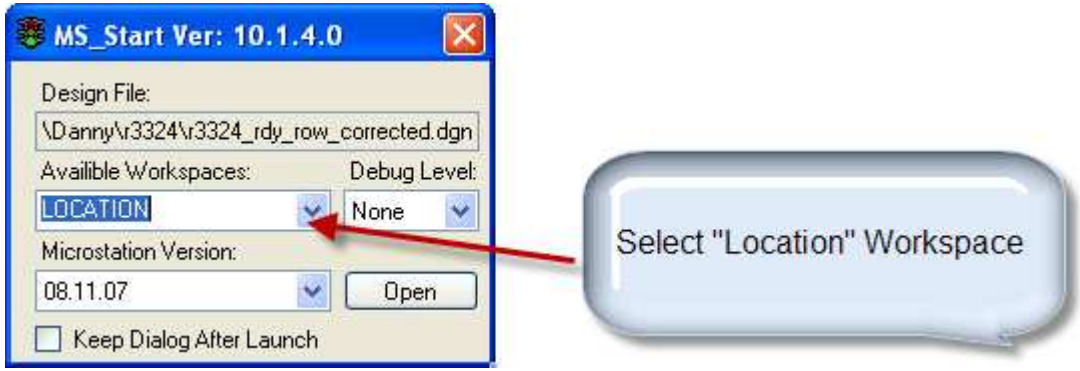
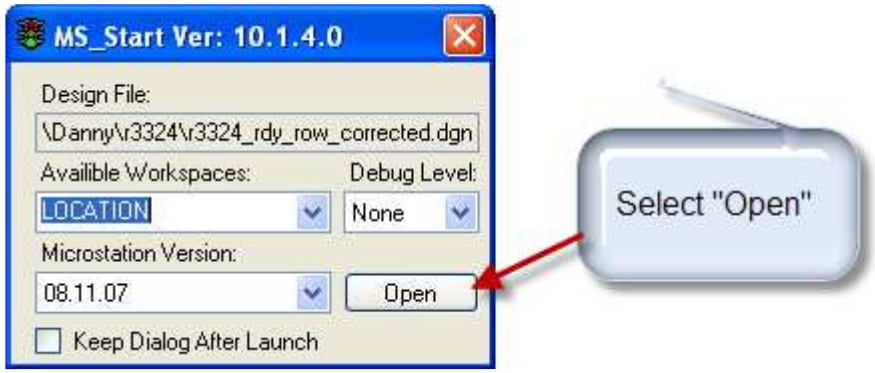
This Tutorial is a guideline for developing Survey Control Sheet 1F (Design Alignments) and Sheet 1G (ROW Markers)

Begin by opening the Right-of-Way (ROW) Roadway Design File

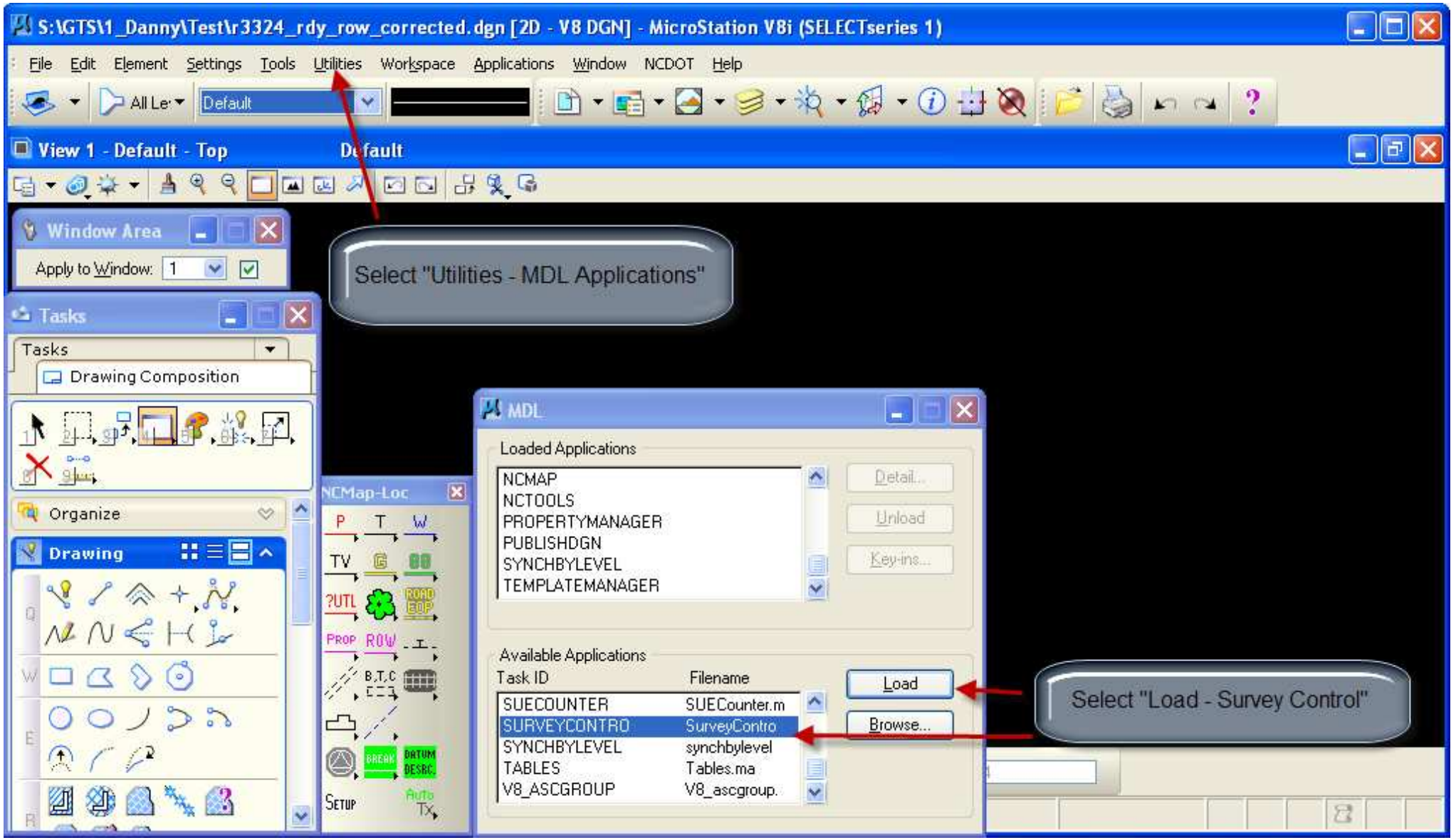


When starting Microstation, be sure to open “Location” Workspaces



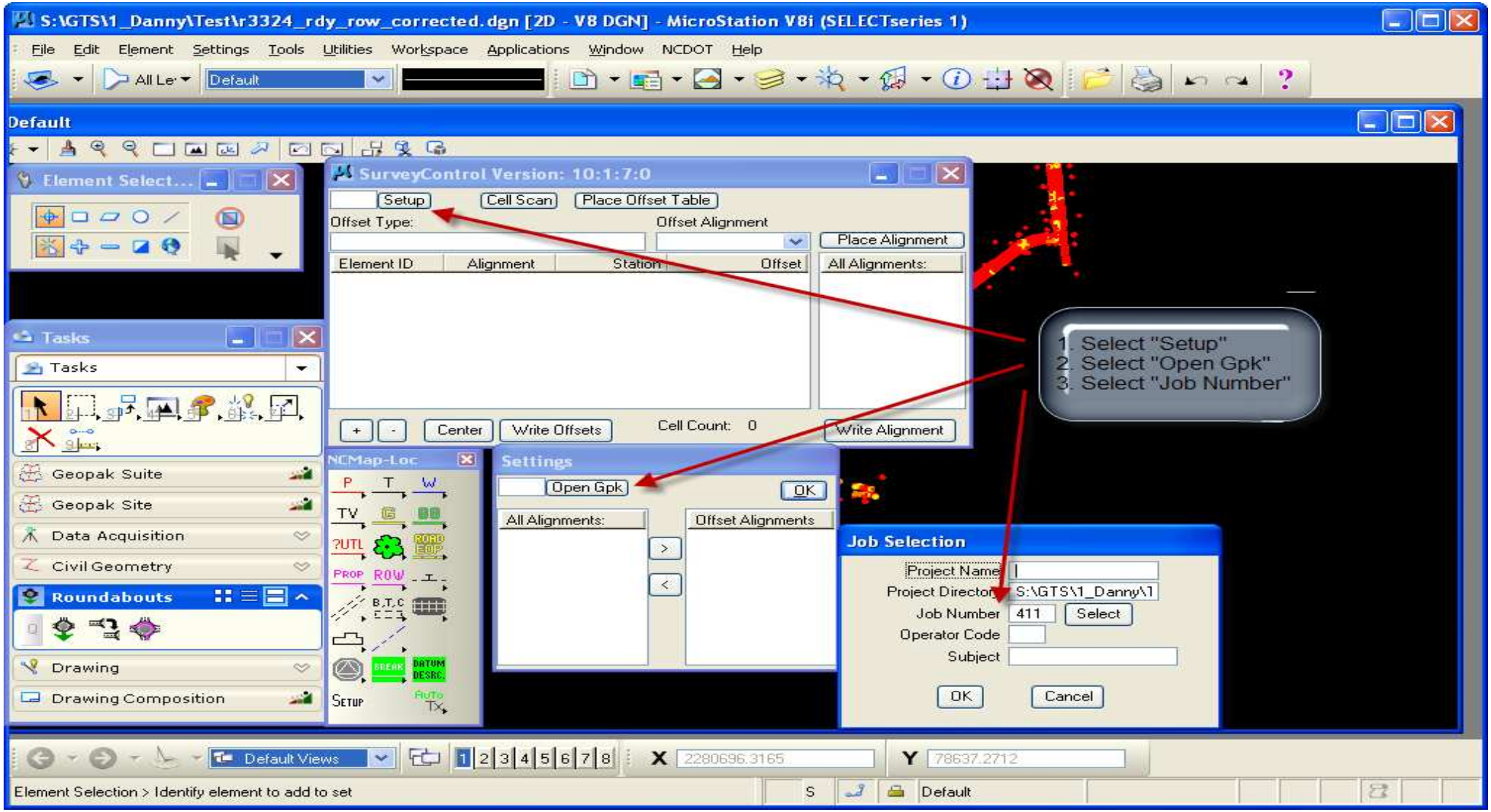
This launches the Microstation Design File.

Under “Utilities” Select “MDL Applications”

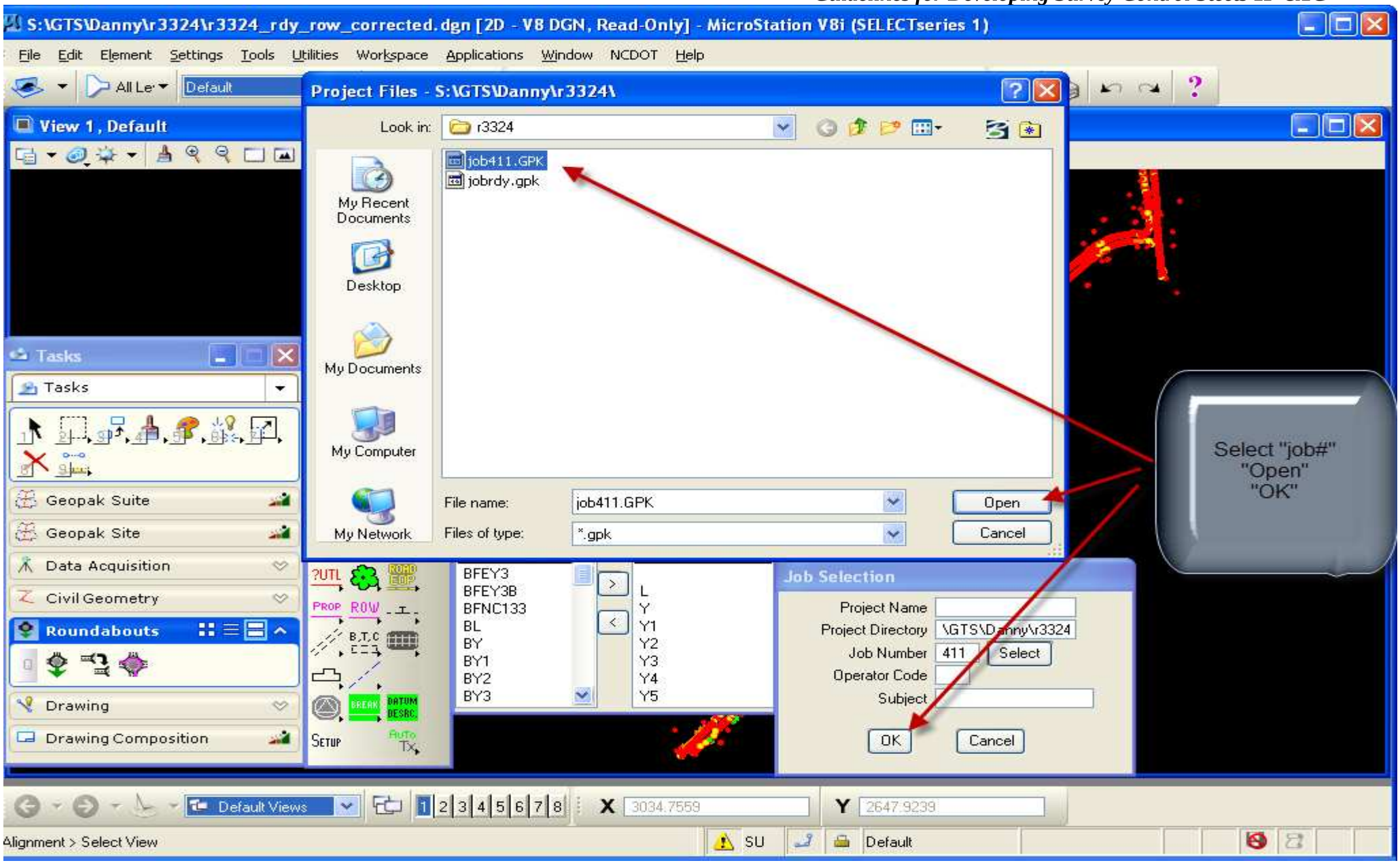


Inside the MDL Toolbox under Available Applications, scroll down to Select “Survey Control” then “Load”
This will launch the Survey Control Toolbox

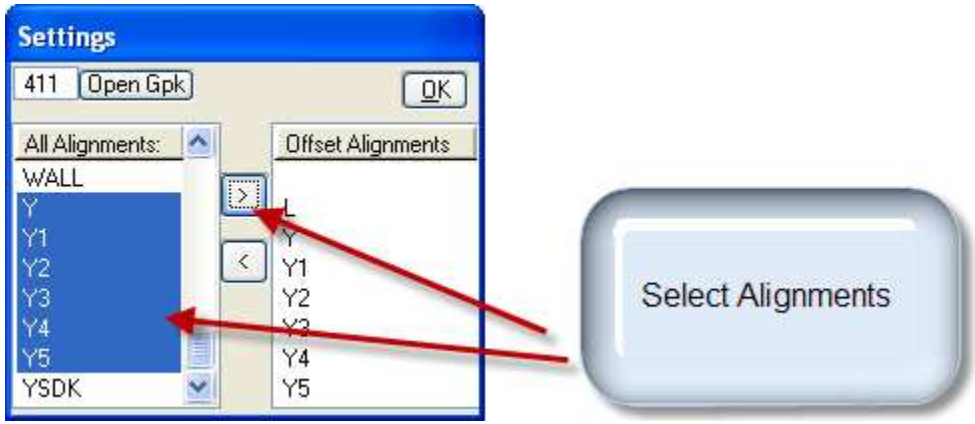
First Select “Setup”
This will launch the “Settings” Toolbox
Second Select “Open Gpk”

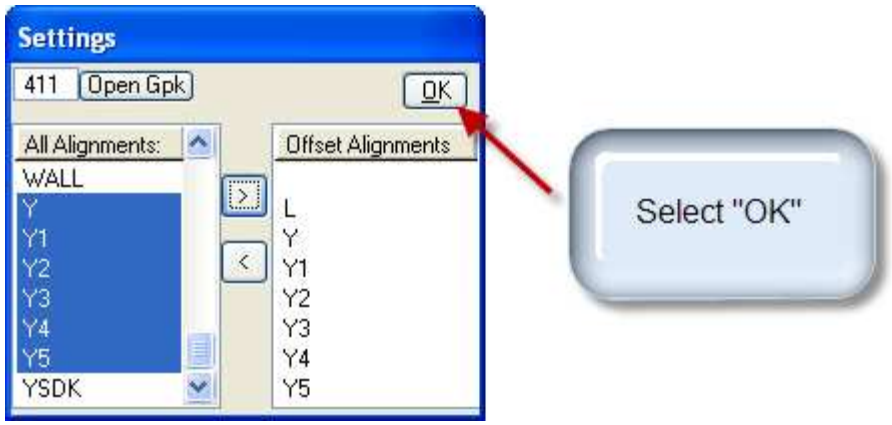


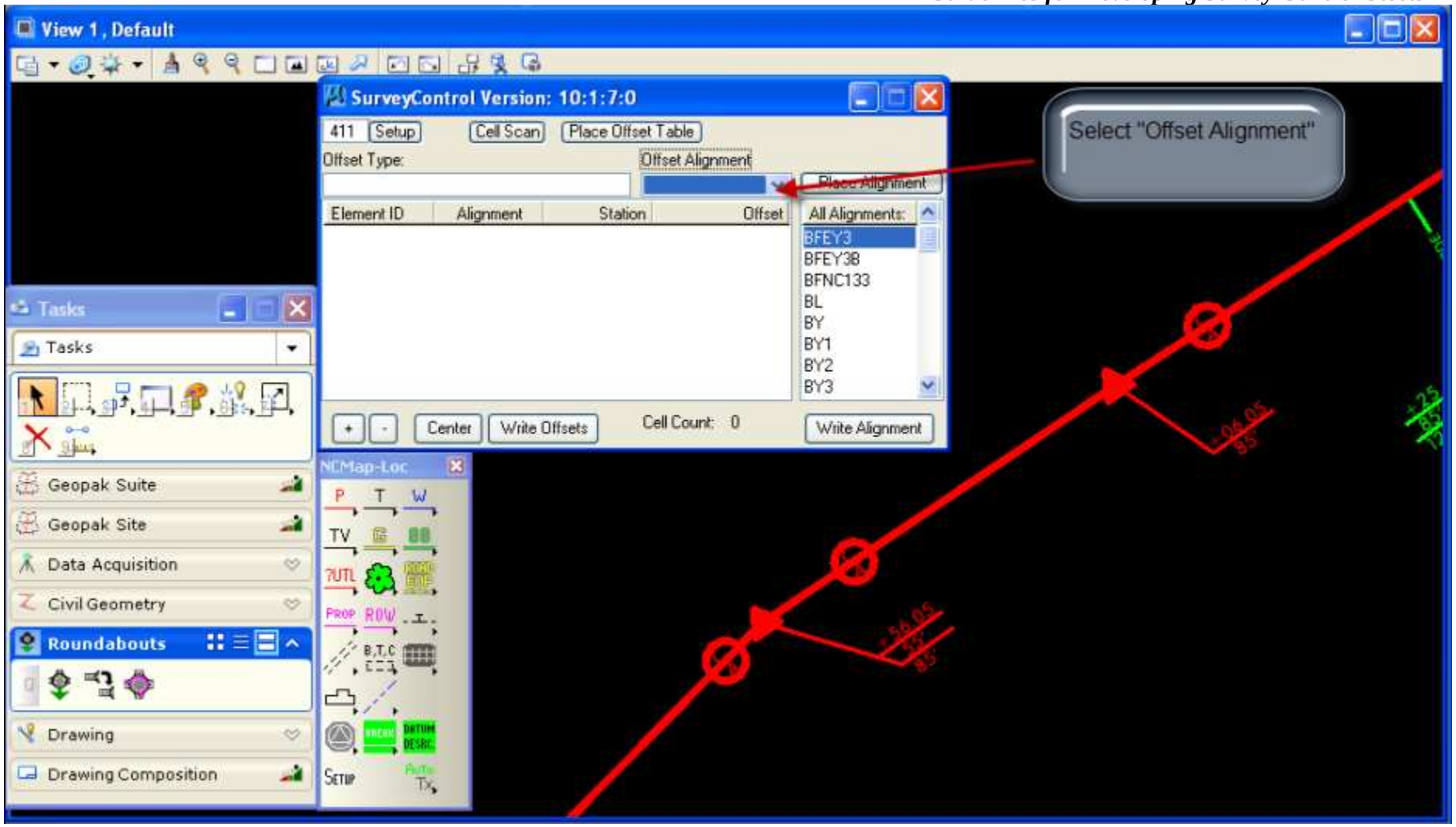
This will launch the “Job Selection” Toolbox
Third “Select” the Job number (Roadway Geopak file) for this project



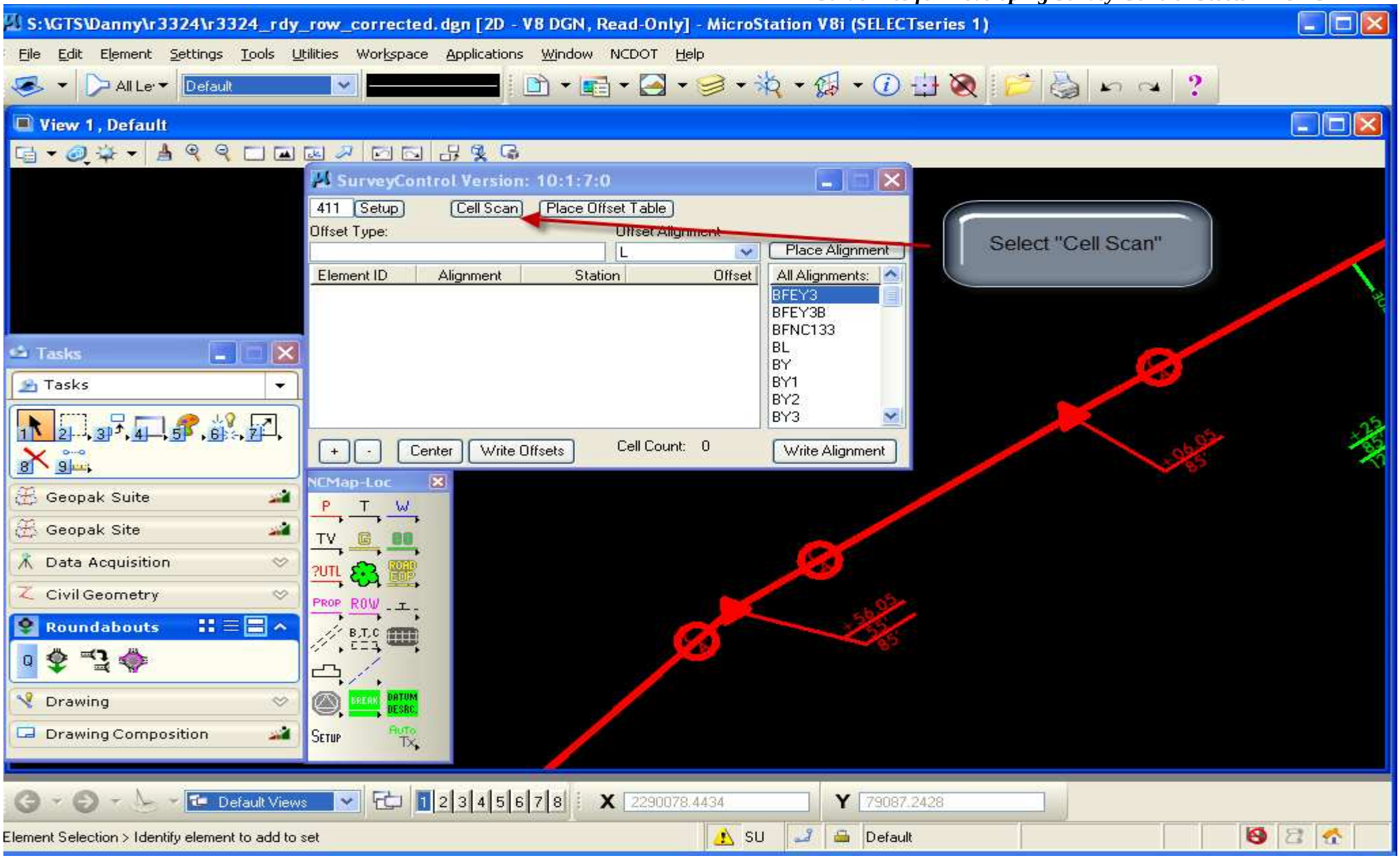
Select the Roadway Gpk file containing the Alignment control


Settings
411
Open Gpk
OK
All Alignments:
Offset Alignments
WALL
Y
Y1
Y2
Y3
Y4
Y5
YSDK
L
Y
Y1
Y2
Y3
Y4
Y5
Select Alignments

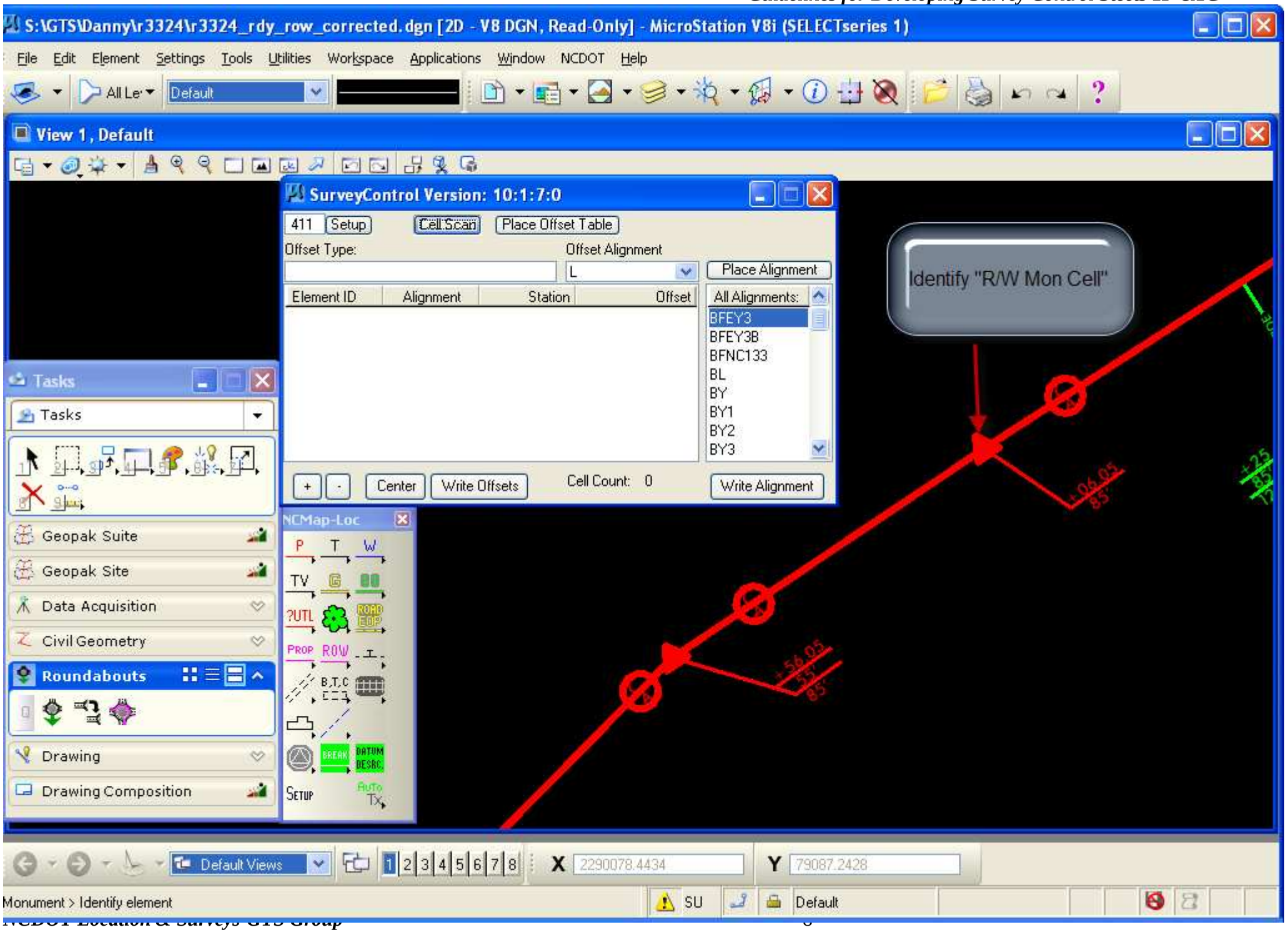

Settings
411
Open Gpk
OK
All Alignments:
Offset Alignments
WALL
Y
Y1
Y2
Y3
Y4
Y5
YSDK
L
Y
Y1
Y2
Y3
Y4
Y5
Select "OK"

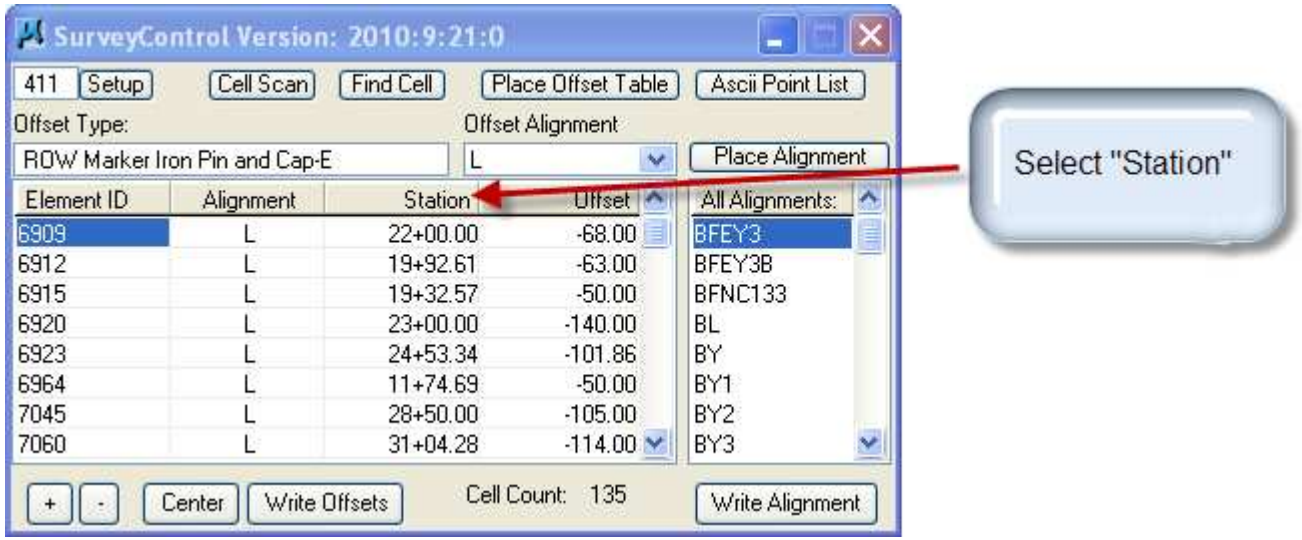


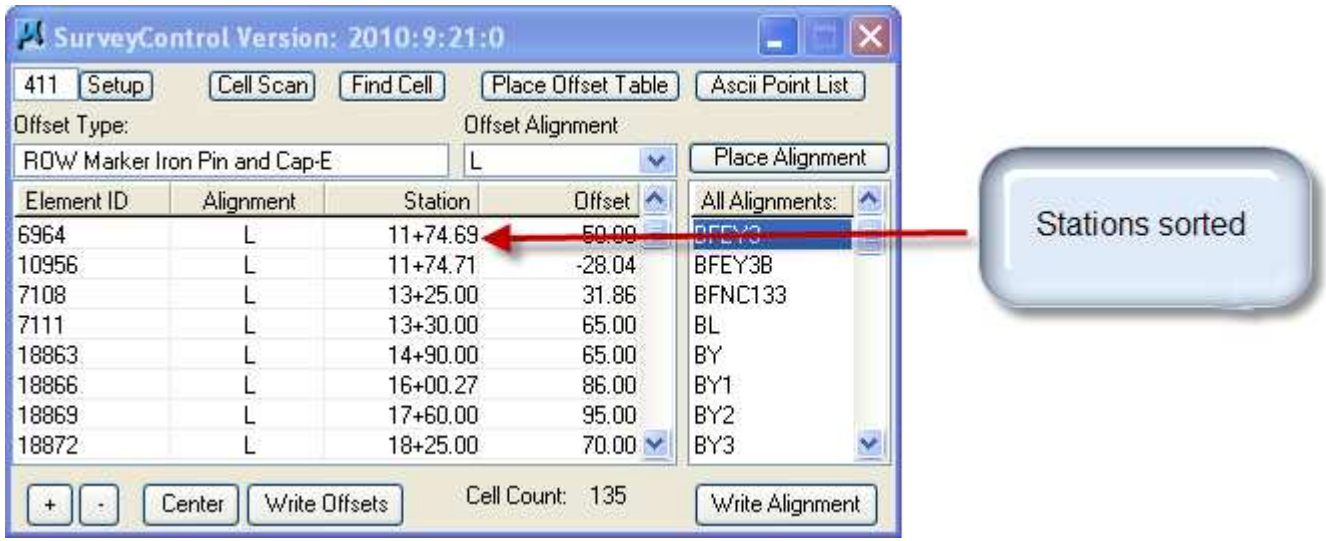
Select the appropriate Design Alignments (i.e. –L-, -Y-, -Y1-, etc.)
Note: The “Blank” alignment can be used for extraneous or unused points.

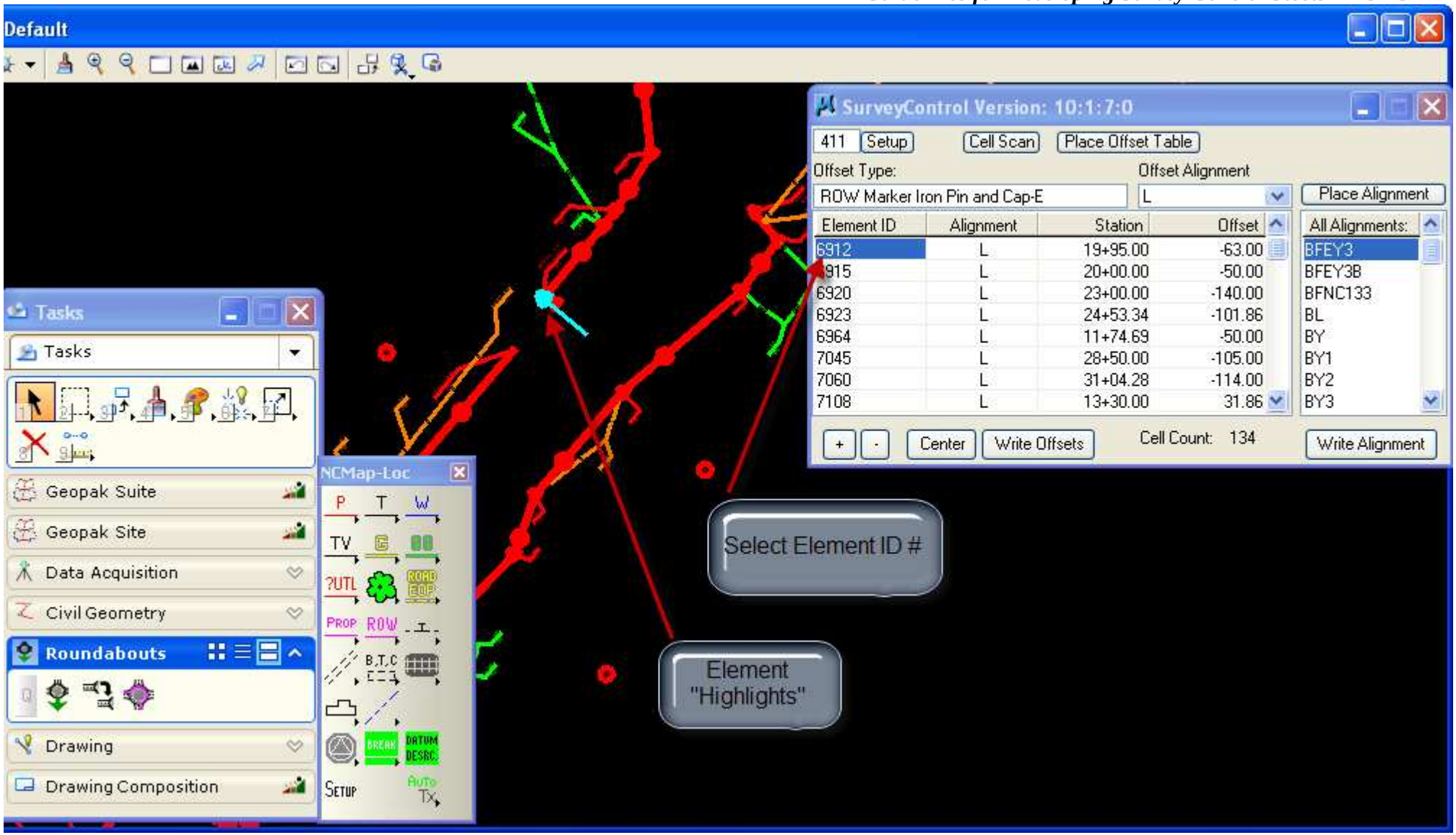


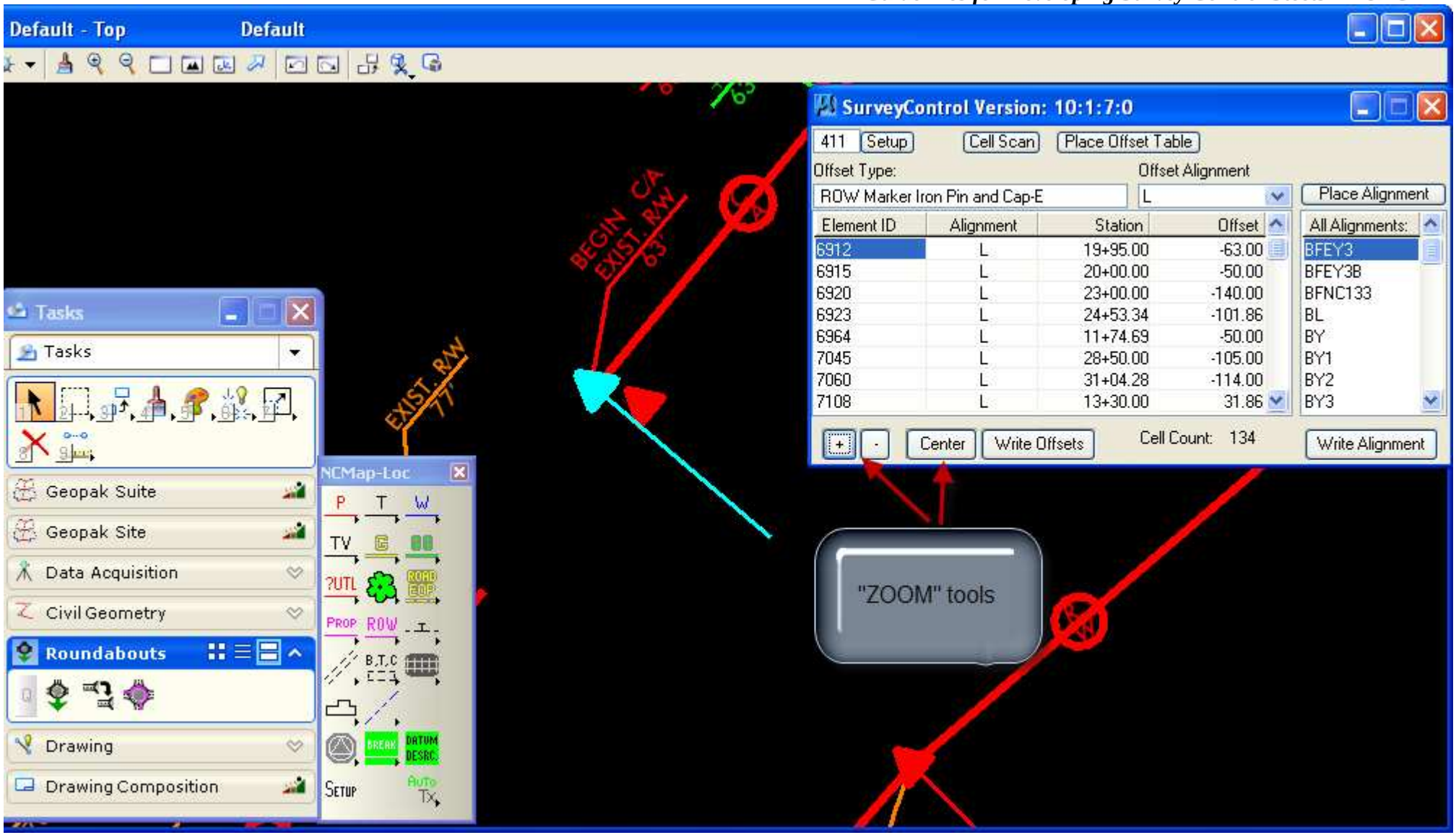
Select “Cell Scan” and Data Point the R/W Cell

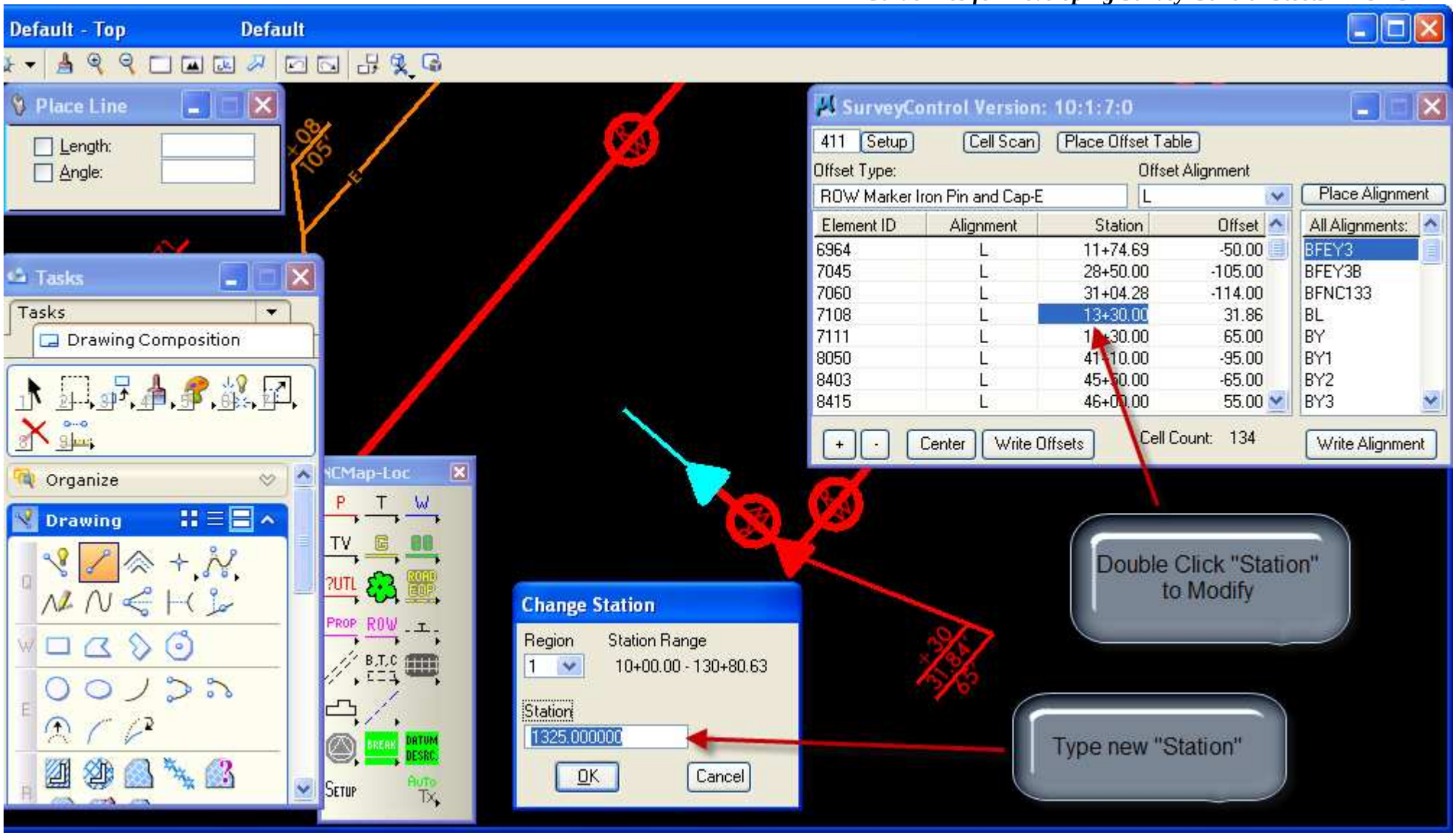

S:\GTS\Danny\r3324\r3324_rdy_row_corrected.dgn [2D - V8 DGN, Read-Only] - MicroStation V8i (SELECTseries 1)
File Edit Element Settings Tools Utilities Workspace Applications Window NCDOT Help
View 1, Default
SurveyControl Version: 10:1:7:0
411 Setup
Cell Scan
Place Offset Table
Offset Type:
Offset Alignment
L
Place Alignment
Element ID
Alignment
Station
Offset
All Alignments:
BFEY3
BFEY3B
BFNC133
BL
BY
BY1
BY2
BY3
Center
Write Offsets
Cell Count: 0
Write Alignment
Identify "R/W Mon Cell"
Tasks
Geopak Suite
Geopak Site
Data Acquisition
Civil Geometry
Roundabouts
Drawing
Drawing Composition
NCMap-Loc
Default Views
X 2290078.4434
Y 79087.2428
Monument > Identify element
SU
Default

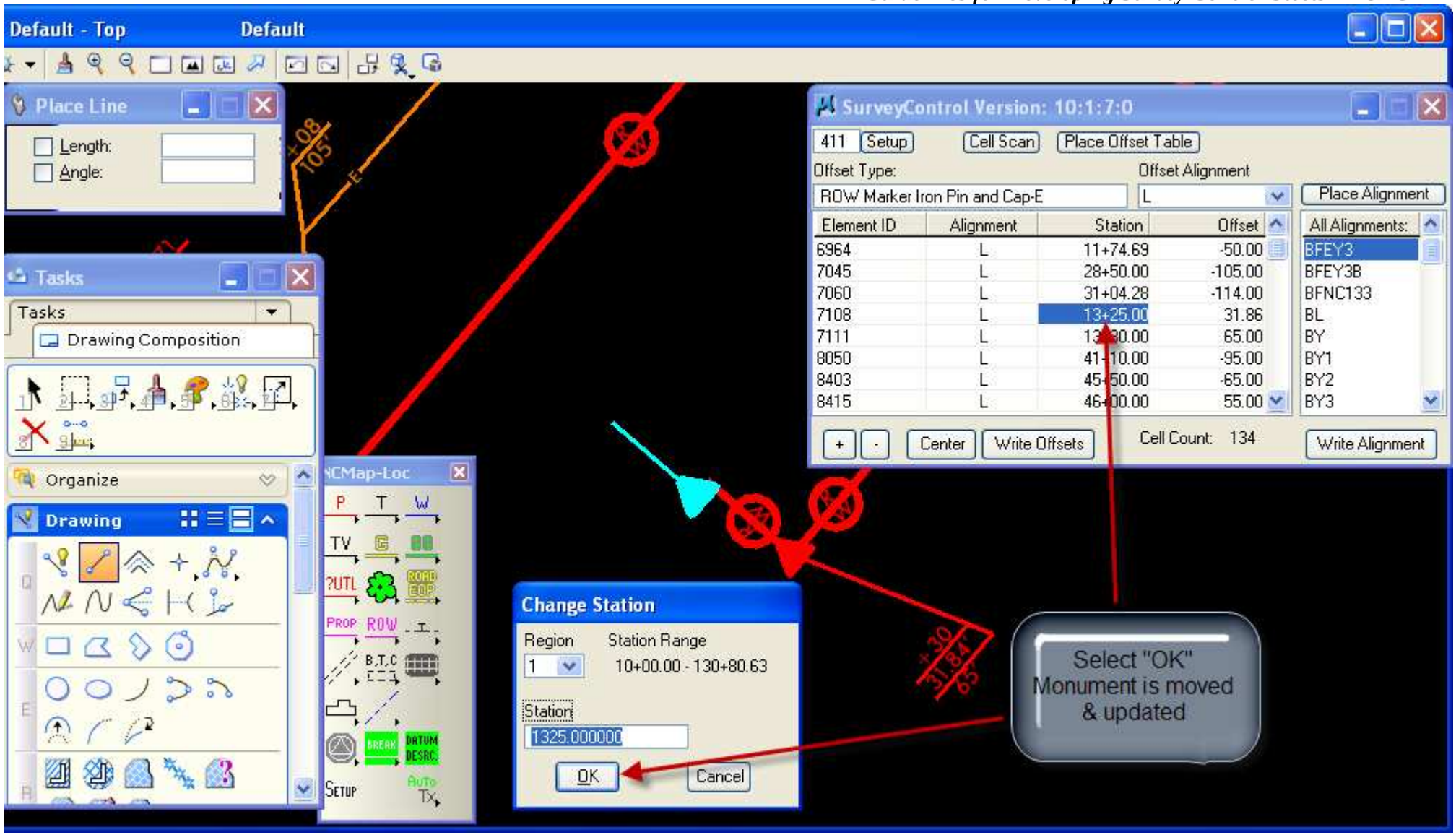

SurveyControl Version: 2010:9:21:0
411
Setup
Cell Scan
Find Cell
Place Offset Table
Ascii Point List
Offset Type:
ROW Marker Iron Pin and Cap-E
Offset Alignment
L
Place Alignment
Element ID
Alignment
Station
Offset
All Alignments:
6909 L 22+00.00 -68.00 BFEY3
6912 L 19+92.61 -63.00 BFEY3B
6915 L 19+32.57 -50.00 BFNC133
6920 L 23+00.00 -140.00 BL
6923 L 24+53.34 -101.86 BY
6964 L 11+74.69 -50.00 BY1
7045 L 28+50.00 -105.00 BY2
7060 L 31+04.28 -114.00 BY3
+
-
Center
Write Offsets
Cell Count: 135
Write Alignment
Select "Station"

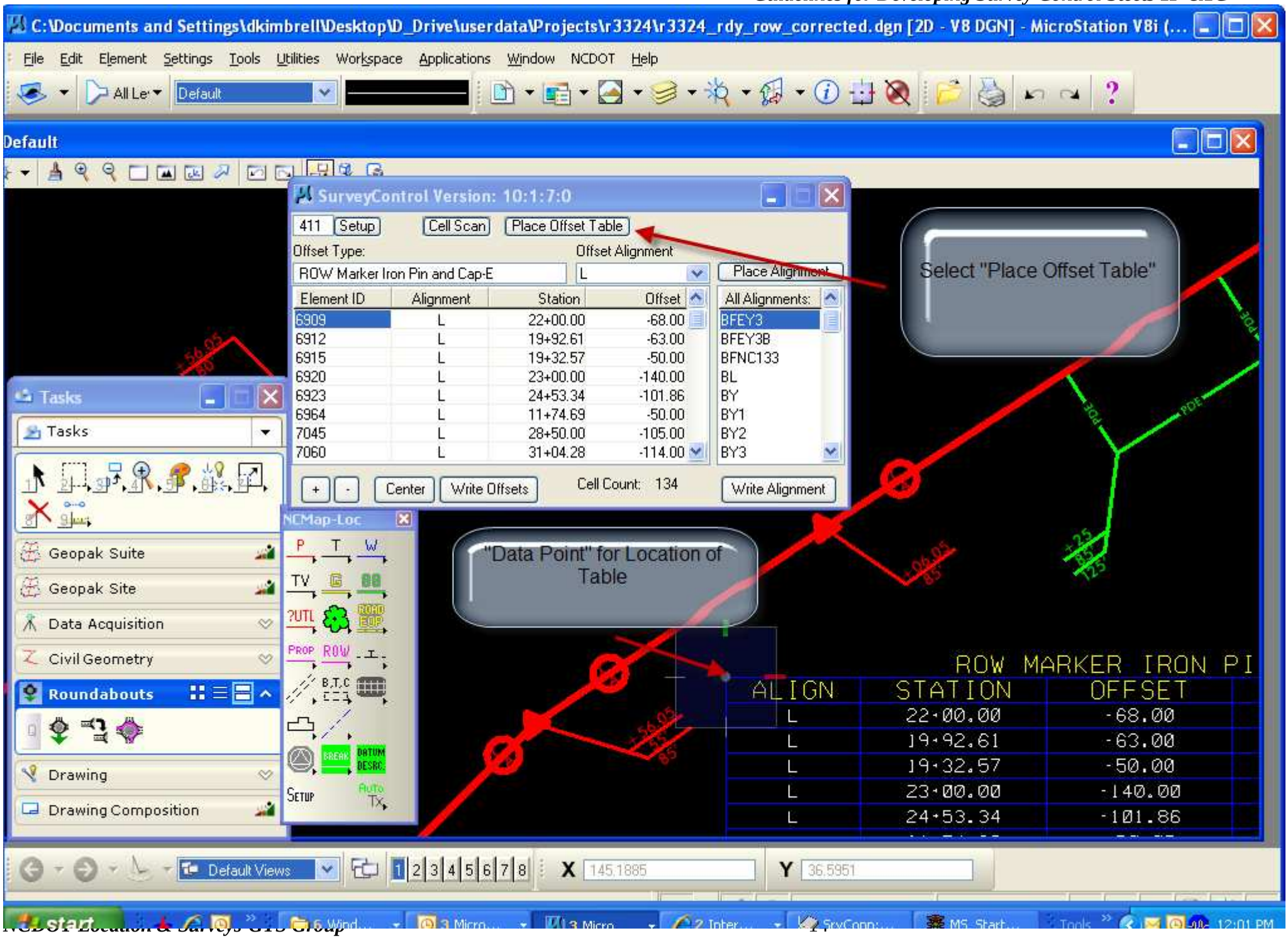

SurveyControl Version: 2010:9:21:0
411
Setup
Cell Scan
Find Cell
Place Offset Table
Ascii Point List
Offset Type:
ROW Marker Iron Pin and Cap-E
Offset Alignment
L
Place Alignment
Element ID
Alignment
Station
Offset
All Alignments:
6964 L 11+74.69 -50.00 BFEY3
10956 L 11+74.71 -28.04 BFEY3B
7108 L 13+25.00 31.86 BFNC133
7111 L 13+30.00 65.00 BL
18863 L 14+90.00 65.00 BY
18866 L 16+00.27 86.00 BY1
18869 L 17+60.00 95.00 BY2
18872 L 18+25.00 70.00 BY3
+
-
Center
Write Offsets
Cell Count: 135
Write Alignment
Stations sorted


Default
SurveyControl Version: 10:1:7:0
411
Setup
Cell Scan
Place Offset Table
Offset Type:
ROW Marker Iron Pin and Cap-E
Offset Alignment
L
Place Alignment
Element ID
Alignment
Station
Offset
All Alignments:
6912 L 19+95.00 -63.00 BFEY3
6915 L 20+00.00 -50.00 BFEY3B
6920 L 23+00.00 -140.00 BFNC133
6923 L 24+53.34 -101.86 BL
6964 L 11+74.69 -50.00 BY
7045 L 28+50.00 -105.00 BY1
7060 L 31+04.28 -114.00 BY2
7108 L 13+30.00 31.86 BY3
+
-
Center
Write Offsets
Cell Count: 134
Write Alignment
Tasks
Tasks
Geopak Suite
Geopak Site
Data Acquisition
Civil Geometry
Roundabouts
Drawing
Drawing Composition
NCMap-Loc
Select Element ID #
Element "Highlights"


Default - Top
Default
SurveyControl Version: 10:1:7:0
411
Setup
Cell Scan
Place Offset Table
Offset Type:
ROW Marker Iron Pin and Cap-E
Offset Alignment
L
Place Alignment
Element ID
Alignment
Station
Offset
6912 L 19+95.00 -63.00
6915 L 20+00.00 -50.00
6920 L 23+00.00 -140.00
6923 L 24+53.34 -101.86
6964 L 11+74.69 -50.00
7045 L 28+50.00 -105.00
7060 L 31+04.28 -114.00
7108 L 13+30.00 31.86
All Alignments:
BFEY3
BFEY3B
BFNC133
BL
BY
BY1
BY2
BY3
Center
Write Offsets
Cell Count: 134
Write Alignment
Tasks
Geopak Suite
Geopak Site
Data Acquisition
Civil Geometry
Roundabouts
Drawing
Drawing Composition
NCMap-Loc
BEGIN C/A
EXIST. R/W
EXIST. R/W
"ZOOM" tools


Default - Top
Default
Place Line
Length:
Angle:
Tasks
Tasks
Drawing Composition
Organize
Drawing
NCMap-Loc
SurveyControl Version: 10:1:7:0
411
Setup
Cell Scan
Place Offset Table
Offset Type:
ROW Marker Iron Pin and Cap-E
Offset Alignment
L
Place Alignment
Element ID
Alignment
Station
Offset
6964 L 11+74.69 -50.00
7045 L 28+50.00 -105.00
7060 L 31+04.28 -114.00
7108 L 13+30.00 31.86
7111 L 65.00
8050 L -95.00
8403 L -65.00
8415 L 55.00
All Alignments:
BFEY3
BFEY3B
BFNC133
BL
BY
BY1
BY2
BY3
+
-
Center
Write Offsets
Cell Count: 134
Write Alignment
Change Station
Region
Station Range
1
10+00.00 - 130+80.63
Station
1325.000000
OK
Cancel
Double Click "Station" to Modify
Type new "Station"


Default - Top
Default
Place Line
Length:
Angle:
Tasks
Tasks
Drawing Composition
Organize
Drawing
NCMap-Loc
SurveyControl Version: 10:1:7:0
411
Setup
Cell Scan
Place Offset Table
Offset Type:
ROW Marker Iron Pin and Cap-E
Offset Alignment
L
Place Alignment
Element ID
Alignment
Station
Offset
6964 L 11+74.69 -50.00
7045 L 28+50.00 -105.00
7060 L 31+04.28 -114.00
7108 L 13+25.00 31.86
7111 L 13+30.00 65.00
8050 L 41+10.00 -95.00
8403 L 45+50.00 -65.00
8415 L 46+00.00 55.00
All Alignments:
BFEY3
BFEY3B
BFNC133
BL
BY
BY1
BY2
BY3
+
-
Center
Write Offsets
Cell Count: 134
Write Alignment
Change Station
Region
Station Range
1
10+00.00 - 130+80.63
Station
1325.000000
OK
Cancel
Select "OK"
Monument is moved
& updated


C:\Documents and Settings\dkimbrell\Desktop\D_Drive\userdata\Projects\r3324\r3324_rdy_row_corrected.dgn [2D - V8 DGN] - MicroStation V8i (...
File Edit Element Settings Tools Utilities Workspace Applications Window NCDOT Help
Default
SurveyControl Version: 10:1:7:0
411 Setup
Cell Scan
Place Offset Table
Offset Type:
ROW Marker Iron Pin and Cap-E
Offset Alignment
L
Place Alignment
Element ID Alignment Station Offset
6909 L 22+00.00 -68.00
6912 L 19+92.61 -63.00
6915 L 19+32.57 -50.00
6920 L 23+00.00 -140.00
6923 L 24+53.34 -101.86
6964 L 11+74.69 -50.00
7045 L 28+50.00 -105.00
7060 L 31+04.28 -114.00
All Alignments:
BFEY3
BFEY3B
BFNC133
BL
BY
BY1
BY2
BY3
Center
Write Offsets
Cell Count: 134
Write Alignment
Select "Place Offset Table"
"Data Point" for Location of Table
Tasks
Geopak Suite
Geopak Site
Data Acquisition
Civil Geometry
Roundabouts
Drawing
Drawing Composition
NCMap-Loc
ROW MARKER IRON PI
ALIGN STATION OFFSET
L 22+00.00 -68.00
L 19+92.61 -63.00
L 19+32.57 -50.00
L 23+00.00 -140.00
L 24+53.34 -101.86
Default Views
X 145.1885
Y 36.5951

Select “Place Offset Table” to create the table. Data Point in the design file for the location of the table.

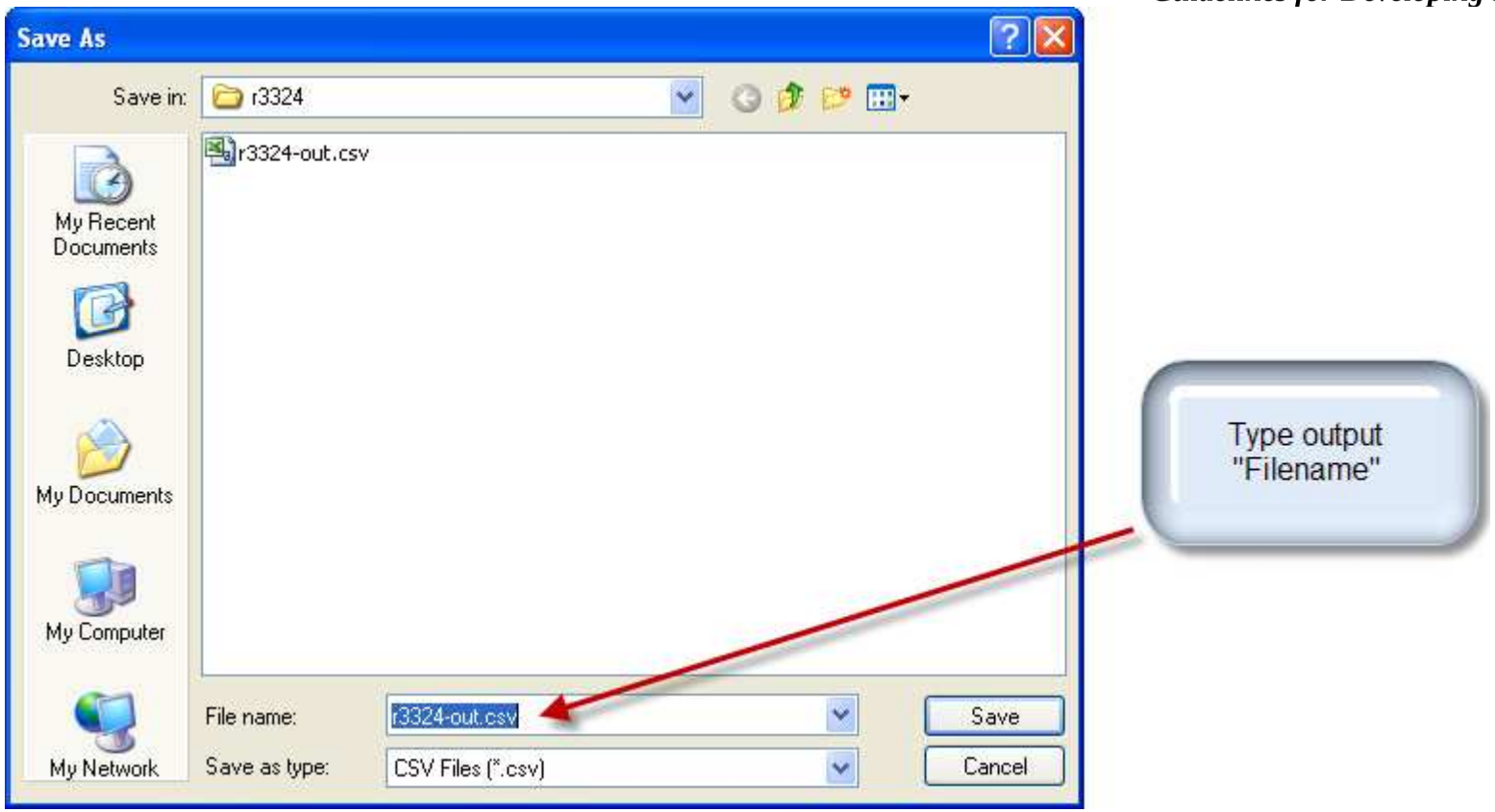
ROW MARKER IRON PIN AND CAP-E

ALIGN	STATION	OFFSET	NORTH	EAST
L	22+00.00	-68.00	73584.2807	2287515.9846
L	19+92.61	-63.00	73423.6727	2287395.9933
L	19+32.57	-50.00	73369.6350	2287366.8804
L	23+00.00	-140.00	73701.2299	2287505.2949
L	24+53.34	-101.86	73808.1512	2287604.0619
L	11+74.69	-50.00	72793.7386	2286874.2085
L	28+50.00	-105.00	74160.7902	2287706.5593
L	31+04.28	-114.00	74401.4838	2287715.9187

R/W Table

Select “Write Offsets” to create an output file containing the Station and offsets for the R/W monuments

Select "Write Offsets"


Save As
Save in:
r3324
r3324-out.csv
My Recent Documents
Desktop
My Documents
My Computer
My Network
File name:
r3324-out.csv
Save as type:
CSV Files (*.csv)
Save
Cancel
Type output "Filename"

Microsoft Excel - r3324-out.csv

File Edit View Insert Format Tools Data Window Help

100% SnagIt Window

10 B U deskPDF

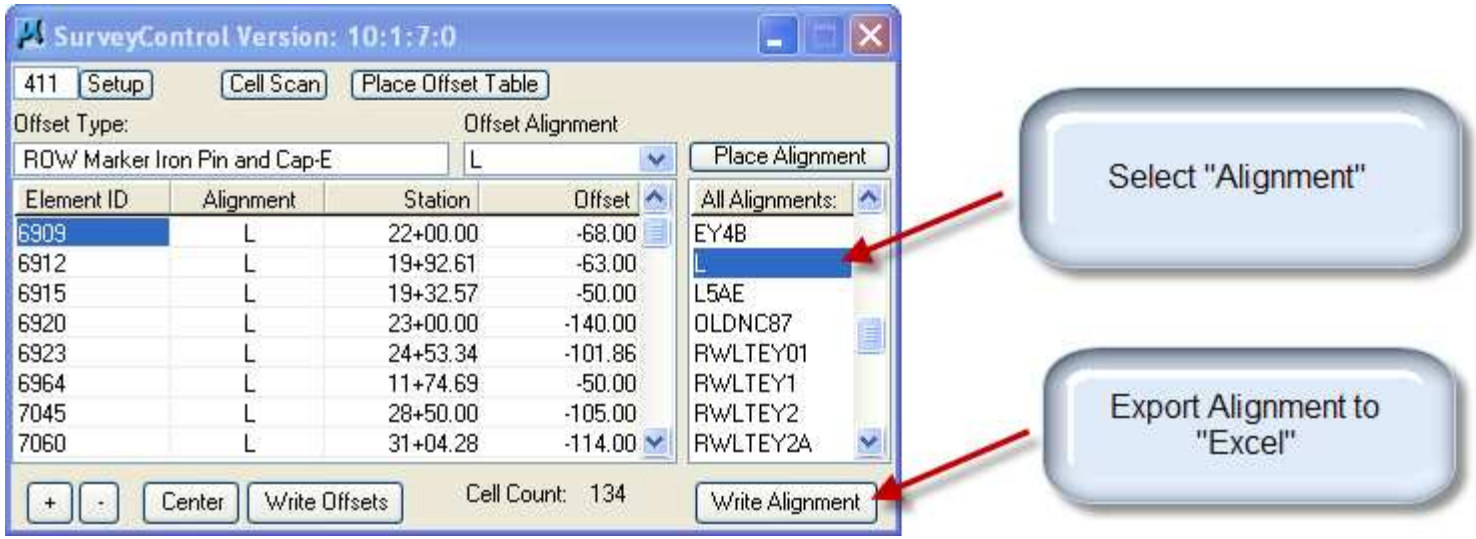
A1 L

	A	B	C	D	E	F	G
1	L	6909	22+00.00	-68	73584.28	2287516	
2	L	6912	19+92.61	-63	73423.67	2287396	
3	L	6915	19+32.57	-50	73369.64	2287367	
4	L	6920	23+00.00	-140	73701.23	2287505	
5	L	6923	24+53.34	-101.86	73808.15	2287604	
6	L	6964	11+74.69	-50	72793.74	2286874	
7	L	7045	28+50.00	-105	74160.79	2287707	
8	L	7060	31+04.28	-114	74401.48	2287716	
9	L	7108	13+30.00	31.86	72858.55	2287037	
10	L	7111	13+30.00	65	72837	2287063	
11	L	8050	41+10.00	-95	75402.81	2287955	
12	L	8403	45+50.00	-65	75810.45	2288180	
13	L	8415	46+00.00	55	75778.63	2288307	
14	L	8418	44+00.00	45	75624.07	2288193	
15	L	8463	52+94.47	-70	76289.72	2288773	
16	L	8472	52+94.47	75	76167.94	2288851	
17	L	8589	61+55.68	-105	76931.73	2289229	
18	L	8598	61+55.68	75	76874.48	2289400	
19	L	8605	63+70.00	-85	77126.62	2289306	
20	L	8630	66+00.00	75	77306.68	2289521	
21	L	8671	76+32.68	55	78304.8	2289774	
22	L	8674	76+32.68	-65	78342.7	2289660	
23	L	8683	71+00.00	-60	77824.59	2289521	
24	L	8765	84+56.05	85	78908.02	2290249	
25	L	8792	84+56.05	-80	79041.25	2290152	
26	L	8815	91+55.55	85	79287.87	2290831	
27	L	8823	91+55.55	-70	79417.97	2290747	
28	L	8849	96+10.38	75	79588.74	2291192	
29	L	8865	88+25.00	-85	79250.89	2290461	
30	L	8878	96+10.38	-70	79692.59	2291091	

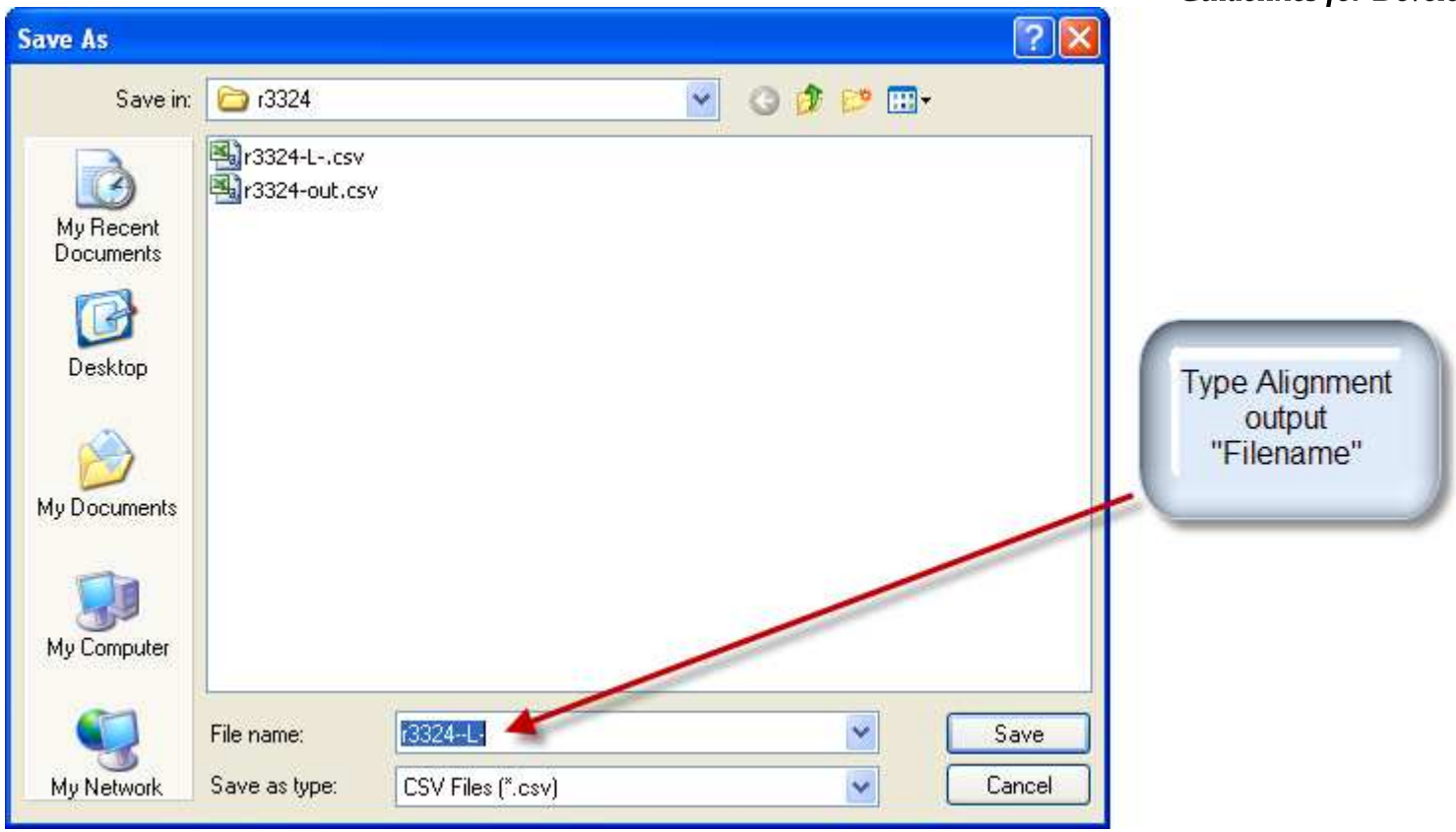
r3324-out

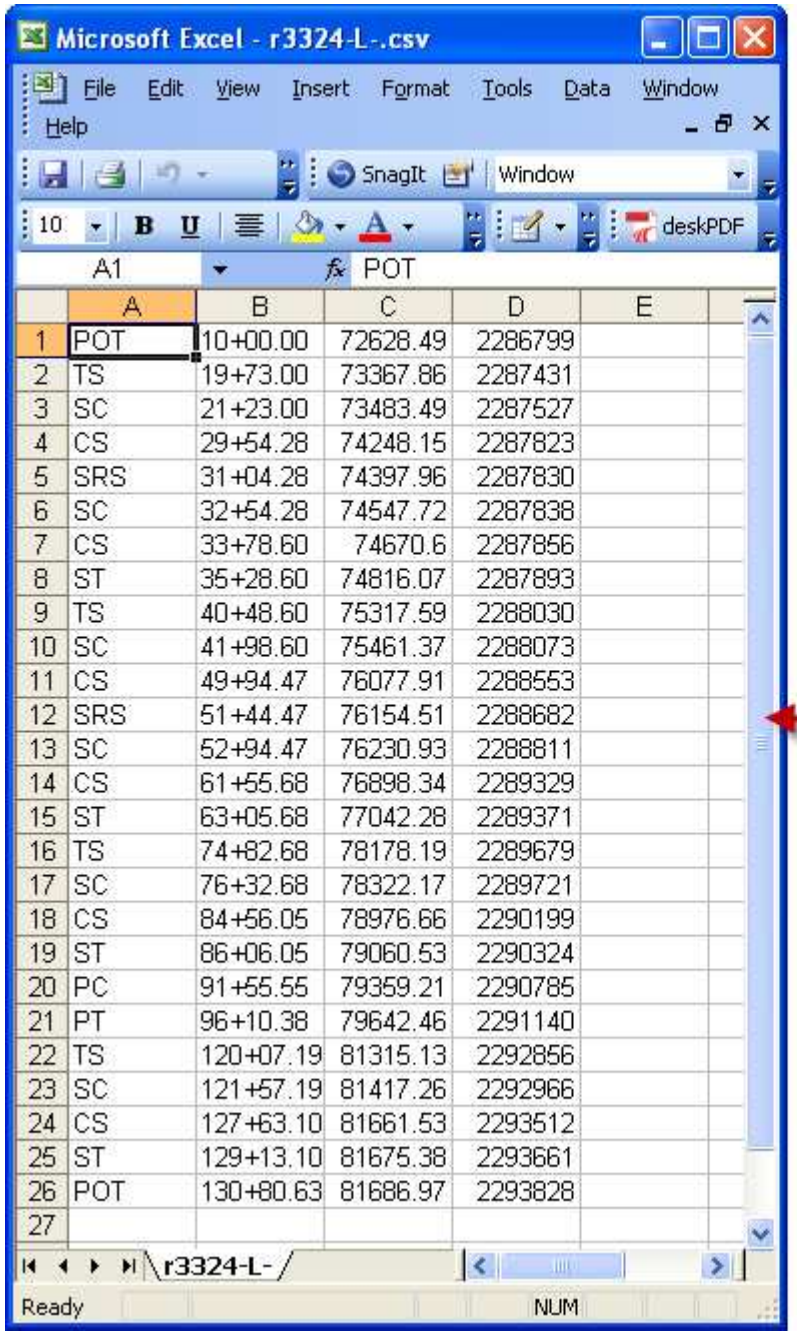
Ready NUM

Excel ASCII Delimited File



Select “Write Alignments” to create an output file containing the Station and offsets for the Design Alignment Control Points.


Save As
Save in:
r3324
r3324-L-.csv
r3324-out.csv
My Recent Documents
Desktop
My Documents
My Computer
My Network
File name:
r3324--L-
Save as type:
CSV Files (*.csv)
Save
Cancel
Type Alignment output "Filename"



	A	B	C	D	E
1	POT	10+00.00	72628.49	2286799	
2	TS	19+73.00	73367.86	2287431	
3	SC	21+23.00	73483.49	2287527	
4	CS	29+54.28	74248.15	2287823	
5	SRS	31+04.28	74397.96	2287830	
6	SC	32+54.28	74547.72	2287838	
7	CS	33+78.60	74670.6	2287856	
8	ST	35+28.60	74816.07	2287893	
9	TS	40+48.60	75317.59	2288030	
10	SC	41+98.60	75461.37	2288073	
11	CS	49+94.47	76077.91	2288553	
12	SRS	51+44.47	76154.51	2288682	
13	SC	52+94.47	76230.93	2288811	
14	CS	61+55.68	76898.34	2289329	
15	ST	63+05.68	77042.28	2289371	
16	TS	74+82.68	78178.19	2289679	
17	SC	76+32.68	78322.17	2289721	
18	CS	84+56.05	78976.66	2290199	
19	ST	86+06.05	79060.53	2290324	
20	PC	91+55.55	79359.21	2290785	
21	PT	96+10.38	79642.46	2291140	
22	TS	120+07.19	81315.13	2292856	
23	SC	121+57.19	81417.26	2292966	
24	CS	127+63.10	81661.53	2293512	
25	ST	129+13.10	81675.38	2293661	
26	POT	130+80.63	81686.97	2293828	
27					

Alignment -L-
Control Points