## 4.7.2 Symbol



### Accelerator Key: y or Y

Place regulator symbol cell “rst” and its witness line.

Follow the message after pressing this menu:

Place cell rst & the witness line:

Place the cell first:



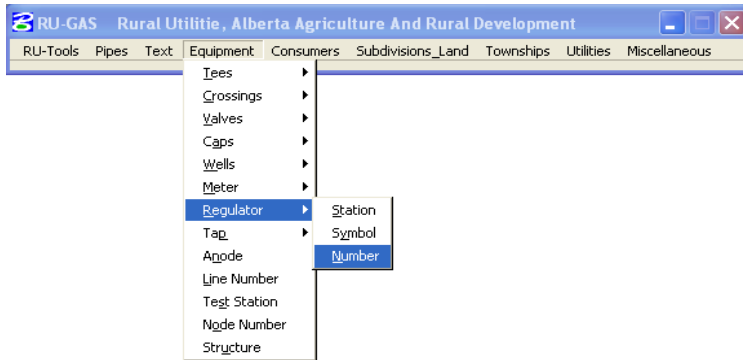
Then follow the message and place the witness line:

Please Specify the witness line End Point

The placed regulator symbol cell “rst” and its witness line:



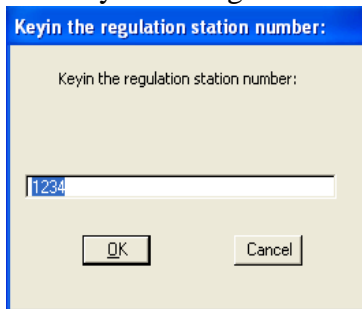
### 4.7.3 Number



#### Accelerator Key: n or N

Place regulator number cell “regsan” and its text.

First key in the regulation station number: 1234 (in this example)



Then follow the message and place the cell:

Place cell regsan:

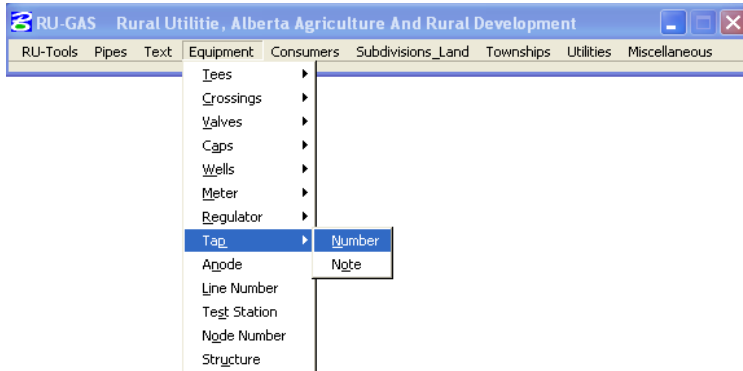
The placed regulator number cell “regsan” and its text:





## 4.8 Tap

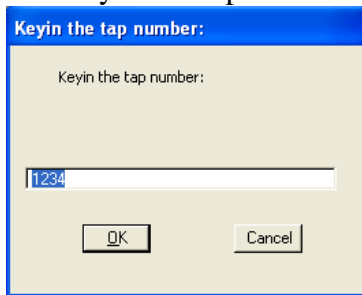
### 4.8.1 Number



Accelerator Key: n or N

Place tap number cell “tapnm2” and its text.

First key in the tap number: 1234 (in this example)



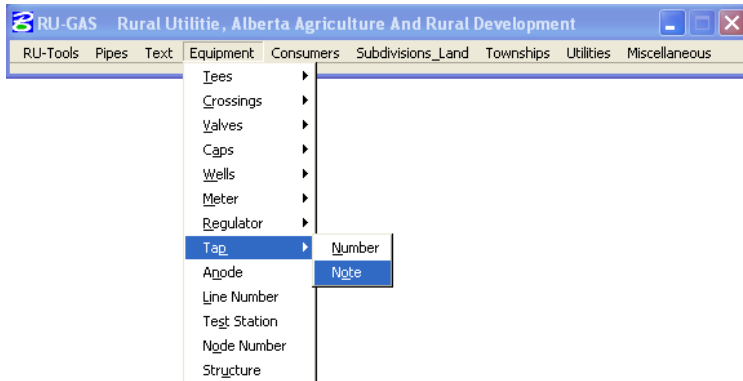
Then follow the message and place the cell:

Place cell tapnm2:

The placed tap number cell “tapnm2” and its text:

Tap 1234

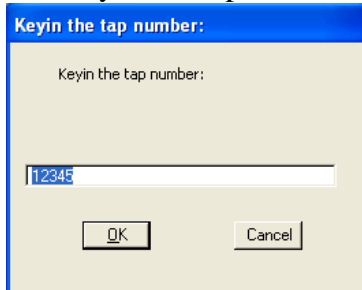
## 4.8.2 Note



### Accelerator Key: o or O

Place tap note cell “fritap” and its text.

First key in the tap number: 12345 (in this example)



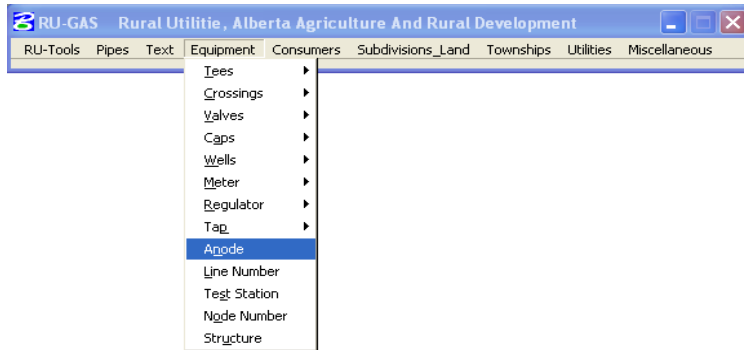
Then follow the message and place the cell:

Place cell fritap:

The placed tap note cell “fritap” and its text:

From Tap12345

## 4.9 Anode



Accelerator Key: n or N

Place cell “anode”.

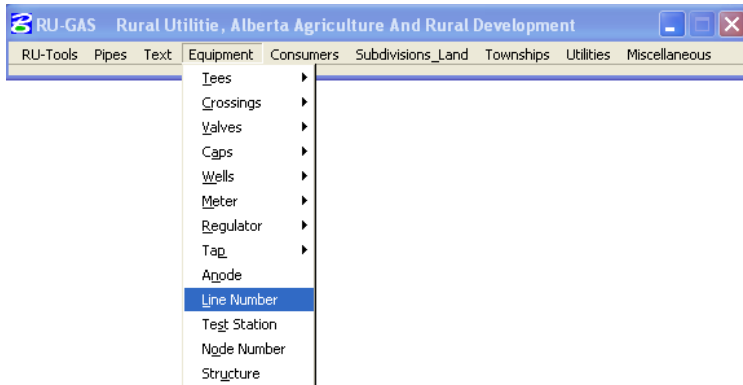
Follow the message after pressing this menu:

Place cell anode only:

The placed cell anode:



## 4.10 Line Number



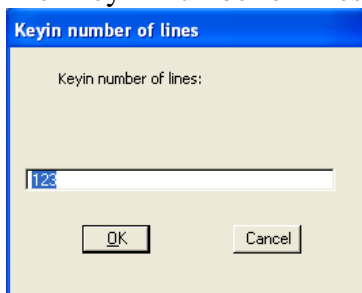
### Accelerator Key: I or L

Place line number cell “linnum” and its number.

Follow the message after pressing this menu:

Place location of line number:

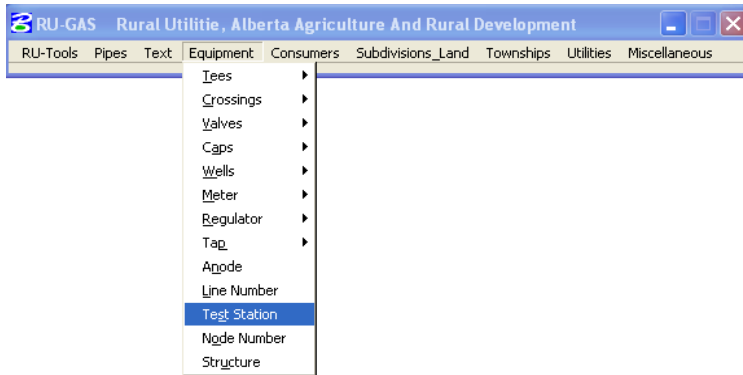
Then key in number of lines and place the cell: 123 (in this example)



The placed line number cell “linnum” and its number:



## 4.11 Test Station



### Accelerator Key: s or S

Place test station cell “tsta2”.

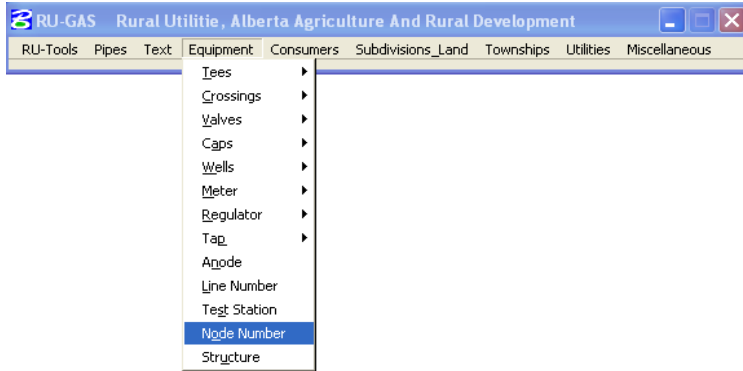
Follow the message after pressing this menu:

Place cell tsta2 only:

The placed test station cell “tsta2”:



## 4.12 Node Number

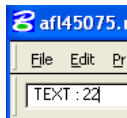


### Accelerator Key: o or O

Place node number text.

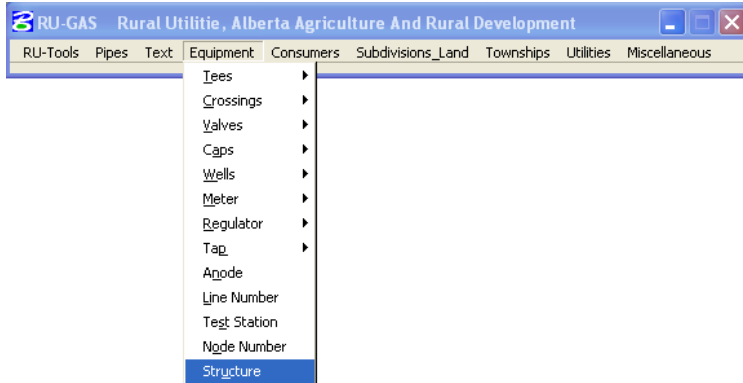
First follow the message and key in text in the keyin window:

Place node number:



Then use the data button to place the node number text.

## 4.13 Structure



Accelerator Key: u or U

Place foreign structure line.

Follow the message after pressing this menu:

Place forstr line:

Then use the data button to place the line string.

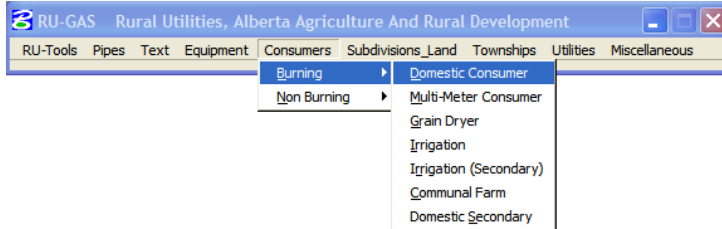




## 5. Consumers

### 5.1 Burning

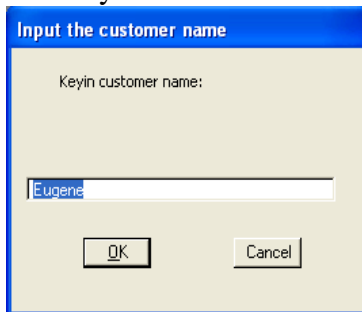
#### 5.1.1 Domestic Consumer(Graphics Group)



Accelerator Key: d or D

Place customer cell "cm", customer name and the customer's load.

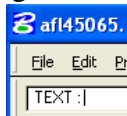
First key in the customer name: Eugene (in this example)



Follow the message to select the pipeline to place the cell "cm":

Please Select Pipe

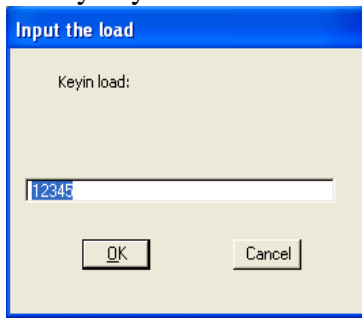
Ignore this keyin:



Place the customer name by the cell "cm":



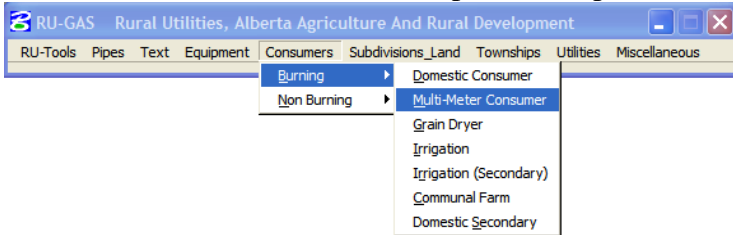
Finally key in the customer's load and place it: 12345 (in this example)



The placed cell "cm", customer name and the load: (Graphics Group)



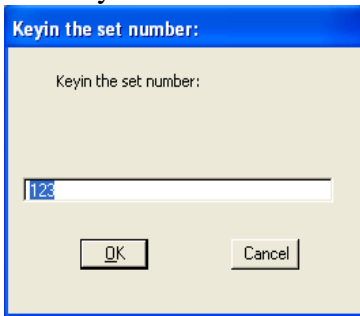
### 5.1.2 Multi-Meter Consumer(Graphics Group)



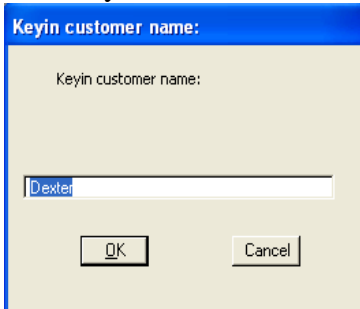
#### Accelerator Key: m or M

Place set number cell “dsmm1”, customer name and the customer’s load:

First key in the set number: 123 (in this example)



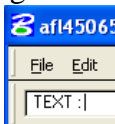
Then key in the customer name: Dexter (in this example)



Follow the message to select the pipeline to place the cell “dsmm1”

Please Select Pipe

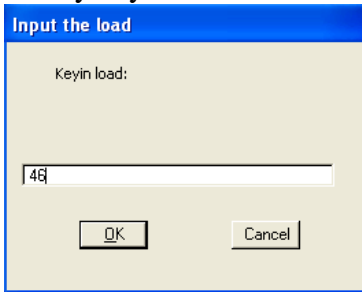
Ignore this keyin:



Place the customer’s name by the cell “dsmm1”:



Finally key in the customer's load and place it: 46 (in this example)

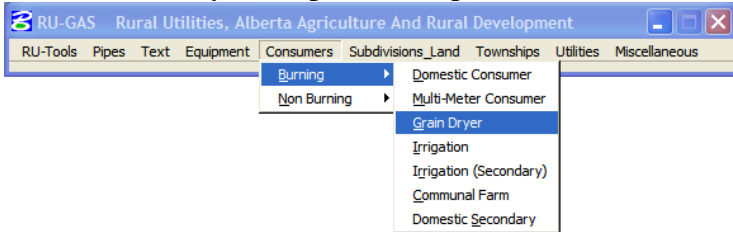


A screenshot of a software dialog box titled "Input the load". The dialog has a blue header bar with the title. Below the header, the text "Keyin load:" is displayed. A text input field contains the number "46". At the bottom of the dialog, there are two buttons: "OK" and "Cancel".

The placed set number cell "dsmm1", customer name and the load: (Graphics Group)



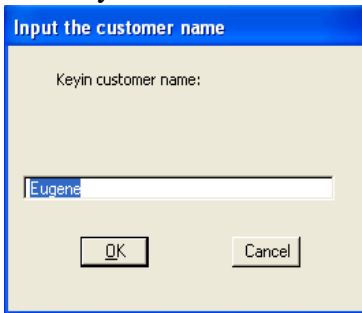
### 5.1.3 Grain Dryer(Graphics Group)



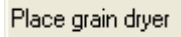
#### Accelerator Key: g or G

Place grain dryer cell “gdbur2”, customer name and the customer’s load:

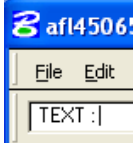
First key in the customer’s name: Eugene (in this example)



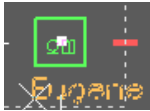
Follow the message to place the cell “gdbur2”



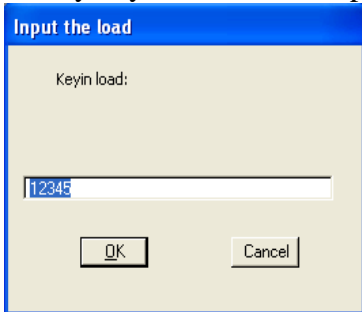
Ignore this keyin:



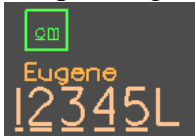
Place the customer’s name by the cell “gdbur2”:



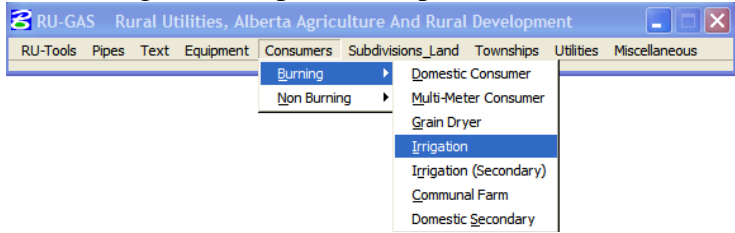
Finally key in the load and place it: 12345 (in this example)



The placed grain dryer cell “gdbur2”, customer name and the load: (Graphics Group)



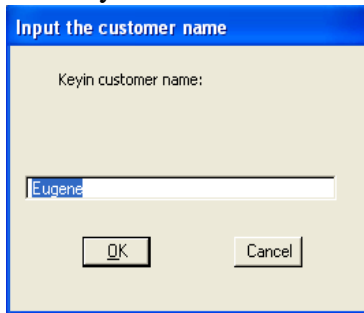
### 5.1.4 Irrigation(Graphics Group)



#### Accelerator Key: i or I

Place irrigation cell “irbur1”, customer name the customer’s load:

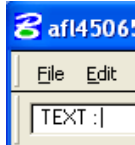
First key in the customer’s name: Eugene (in this example)



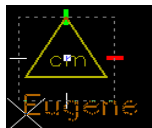
Follow the message to place the cell “irbur1”:

Place irrigation unit (burning)

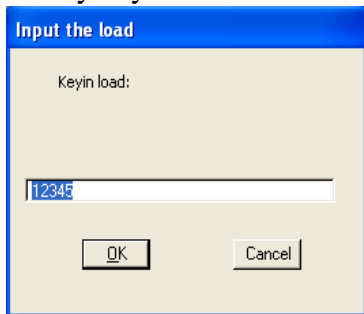
Ignore this keyin:



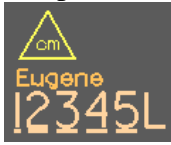
Place the customer’s name by the cell “irbur1”:



Finally key in the customer’s load and place it: 12345 (in this example)

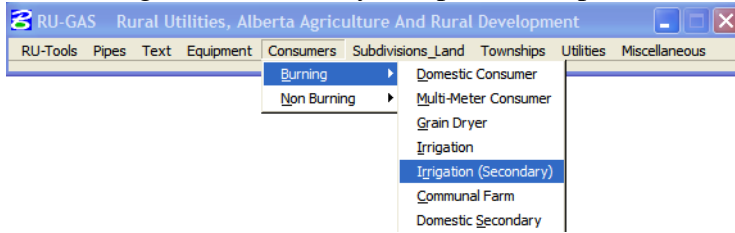


The placed irrigation cell “irbur1”, customer name and the load: (Graphics Group)





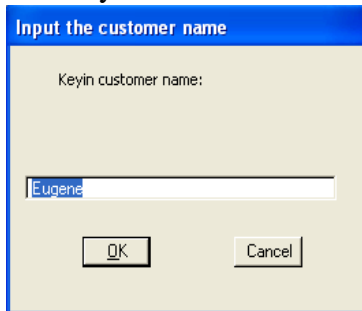
### 5.1.5 Irrigation (Secondary: Graphics Group)



#### Accelerator Key: r or R

Place secondary irrigation cell “irrsec”, customer name and the customers’ load.

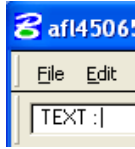
First key in the customer’s name: Eugene (in this example)



Follow the message to place the cell “irrsec”:

Place irrigation unit (secondary)

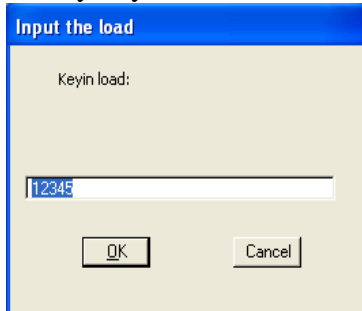
Ignore this keyin:



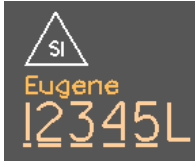
Place the customer’s name by the cell “irrsec”:



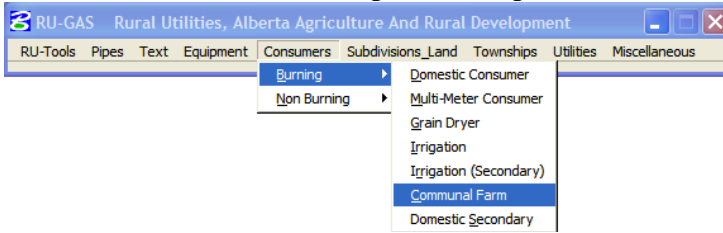
Finally key in the customer’s load and place it: 12345 (in this example)



The placed secondary irrigation cell “irrsec”, customer name and the load: (Graphics Group)



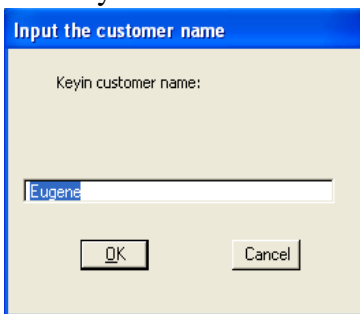
### 5.1.6 Communal Farm(Graphics Group)



#### Accelerator Key: c or C

Place communal farm cell “cfarm”, customer name and the load:

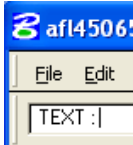
First key in the customer’s name: Eugene (in this example)



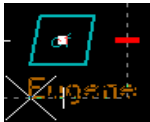
Follow the message to place the cell “cfarm”:



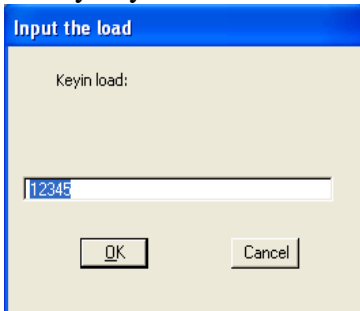
Ignore this keyin:



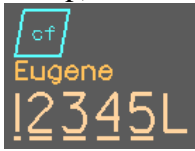
Place the customer’s name by the cell “cfarm”:



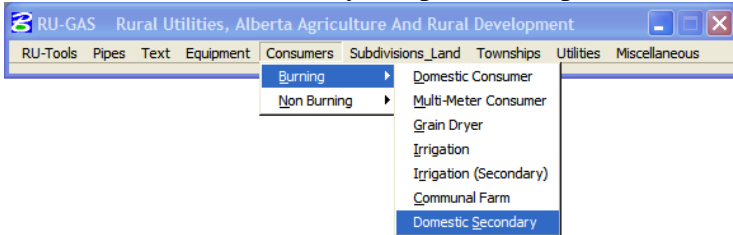
Finally key in the customer’s load and place it: 12345 (in this example)



The placed communal farm cell “cfarm”, customer name and the load: (Graphics Group)



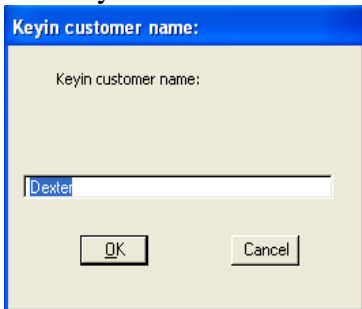
### 5.1.7 Domestic Secondary(Graphics Group)



Accelerator Key: s or S

Place cell “cmbur2”, customer name and the load

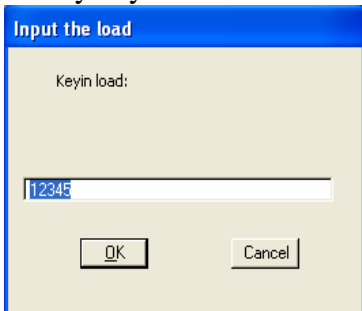
First key in the customer name: Dexter (in this example)



Follow the message to place the cell “cmbur2” and the customer name:



Finally key in the customer’s load and place it: 12345 (in this example)

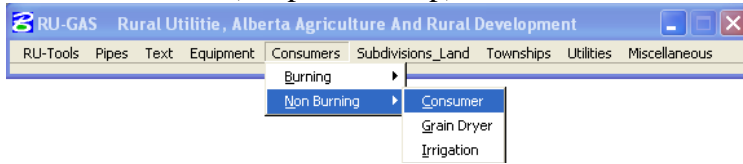


The placed cell “cmbur2”, customer name, number of customer, and the load:  
(Graphics Group)



## 5.2 Non Burning

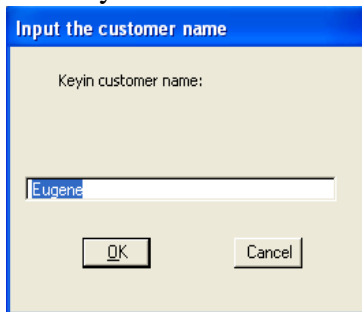
### 5.2.1 Consumer(Graphics Group)



#### Accelerator Key: c or C

Place non-burning consumer cell “cmb1”, customer name and the load:

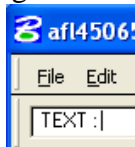
First key in customer name: Eugene (in this example)



Follow the message to place the cell “cmb1”:

Place Non-burning consumer

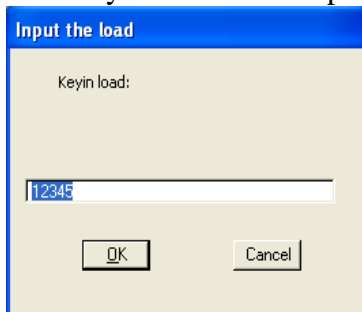
Ignore this keyin:



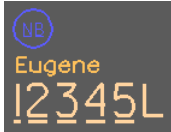
Place the customer name by the cell “cmb1”:



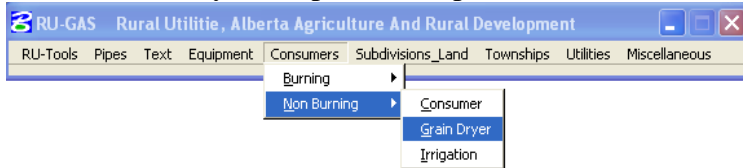
Then key in the load and place it: 12345 (in this example)



The placed non-burning consumer cell “cmnb1”, customer name and the load:  
(Graphics Group)



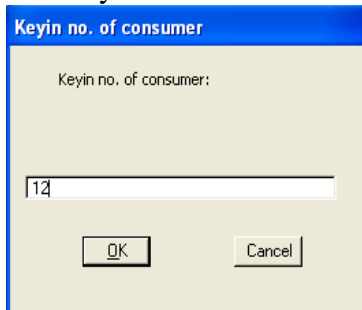
## 5.2.2 Grain Dryer(Graphics Group)



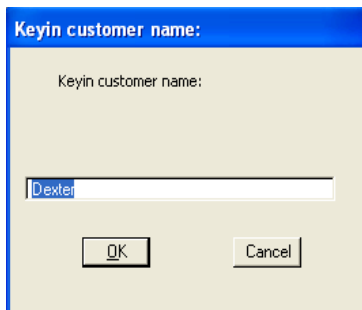
### Accelerator Key: g or G

Place non-burning grain dryer cell “gndb2”, number of consumer, consumer name and the load.

First key in the number of consumer: 12 (in this example)



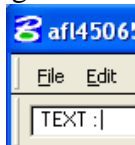
Then the consumer name: Dexter (in this example)



Follow the message to place the cell “gndb2”:

Place non-burning grain dryer

Ignore this keyin:

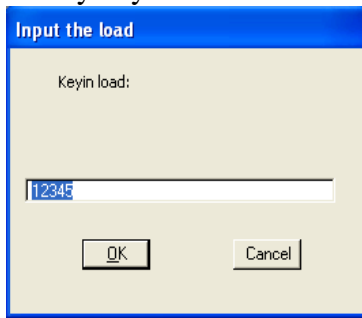


Place the customer name by the cell “gndb2”:





Finally key in the customer's load and place it: 12345 (in this example)

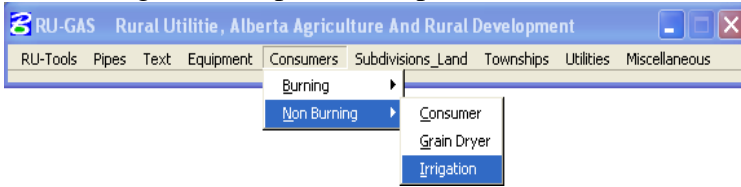


A screenshot of a software dialog box titled "Input the load". The dialog has a blue title bar. Inside, the text "Keyin load:" is followed by a text input field containing the number "12345". Below the input field are two buttons: "OK" and "Cancel".

The placed non-burning grain dryer cell “gndb2”, customer name, number of customer, and the load: (Graphics Group)



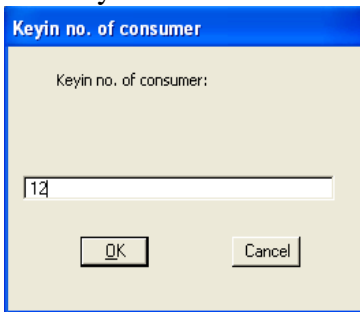
### 5.2.3 Irrigation(Graphics Group)



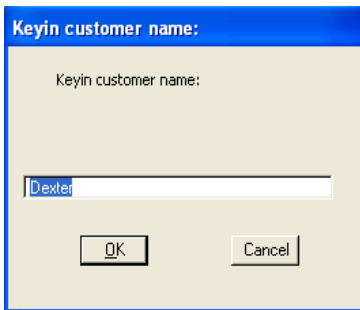
#### Accelerator Key: i or I

Place non-burning irrigation cell “irnb1”, number of consumer, consumer name and the load:

First key in the number of consumer: 12 (in this example)



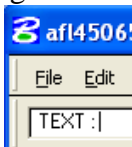
Then the consumer name: Dexter (in this example)



Follow the message to place the cell “irnb1”:

Place non-burning irrigation unit

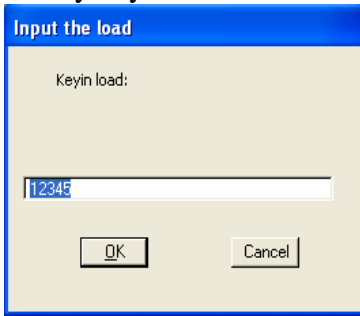
Ignore this keyin:



Place the customer name by the cell “irnb1”:



Finally key in the customer's load and place it: 12345 (in this example)



The placed non-burning irrigation cell "irnb1", number of consumer, consumer name and the load: (Graphics Group)

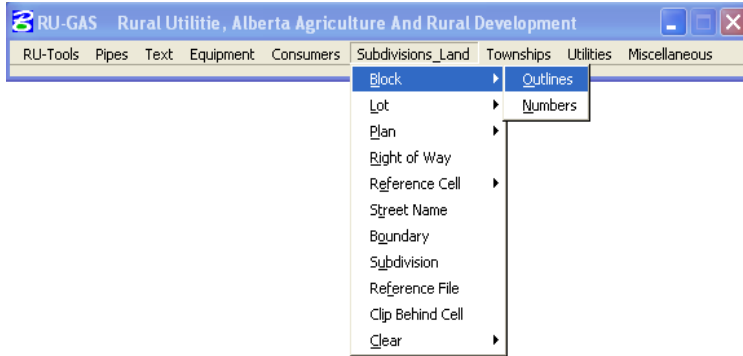




## 6. Subdivision Land

### 6.1 Block

#### 6.1.1 Outlines



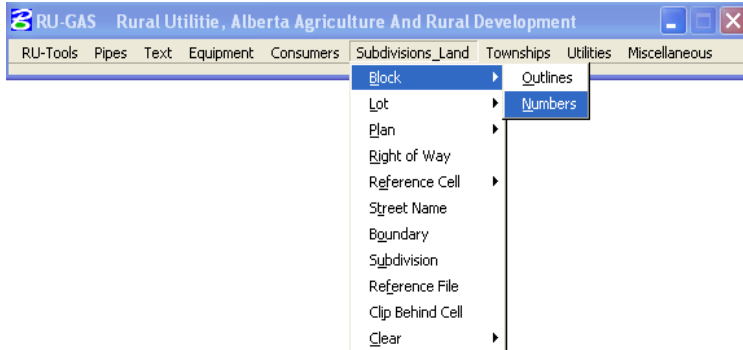
Accelerator Key: o or O

Place block outlines.

Follow the message and use the data button to place the outlines:

Place block outline:

## 6.1.2 Numbers



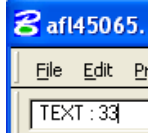
### Accelerator Key: n or N

Place block numbers.

Follow the message and key in the first block number:

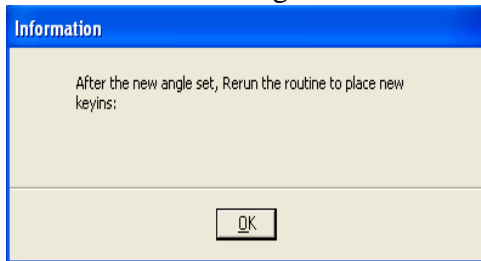
place block numbers:

Key in the first block number in the keyin window:



And use the data button to place the first block number inside a block. Next the number will be automatically added by 1. If the first block number are 33, then the next block number will be 34, 35, etc. and no further key in is required. The user only needs to move the cursor to the corresponding block and give a data button.

If the user wants to change the active angle for the block numbers, then key in “aa” and follow the message:



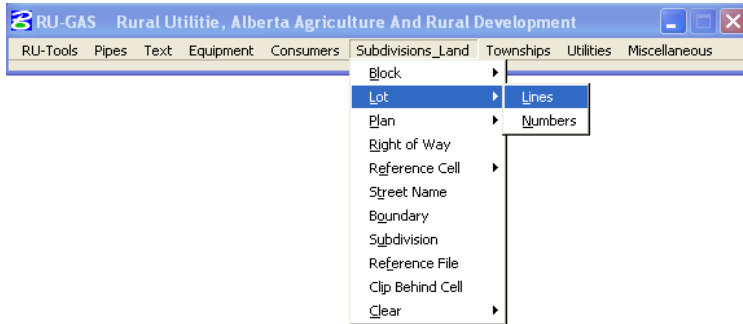
Give data buttons for two locations to set the active angle:

set new active angle by 2 points:

Rerun the program to use the new active angle setting.

## 6.2 Lot

### 6.2.1 Lines



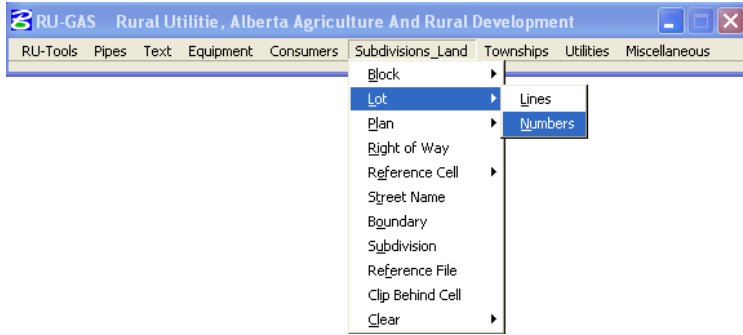
### Accelerator Key: I or L

Place lot lines.

Follow the message and use the data button to place the lot lines:

Place lot line:

## 6.2.2 Numbers



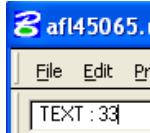
### Accelerator Key: n or N

Place lot numbers.

Follow the message:

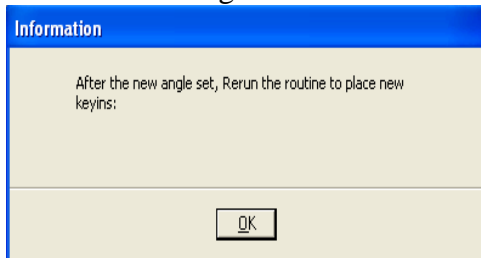
place lot numbers:

And key in the first lot number in the keyin window:



And place the first lot number inside a lot, next the number will be automatically added by 1. If the first lot number is 33, then the next lot number will be 34, 35, etc. and no further key in is required. The user only needs to move the cursor to the corresponding lot and give a data button.

If the user wants to change the active angle for the lot numbers, then key in "aa" and follow the message:



Give data buttons for two locations to set the active angle:

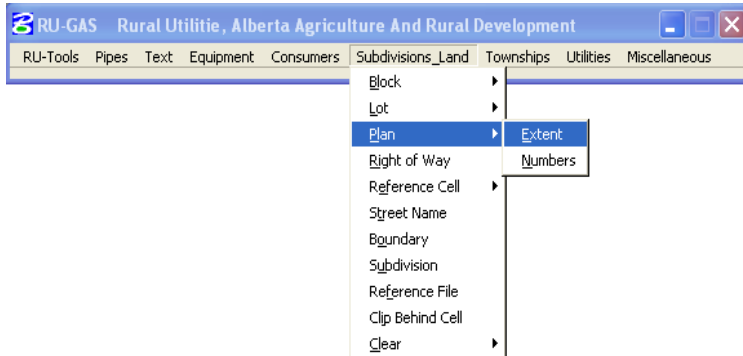
set new active angle by 2 points:

Rerun the program to use the new active angle setting.



## 6.3 Plan

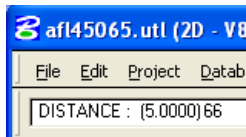
### 6.3.1 Extent



Accelerator Key: e or E

Set default 5m for parallel copy:

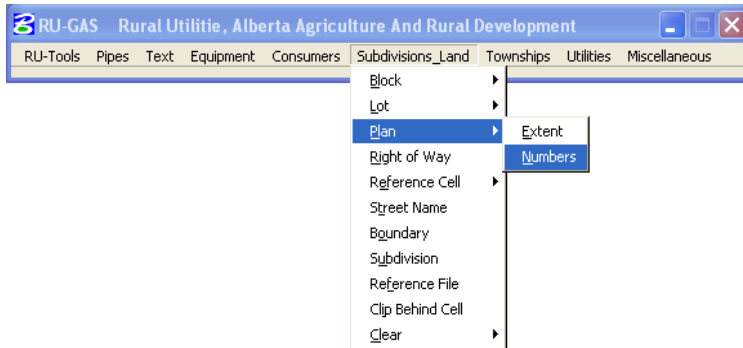
Other distances for parallel copy can be set using keyin:



Follow the message to copy parallel:

Copy Parallel by Key-in > Identify element

### 6.3.2 Numbers



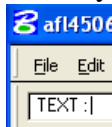
Accelerator Key: n or N

Place plan numbers.

Follow the message

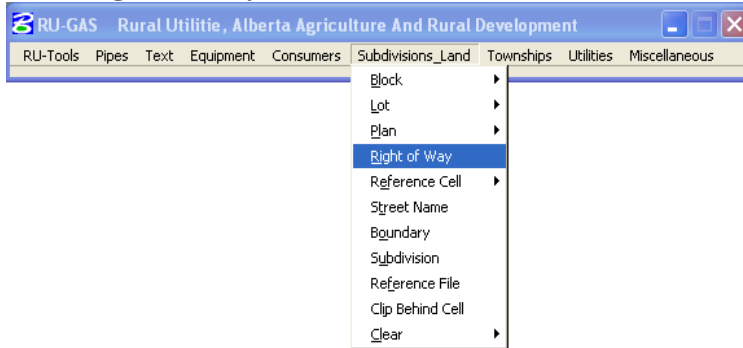
place plan numbers:

And key in the plan number in the keyin window:



Then use the data button to place the plan number.

## 6.4 Right of Way



### Accelerator Key: r or R

Place right of way line strings, copy parallel the right of way and place text at the user's specified angle.

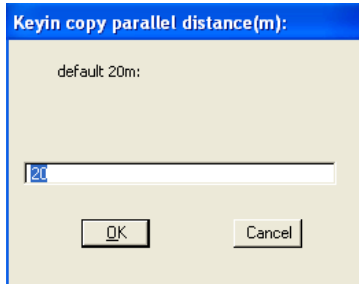
Follow the message after pressing this menu:

Place right of way line string

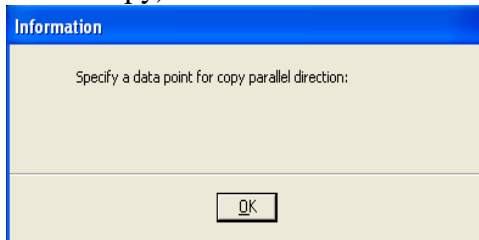
Place the right of way line string in the dgn file:



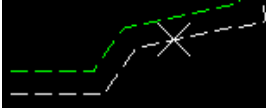
And a reset button (usually the right button of the mouse) click, the copy parallel key in distance window will show up: 20 (in this example)



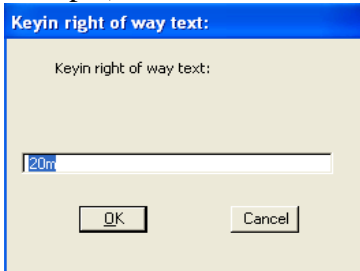
Then another window will let the user specify the copy parallel direction (on which side to copy):



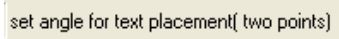
A data point was given below the right of way line string to parallel copy the right of way downwards:



Then key in the right of way width text (parallel copy distance): 20m (in this example)



Then set two points for the text placement (alignment):



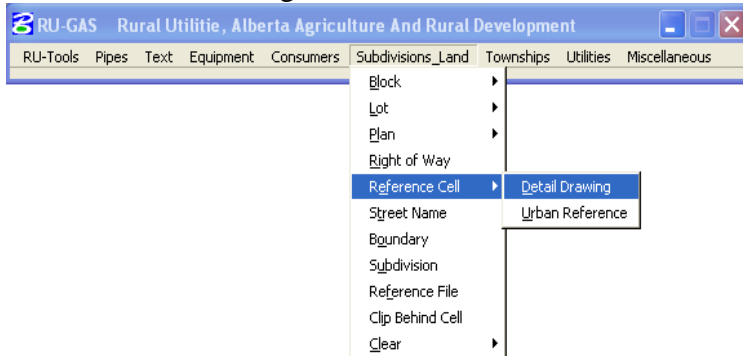
The placed right of way text (see the suffixed P/L R/W):



Note: a presetting for parallel copy may be required to have this process work properly.

## 6.5 Reference Cell

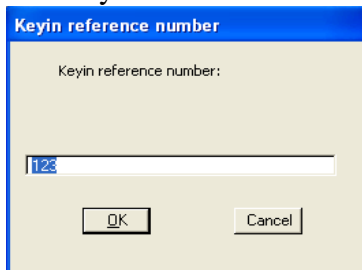
### 6.5.1 Detail Drawing



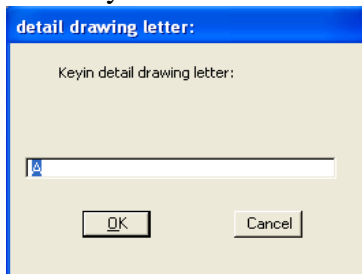
Accelerator Key: d or D

Place detail drawing cell “see500”.

First key in the reference number for cell “see500”: 123 (in this example)



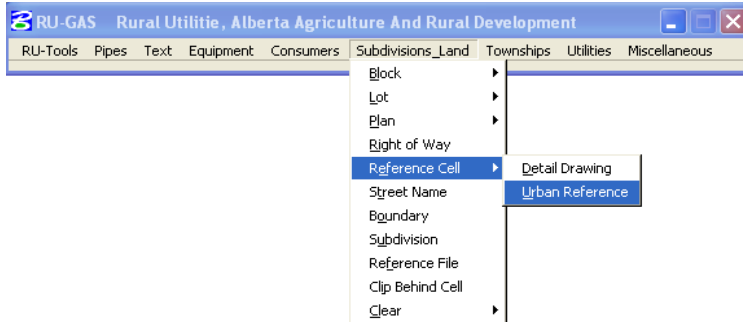
Then key in the detail drawing letter and place the cell: A (in this example)



The placed detail drawing cell “see500”:



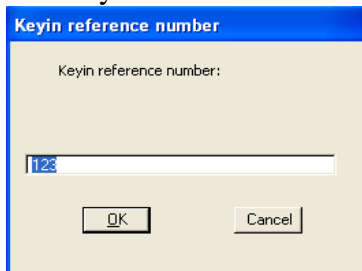
## 6.5.2 Urban Reference



Accelerator Key: u or U

Place urban reference cell “see300”.

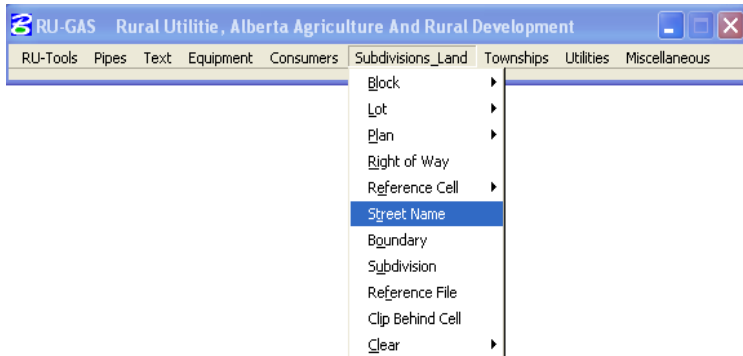
First key in the reference number for cell “see300”: 123 (in this example)



Then place the cell:



## 6.6 Street Name



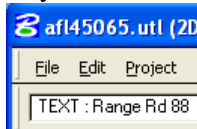
### Accelerator Key: t or T

Place text (default: GOVERNMENT ROAD ALLOWANCE).

Follow the message after pressing this menu:

Key in Street Name or Enter for default: Government Road Allowance:

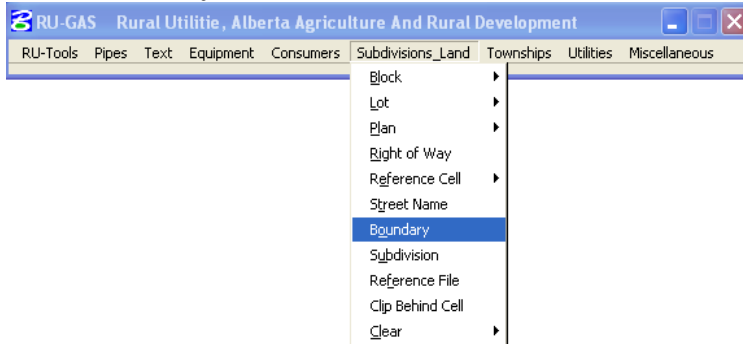
Key in new text if wanted:



Place the text along the road element:



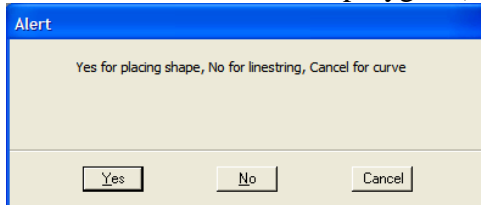
## 6.7 Boundary



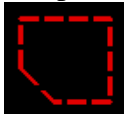
### Accelerator Key: o or O

Place detailed 300 drawing boundary lines. These lines can be placed as polygons, line strings or curves.

Chose different button for polygon (shape), line string or curve:

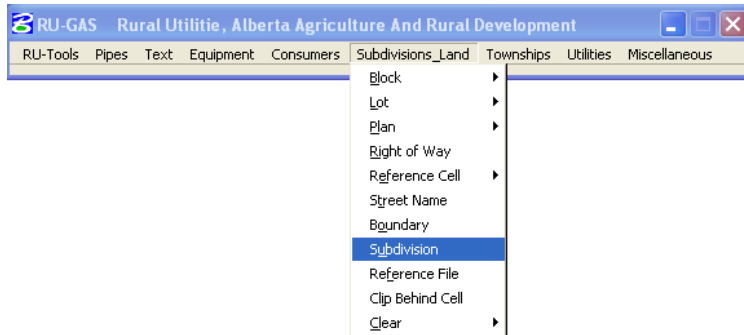


The placed detail drawing boundary (in this case, a closed shape):





## 6.8 Subdivision



### Accelerator Key: u or U

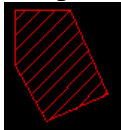
Place a hatched closed polygon feature for a new subdivision.

Follow the message after pressing this menu:

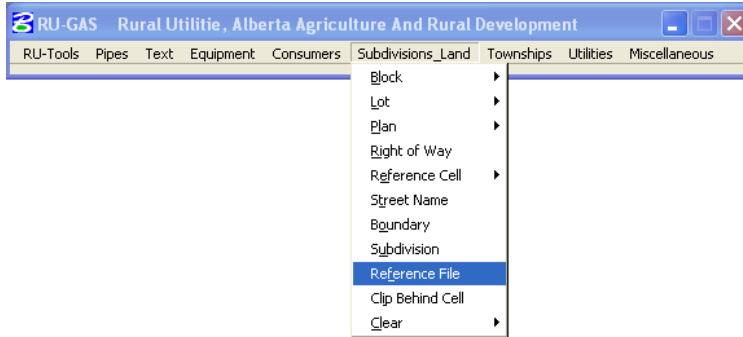
Place subdivision, Reset to hatch

Use the data button to place the polygon, the last data point must close the polygon!  
Then use the reset button to hatch the polygon:

The placed and hatched subdivision polygon:



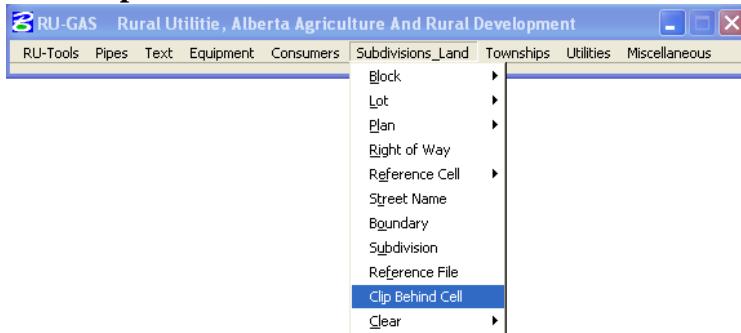
## 6.9 Reference File



### Accelerator Key: f or F

Reference 300lnd file to the active 300utl file. "Config" needs to be run first and the active dgn has to be a 300utl file.

## 6.10 Clip Behind Cell



### Accelerator Key: i or I

Clip all other elements overlapped with the selected cell. The clipped size is determined by the cell range. So use this tool with caution.

Two points are required to select the cell: either the upper left/bottom right or the upper right/bottom left points.

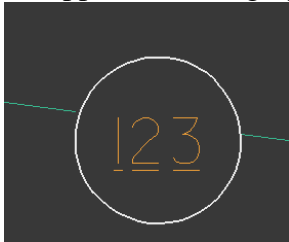
Follow the message after pressing this menu:

Place the first upper left point to select the cell:

After the first point is specified in the view:

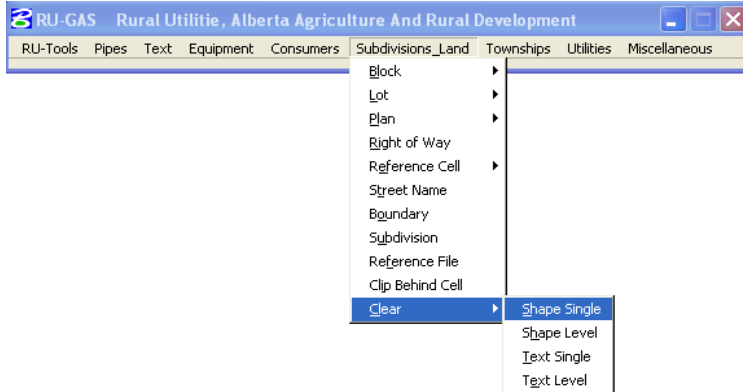
Place the the second lower right point to select the cell:

A clipped line string by selecting the cell "dsmm1":



## 6.11 Clear

### 6.11.1 Shape Single



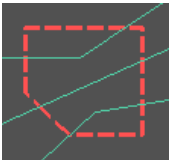
#### Accelerator Key: s or S

Clip elements using a single selected shape feature.

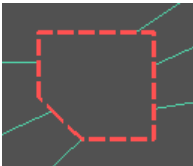
Follow the message after pressing this menu:

Place select the shape:

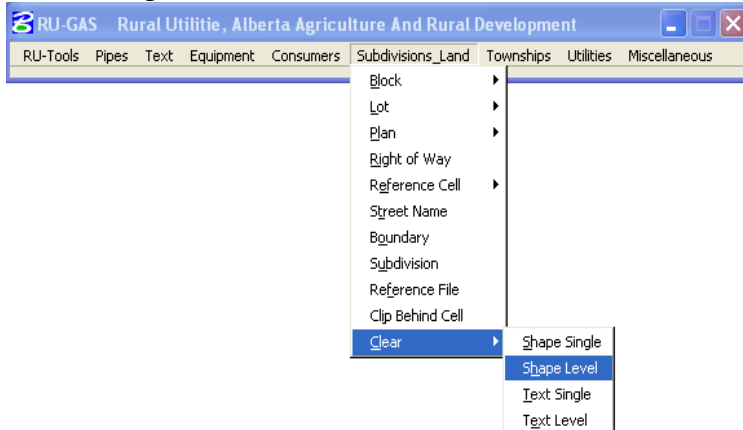
The lines before being clipped (selected single red shape):



The lines after being clipped (selected single red shape):



### 6.11.2 Shape Level



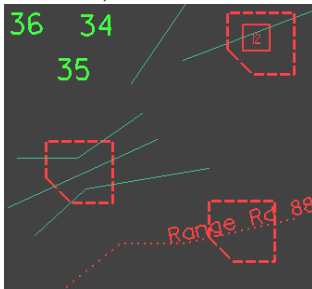
#### Accelerator Key: h or H

If more shapes are on the same selected shape level, then all shapes on that level will be used to clip the overlapped elements.

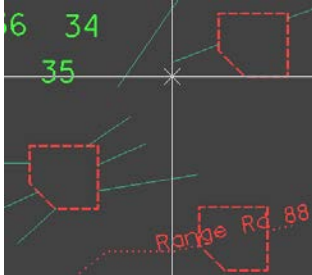
Follow the message to select the shape feature:

Place select the shape:

Features before being clipped (3 red shapes on the same level and one being selected):

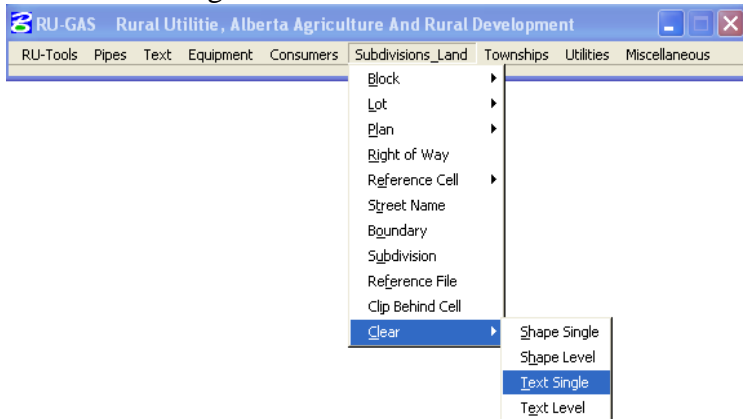


Features after being clipped:



Some overlapped features may not be clipped, depends on their locations. Use this tool with caution (Because this tool works on all shapes in the same level, it is better to make sure that to clip all shapes on the same level is exactly what you want).

### 6.11.3 Text Single



Accelerator Key: t or T

Clip overlapped elements with a single text.

Follow the message and select the single text:

Place select the text:

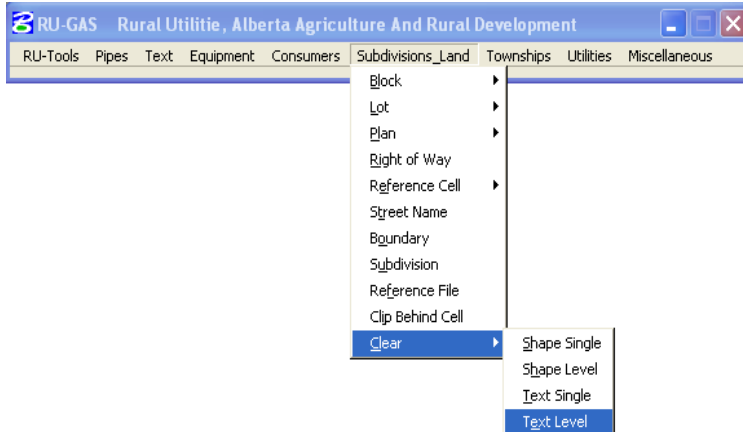
A line string overlapped with a text before being clipped:



The line string after being clipped:



### 6.11.4 Text Level



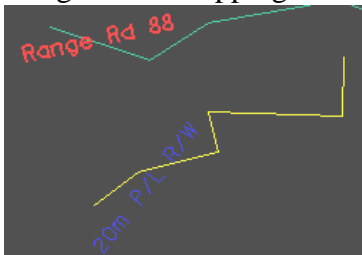
Accelerator Key: e or E

Clip overlapped elements on all same level texts.

Follow the message and select a single text:

Place select the text:

Two text features (on same level, but different colors) overlapped with two line strings before clipping:



Texts and line strings after being clipped:



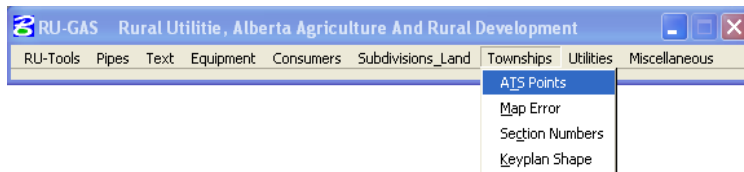
Use this tool with caution.





## 7. Townships

### 7.1 ATS Points



#### Accelerator Key: t or T

Place ats point cell “ats”.

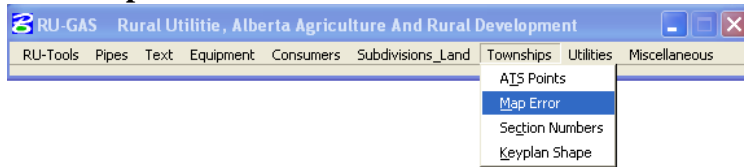
Follow the message after pressing this menu:

Place cell ats:

The placed ats point cell “ats”:



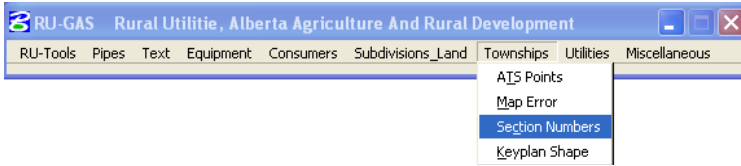
## 7.2 Map Error



Accelerator Key: m or M

Settings for map error.

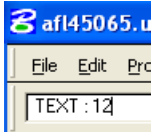
### 7.3 Section Numbers



#### Accelerator Key: c or C

Place section numbers.

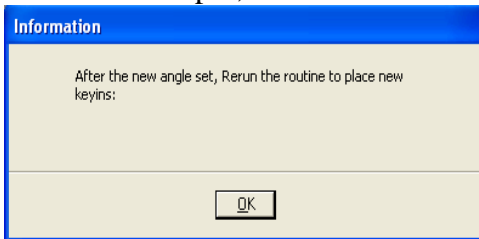
Key in the section number in the keyin window:



Follow the message if a new active angle is wanted for the section number:

place section numbers, aa for new angle:

If “aa” is the input, then another window will show up:



Use two points to set the new active angle:

set new active angle by 2 points:

The placed section number 12 (active angle = 0):

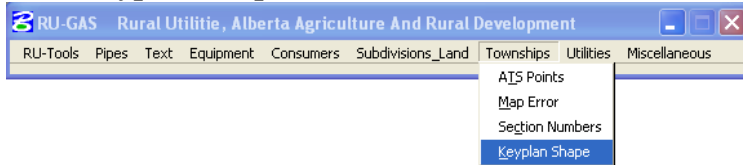


The placed same section number 12 (after aa's new set)



The section numbers will be automatically added by 1 each time after a keyin.

## 7.4 Keyplan Shape



### Accelerator Key: k or K

Place a hatched shape for key plan polygon.

Follow the message to place the key plan polygon. The last data point must close the polygon:

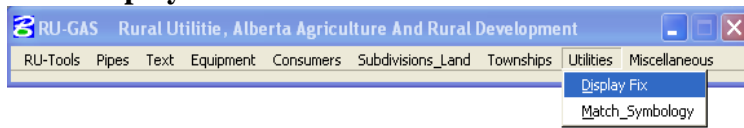
Place keyplan, Reset to hatch

The placed and hatched key plan polygon:



## 8. Utilities

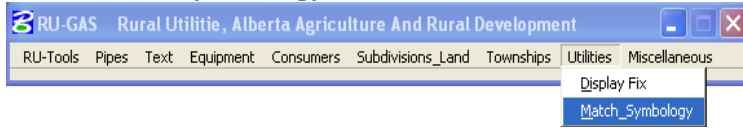
### 8.1 Display Fix



Accelerator Key: d or D

For view attribute settings, active dgn and reference files levels on/off.

## 8.2 Match Symbology



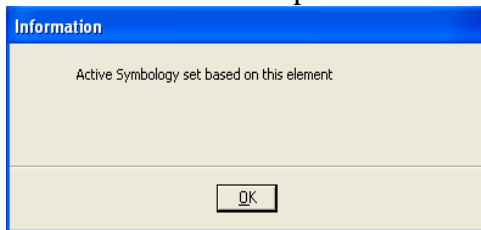
### Accelerator Key: m or M

Set active symbologies based on the selected element.

Follow the message:

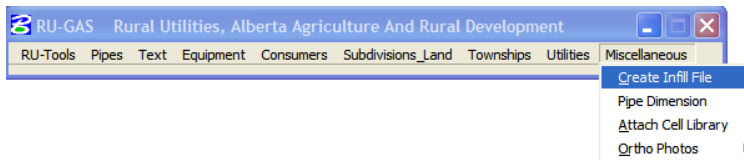
Please select the element:

A window will show up to let the user know that the settings are done:



## 9. Miscellaneous

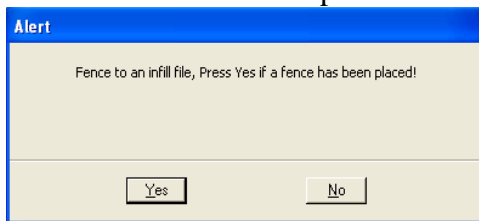
### 9.1 Create Infill File



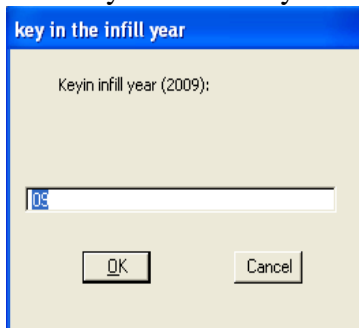
Accelerator Key: c or C

Fence out infill features to a new dgn file.

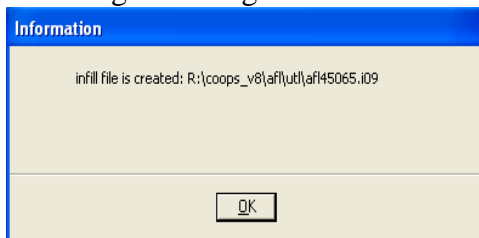
First a fence needs to be placed:



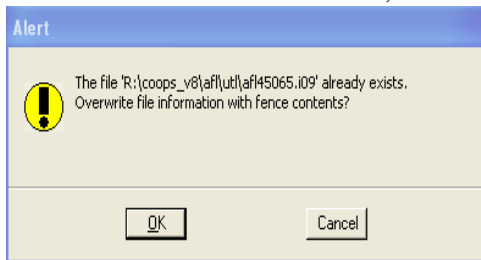
Then key in the infill year: 09 (in this example)



A message showing that the infill file is created:

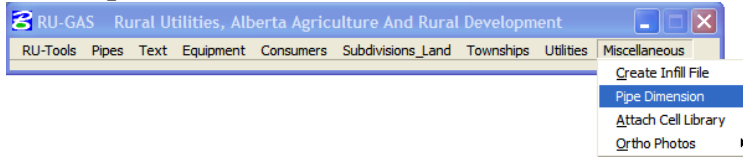


If the same file name is found, then a message will show up to confirm to overwrite:





## 9.2 Pipe Dimension



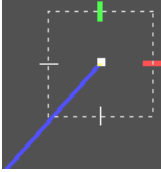
### Accelerator Key: i or I

Place dimensions for pipeline features:

Follow the message:

Dimension Size (Custom) > Select start of dimension

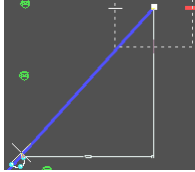
Select the start point of the dimension:



And then define length of extension line:

Dimension Size (Custom) > Define length of extension line

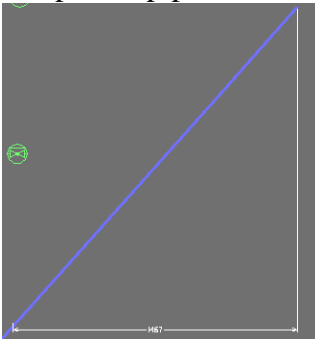
Define the length:



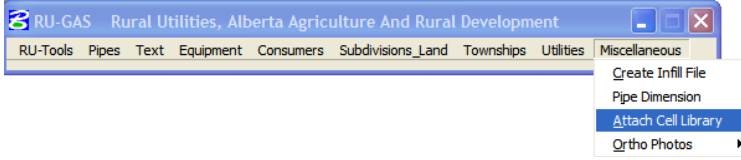
Finally select dimension endpoint:

Dimension Size (Custom) > Select dimension endpoint

The placed pipe dimension:



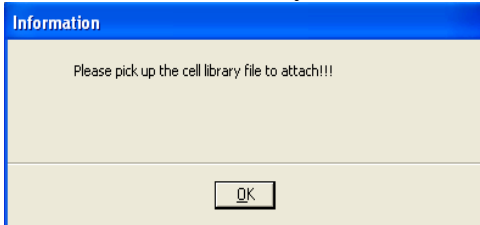
### 9.3 Attach Cell Library



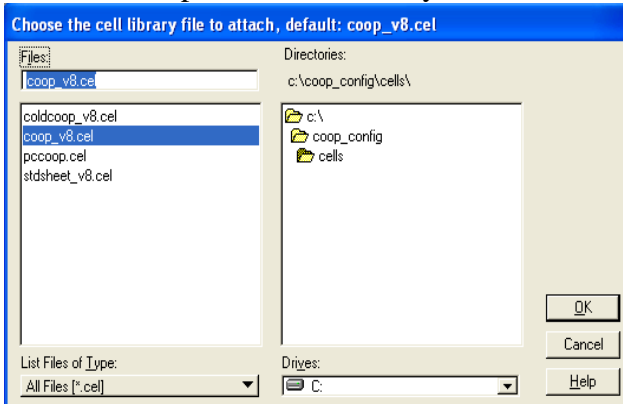
#### Accelerator Key: a or A

Attach a selected cell library file.

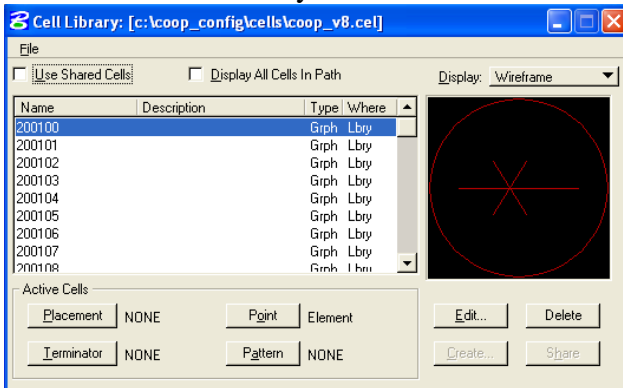
First select a cell library file to attach:



Chose the coop\_v8.cel cell library file:

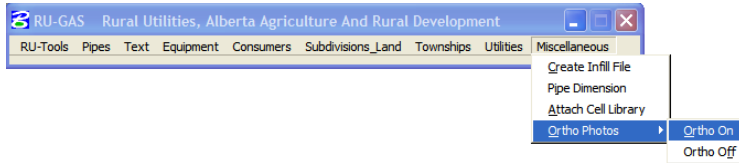


The attached cell library file window:



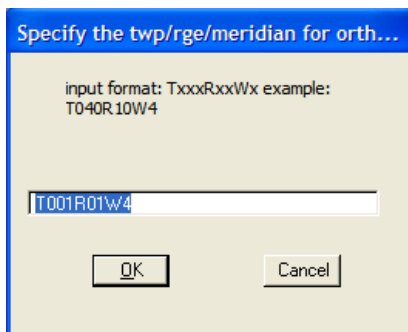
## 9.4 Ortho Photos

### 9.4.1 Ortho Photo Attach

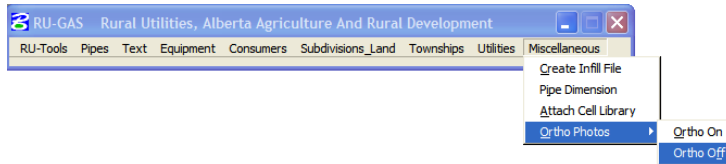


#### Accelerator Key: o or O

If the active dgn file is in the config-ed coop twp list, then the ortho photo for the file will be automatically attached. Otherwise, the user will be prompted to key in for ortho photo location: township, range and meridian(format: TxxxRxxWx):



## 9.4.2 Ortho Photo Detach



Accelerator Key: f or F

Detach all attached ortho photos