User's Guide

Version 1, Release 2.0

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About This Manual

This manual provides you with the information you need to install and use LOCUS™ 2000.

What You Should Know

The objective of this training manual is to provide you with the basic knowledge needed to use LOCUS™ 2000. It is not intended to provide instruction on the modeling and balancing processes in general, or to make any recommendation on various balancing methods.

This manual is intended for experienced market analysts. You should be familiar with the following:

- How to collect field and supplemental data.
- Your IBM or compatible personal computer, keyboard and printer.
- How to install the LOCUS™ 2000 program on your PC (See *Chapter 1* for installation instructions).
- How to export GIS Mapping data so it is compatible with LOCUS™ 2000's import function.

If you need information on market analysis procedures, collecting data or GIS Mapping compatibility, contact Dakota Worldwide.

How this Manual is Organized

LOCUS™ 2000 Release 1.0 consists of two interrelated modules: **Balance** and **Tactics**. This manual is divided into chapters that either introduce or support these two modules.

LOCUS™ 2000 **Balance** provides information on how to create accurate, or balanced, computer models of a specified trade area. **LOCUS™ 2000 Balance** is covered in Chapters 5 through 7.

LOCUS™ 2000 **Tactics** allows you to test What If scenarios to help you build tactics to perform your market strategy. LOCUS™ 2000 **Tactics** is covered in Chapters 8 and 9.

Chapter Overview

Chapter 1 presents the hardware and software you must have to install LOCUS™ 2000 and shows you how to install it.

Chapter 2 provides information on compiling your market research data and explains the role of LOCUS™ 2000 in the research process.

Chapter 3 explains basic operations such as starting and quitting sessions. It also introduces the main folder menu, the user-friendly spreadsheet format and pull-down menus.

Chapter 4 presents information on how to define system parameters, create a model shell with various sizes and default value parameters, and define groups of information.

Chapter 5 provides information on how to create a preliminary model, including how to add facilities, sectors and barriers. Also discussed are procedures for displaying paths, checking your data and making corrections.

Chapter 6 explains how to balance the model you have created and discusses LOCUS™ 2000 tools, such as reports and visual displays.

Chapter 7 presents information on how to enter customer spotting or correlation into your model.

Chapter 8 provides information on how to test What If scenarios to help you build tactics to perform your market strategy. This chapter also discusses some of the tools available for reviewing your changes, such as drawing paths, curves and the various reports you can list.

Chapter 9 explains how to use advanced modeling techniques (such as image, curve and radius overrides) for running tactics.

This manual also contains a glossary of terms.

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Chapter 1
Installing LOCUS™ 2000

Before you begin the installation process, review the equipment and software outlined below to make sure that you have the proper hardware and software for your computer system.

Once you are sure your system is ready to have LOCUS™ 2000 installed, follow the procedure outlined in ***Installation Steps.***

A. Important Information

When you opened the package containing this program, you agreed to all provisions and conditions as stated in the software license agreement. Under this agreement, you are allowed to install one copy of LOCUS™ 2000 per machine, and you may only run (or use) one copy of the program at any time. Please refer to your LOCUS™ 2000 license agreement for information regarding your rights and responsibilities.

B. Equipment Requirements

- An IBM or compatible personal computer using a Pentium 166 system or greater.
- Windows 95/98 or Windows NT operating system.
- A 3.5" diskette drive and CD-ROM or DVD drive.
- Hard disk with a minimum of 5 MB (megabytes) free disk space.
- A minimum of 16 MB RAM (32 MB or greater is recommended).
- A VGA color monitor and a video adapter that supports a minimum resolution of 640 x 480 with 256 colors.

C. Installation Steps

Once you have verified the necessary hardware and software on your system, you are ready to install LOCUS™ 2000. To install the program:

1. Start Windows if you have not already done so.
2. Place the LOCUS™ 2000 CD into your CD-ROM drive ("***X***," below)
3. Select **Start** menu, then **Run**.
4. Type ***X:\SETUP.EXE*** and select **OK**, or press the **Enter** key to begin installation. Follow the on-screen prompts to finish installing.

   NOTE: During installation, you will be prompted for a destination directory for LOCUS™ 2000 files. The default is **C:\Program Files\Locus 2000**.

5. Once installation is complete, store your LOCUS™ 2000 CD-ROM in a safe place. You may need it if a problem occurs or if you wish to obtain future versions of the program.
6. The first time you run LOCUS™ 2000, you will encounter the LOCUS™ 2000 **System Authorization** screen. You will need to telephone, fax or e-mail the authorization code to your Dakota Worldwide representative.

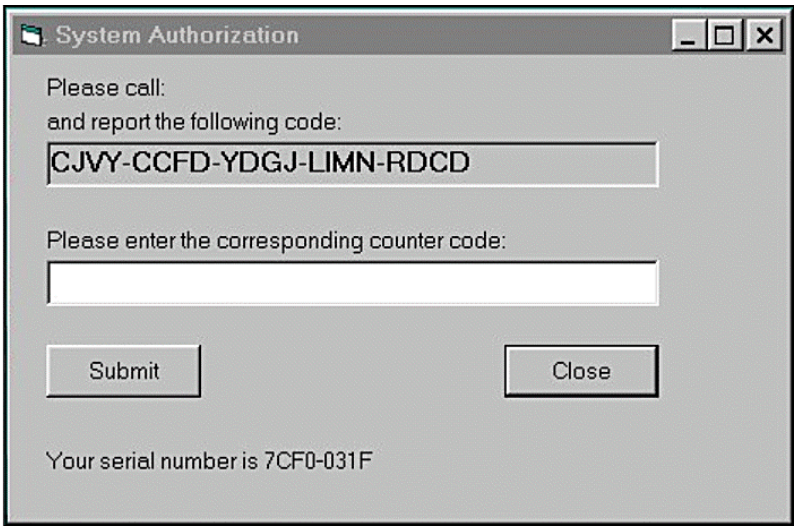

Figure 1-1: LOCUS™ 2000 System Authorization Window.

7. Your representative will send a Counter Code to you by phone, fax or e-mail. Please note that the Counter Code must be entered in CAPS and dashes. It is a good idea to keep this Counter Code in a safe place in case you need to re-install LOCUS™ 2000 on your computer.

D. Customer Support

For technical support, please contact us at:

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4801 West 81st Street, Suite 105
Minneapolis, Minnesota USA 55437

Phone: (800) 475-4505 or
(952) 835-4505
Fax: (952) 835-4461
E-mail: dakotaww@goldengate.net
Internet: www.dakotaww.com

Chapter 2
Getting Started

LOCUS™ 2000 is designed to help you be more effective and productive in your market analysis. You can use LOCUS™ 2000 to create an accurate simulation of a specified trade area, run various tactical scenarios to create a market strategy, and review the financial impacts of various retailing site options.

A. The Market Analysis Process

Before you start using these programs, you need to understand their role within the overall market analysis process. The process consists of the following steps:

1. *Clearly define the purpose and identify objectives* for the market analysis. This is the basis for decisions during the remainder of the process.
2. *Gather accurate data* about the trade area from census reports, maps, driving the area, visiting and ranking stores, and so on.
3. *Collect the information gathered in a quantifiable fashion*, so that you can easily analyze the current situation as well as any changes.
4. *Enter the information* gathered into a LOCUS™ 2000 database so you can retrieve and analyze market data.
5. *Create a balanced model* of the trade area using the information gathered.
6. *Create tactics*, based on the balanced model, to analyze and define an effective market strategy.

B. LOCUS™ 2000 Concepts

There are four basic steps in using LOCUS™ 2000:

1. Manually enter or import data into LOCUS™ 2000 to build an accurate database and create a model.
2. Examine the model you have built and make any necessary adjustments so that it accurately represents the marketplace.
3. Print reports and graphics so you have a visual representation of your trade area.
4. Test various tactics to develop a market strategy, using the balanced model you have built.

   NOTE: This program is not a substitute for a thorough market analysis. LOCUS™ 2000 bases its model on information you have entered. If you enter incorrect data into the program, you will get inaccurate results.

C. Definitions of Key Terms

There are five terms you need to become familiar with before you begin working in the LOCUS™ 2000 program. These terms are:

Curve

Curve is the measurement of a facility's pulling power, or its ability to capture market share over distance. The curve for a facility can range from 1 to 99. Raising a facility's curve decreases its pulling power; lowering its curve increases its pulling power. For example, if a facility has a curve of 75 and you lower it to 60, you increase its pulling power; the facility will attract more sales from a greater distance.

Draw

Draw is the percent of a facility's total business that is derived from the defined trade area. The remainder of the facility's business comes from outside the trade area.

Radius

The radius controls the length of the curve, influencing the facility's pulling power over distance. Decreasing the radius shortens the curve; increasing it lengthens the curve. LOCUS™ 2000 uses a default radius of 2.

Float

When the total volume from the defined trade area for all facilities is subtracted from the total expenditure potential of this trade area, the remaining potential is called float. Float is the expenditure amount within the trade area that is not spent at the facilities defined for the model.

Image

Image is a ranking that describes the relative acceptance of a facility as calculated by LOCUS™ 2000. The higher a facility's image, the more acceptance that facility has in its own trade area.

D. Setting Up Your Database

When you enter data obtained from your field study of the trade area into LOCUS™ 2000, you will create a database. A database is a collection of records organized for rapid search and retrieval by a computer.

Conceptually, data that you enter into a LOCUS™ 2000 database can be placed into three categories:

Factual

Data that is verifiable and is required for a complete model. Factual parameters are:

- Facility location (latitude and longitude, or x and y coordinates)
- Facility size (total area or sales area)
- Sector location
- Sector population
- Barriers

Subjective
Information that reflects your opinion of the factors affecting the market. This information must fall within a predefined range. It is subject to change, usually when you are balancing the model or running tactics. Subjective data are required for a complete model. Subjective parameters are:

- Curve
- Image
- Radius
- PCE (Per Capita Expenditure)

Reference
Optional information that does not affect the model, but may be helpful for record keeping. Some reference examples are:

- Project number
- Analyst name
- Comments
- Study location
- Client name
- Facility address
- Facility type
- Parking
- Checkouts
- Operation
- Exterior Conditions
- Interior Conditions
- Meat
- Produce
- Deli
- Bakery
- Rx (Pharmacy)
- Hours
- Adjacent Retail 1
- Adjacent Retail 2

Chapter 3
Basic LOCUS™ 2000 Operations

This chapter presents procedures you need to know to operate LOCUS™ 2000. It discusses how to start the LOCUS™ 2000 program and presents the Main Folder Menu. It also explains command words and keyboard movement options.

A. Starting LOCUS™ 2000

To start the LOCUS™ 2000 program, turn on your computer. Then:

1. Select **Start** menu/**Programs**, then the LOCUS™ 2000 icon
   or
2. From Windows Explorer, go to the **C:\Program Files\Locus 2000** directory, and double-click on the file **locus2000.exe.**

The LOCUS™ 2000 Main Folder Menu appears.

1. LOCUS™ 2000 Main Folder Menu

The Main Folder Menu will display 16 folders, which allow you to enter and adjust all pertinent data.

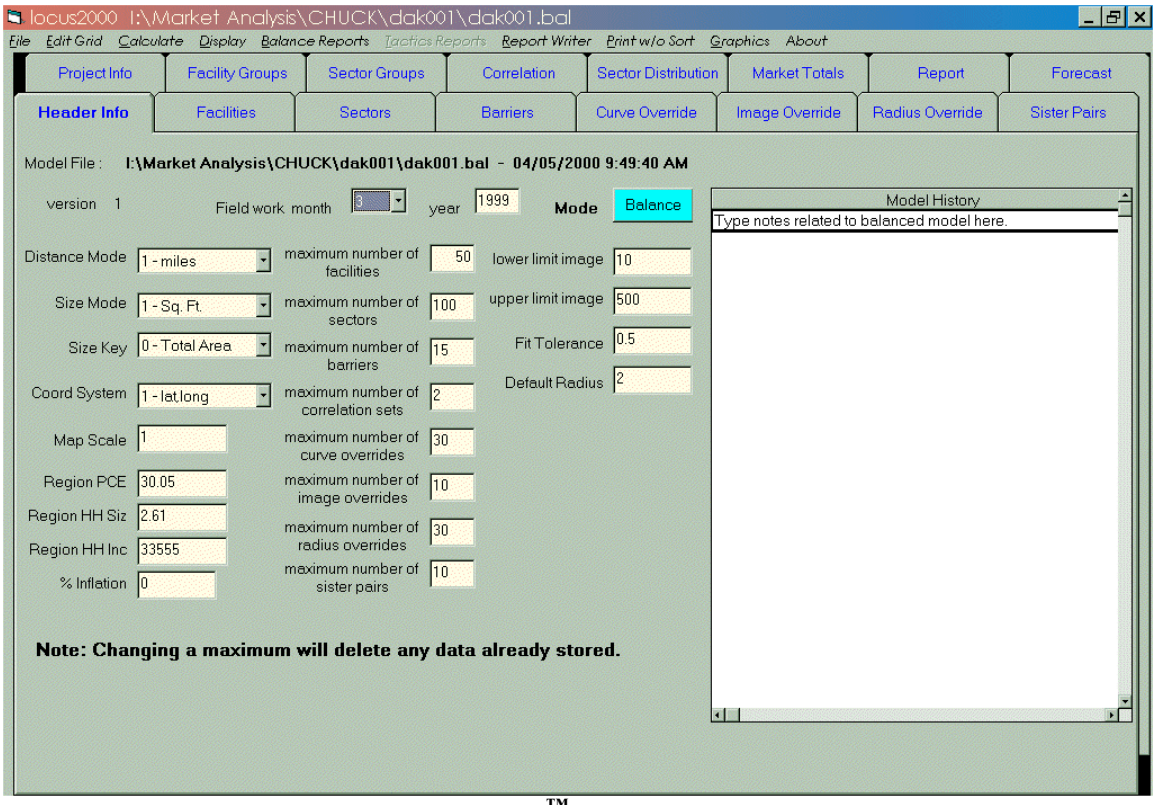


Figure 3-1: LOCUS™ 2000 Main Folder Menu.

2. Main Menu Folders

These 16 folders break down LOCUS™ 2000 into easy-to-use spreadsheets, as follows:

- Header Info
- Project Info
- Facilities
- Facility Groups
- Sectors
- Sector Groups
- Correlation
- Barriers
- Sector Distribution
- Curve Override
- Market Totals
- Image Override
- Report
- Radius Override
- Forecast
- Sister Pairs

3. Pull-Down Menus

In addition, there are nine pull-down menus:

- File
- Edit Grid
- Calculate
- Display
- Balance Reports
- Tactics Reports
- Report Writer
- Print w/o Sort
- Graphics

B. Creating a New Model

Step 1: Create New Model.

To create a new model, click on **File** and highlight **Create New Model**. The New Model Parameters Box appears.

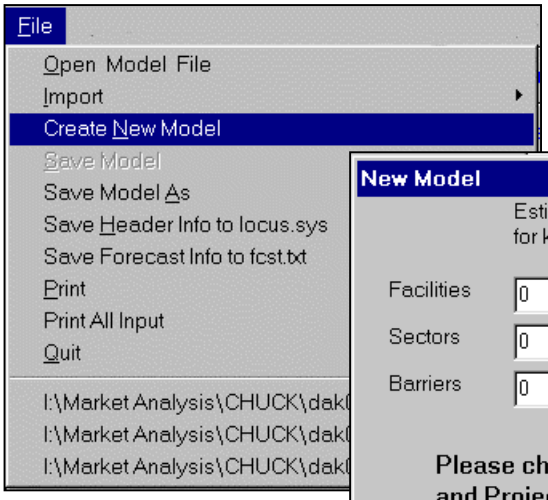


Figure 3-2: Create New Model Menu.

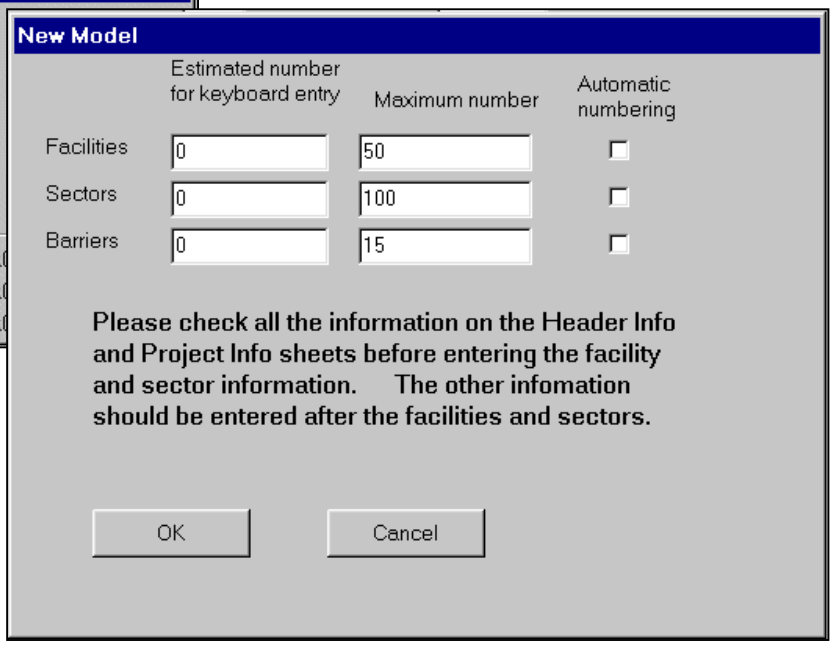


Figure 3-3: New Model Parameters Box.

Enter in the number of *Facilities*, *Sectors* and *Barriers* to be used. Allow for the number of sites and market changes you plan to add in **Tactics** mode. Note the *Maximum number* is set at a standard default number. If you need to have more facilities, sectors or barriers than the default total, change the maximum to the required number needed. Be sure the number is less than the maximum allowed on the **Header Info** folder.

Step 2: Header Info

Fill in the **Header Info** folder, adjusting fields to correspond with your known data.

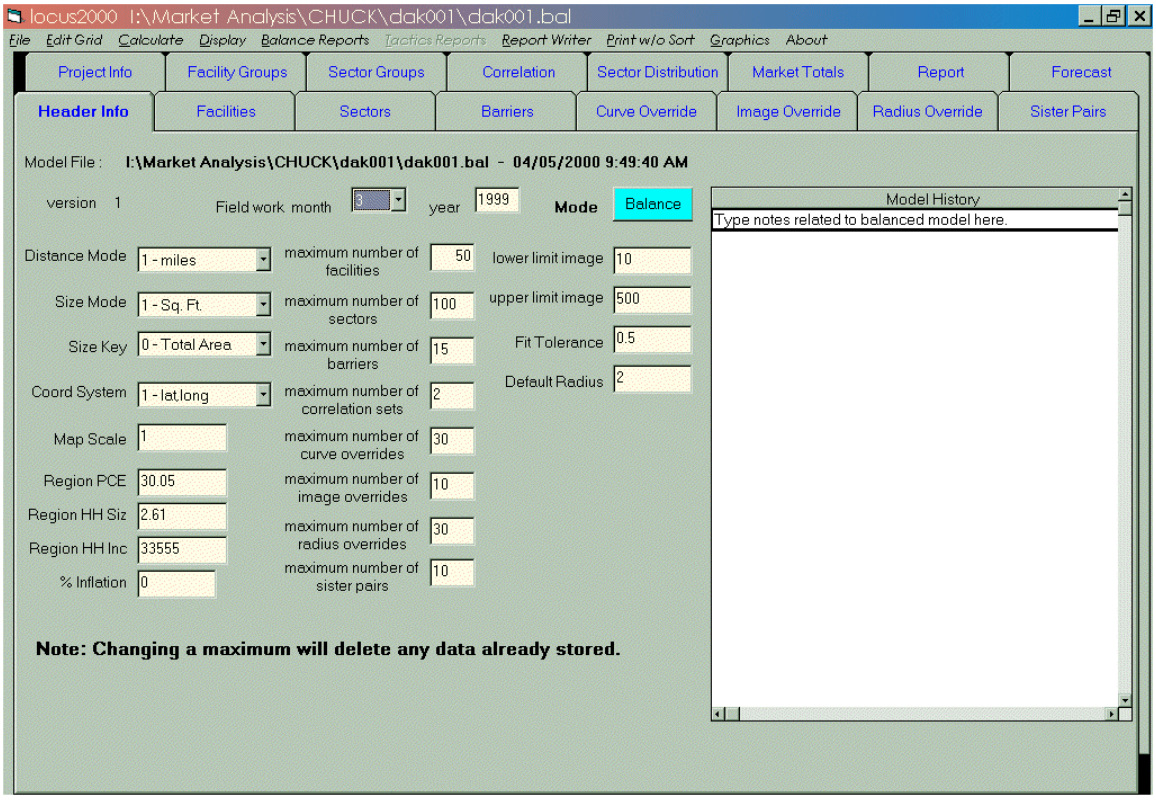


Figure 3-4: Header Info Folder.

Header Info Field	**Sample Description**
Fieldwork Month	Correct month (*i.e.*, 1 = January, 12 = December)
Year	Current year (*i.e.*, if it is March 1999, enter 3 in month and 1999 in year)
Distance Mode	(0 = kilometers) --- (1 = miles)
Size Mode	(0 = Square Meters) --- (1 = Square Feet)
Size Key	(0 = Total Area) --- (1 = Sales Area)
Coord System	(0 = X,Y) --- (1 = Lat, Long)
Map Scale	(1 for Lat, Long), or number of miles to equate 1 inch
Region PCE	Per Capita Expenditure from your government and data files

Header Info Field (cont.)	**Sample Description (cont.)**
Region HH Size	Household Size from your government and data files
Region HH Income	Household Income from your government and data files

The maximum numbers on the **Header Info** folder are virtually unlimited. However, to handle extremely large models, your computer will need to have the appropriate memory, speed and capability. It is recommended that you limit maximums to the following:

- Up to 500 facilities
- Up to 1,000 sectors
- Up to 50 barriers
- Up to 500 sector correlations per facility and 50 correlation sets
- Up to 1,000 curve overrides
- Up to 1,000 image overrides
- Up to 1,000 radius overrides
- Up to 10 sister pairs
- Up to 9 facility groups
- Up to 9 sector groups
- Up to 10 forecasts
- Up to 10 barrier crosspoints

Maximums may be limited by your computer's capabilities and memory. So, keep your maximum number of the above model limits to within a reasonable number of those used. This will reduce calculation times.

- Lower limit image 10
- Higher limit image 500
- Fit Tolerance .50
- Default Radius 2
- Inflation 0

NOTE: Changing a maximum will delete any data stored, so save your model first.

Changing Header Info Defaults.

To adjust the defaults of the Header Info Folder, click on the **File** pull down menu and select **Save Header Info to locus.sys**. The locus.sys file controls the defaults for all future models.

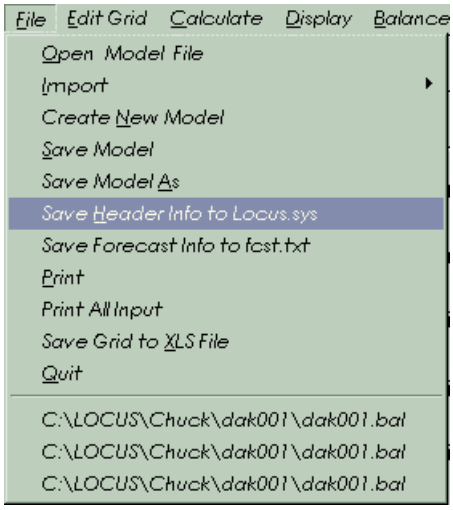


Figure 3-5: Save Header Info to locus.sys

Step 3: Project Info

Click on the **Project Info** folder and add pertinent data.

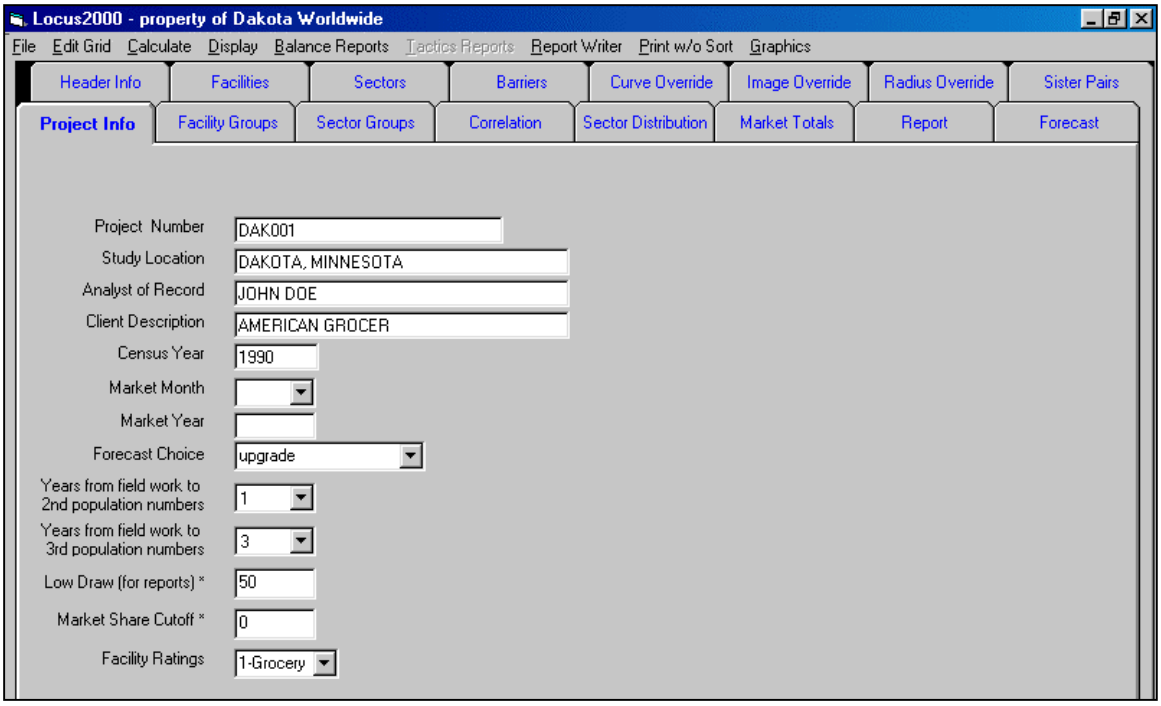


Figure 3-6: Project Info Folder.

Project Info Fields	**Sample Description**
Project Number	DAK001
Study Location	Dakota, Minnesota
Analyst of Record	John Doe
Client Description	American Grocer
Census Year	1990, or 2000 when applicable
Market Month	*Fill this in when you go to* **Tactics** *mode*
Market Year	*Fill this in when you go to* **Tactics** *mode*
Forecast Choice	New, Upgrade, Stable, or another you create
Yrs from field work to 2nd pop numbers	(normally 1)
Yrs from field work to 3rd pop numbers	(normally 3)
Low Draw	Enter desired draw (*i.e.*, 30)
Market Share Cutoff	0 if you want all shares displayed
Facility Ratings	1-Grocery --- 2-Other

Once you have completed these entries, you may save the file using a numbering convention with up to 8 characters (for example, *a:\dak001.bal*).

Step 4: Import Data.

Use the following procedure to import *Sector*, *Trade Area*, *Facility* and *Barrier* data. If you are going to manually enter data, follow procedures in *Chapter 5*.

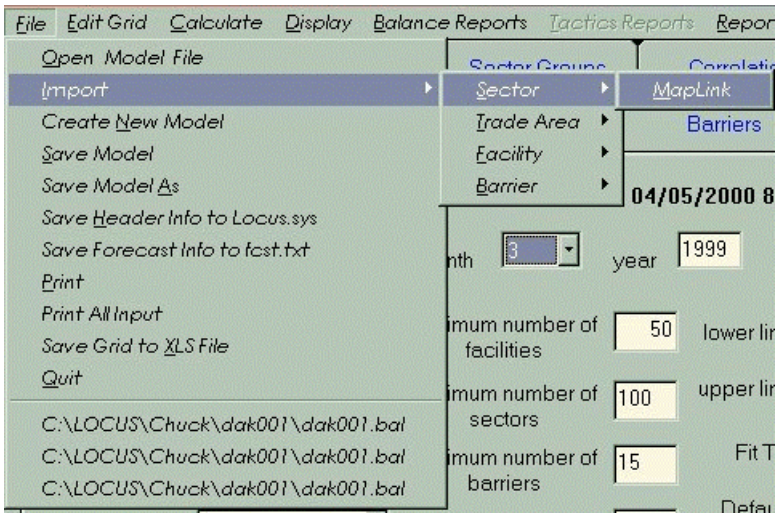


Figure 3-7: Importing Data.

It is imperative to always import data in the following order!

Sector: **File, Import, Sector, MapLink**

Description: Imports sector Map Key, Lat-Long, Census Population, PCE
Sample: *a:\dak001_m.txt*, or whatever GIS has named the file (include entire pathname)

Trade Area: **File, Import, Trade Area, MapLink**

Description: Imports sector Census tracts and demographic variables (*i.e.,* percent white, average income, etc.)
Sample: *a:\dak001_ta.txt*

Facility: **File, Import, Facility, MapLink**

Description: Imports facility Lat-Long and other store data captured by GIS
Sample: *a:\dak001_f.txt*

Barrier: **File, Import, Barrier, MapLink**

Description: Imports barrier Map Keys, Lat-Long and crosspoints
Sample: *a:\dak001_x.txt*

Step 5: Once you have imported your data, **Save** your new model (*i.e., dak001.bal*).

C. Adding or Adjusting Data

LOCUS™ 2000 allows you to adjust the facility and sector data you have imported or manually entered. You may also add factual, subjective and reference information on facilities and sectors. The following pages show the various other menu folders.

1. Facilities Folder

The analyst may manually enter, remove or adjust all elements of a facility such as volume, size, curve, draw and radius. (**NOTE:** Pink columns are calculated data; the user cannot change them.)

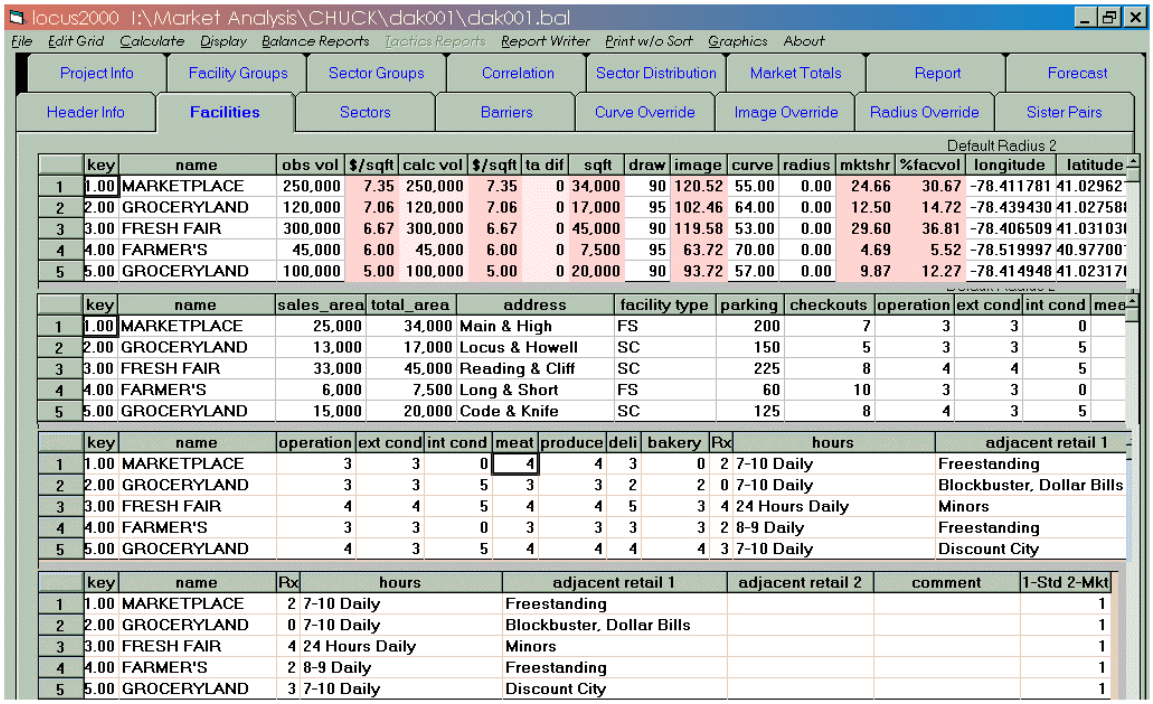


Figure 3-8: Facilities Folder.

NOTE: If the space of a grid cell is not wide enough to accept a larger number, simply widen the column as you would in any spreadsheet. Then the larger number will be accepted.

2. Facility Groups Folder

The **Facility Groups** folder allows the analyst to designate chains and stores owned by a single entity as a group for analysis.

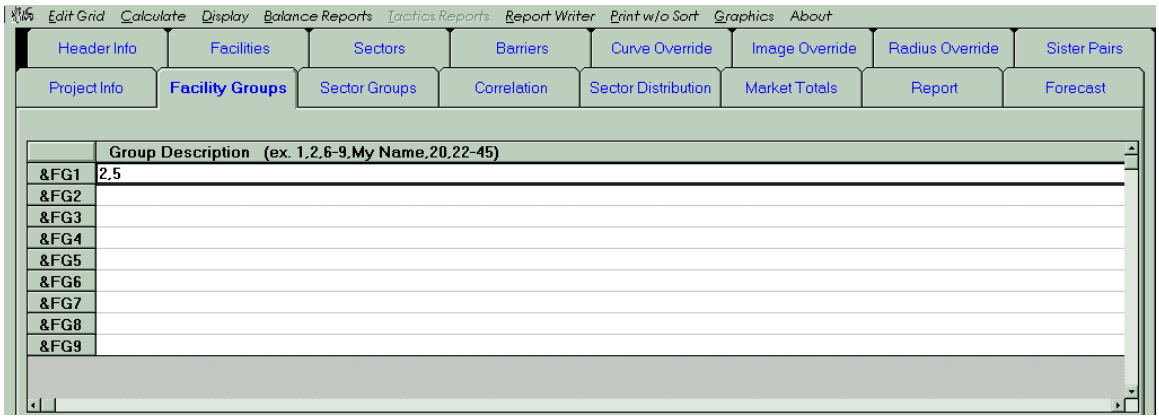


Figure 3-9: Facility Groups Folder with Sample Data.

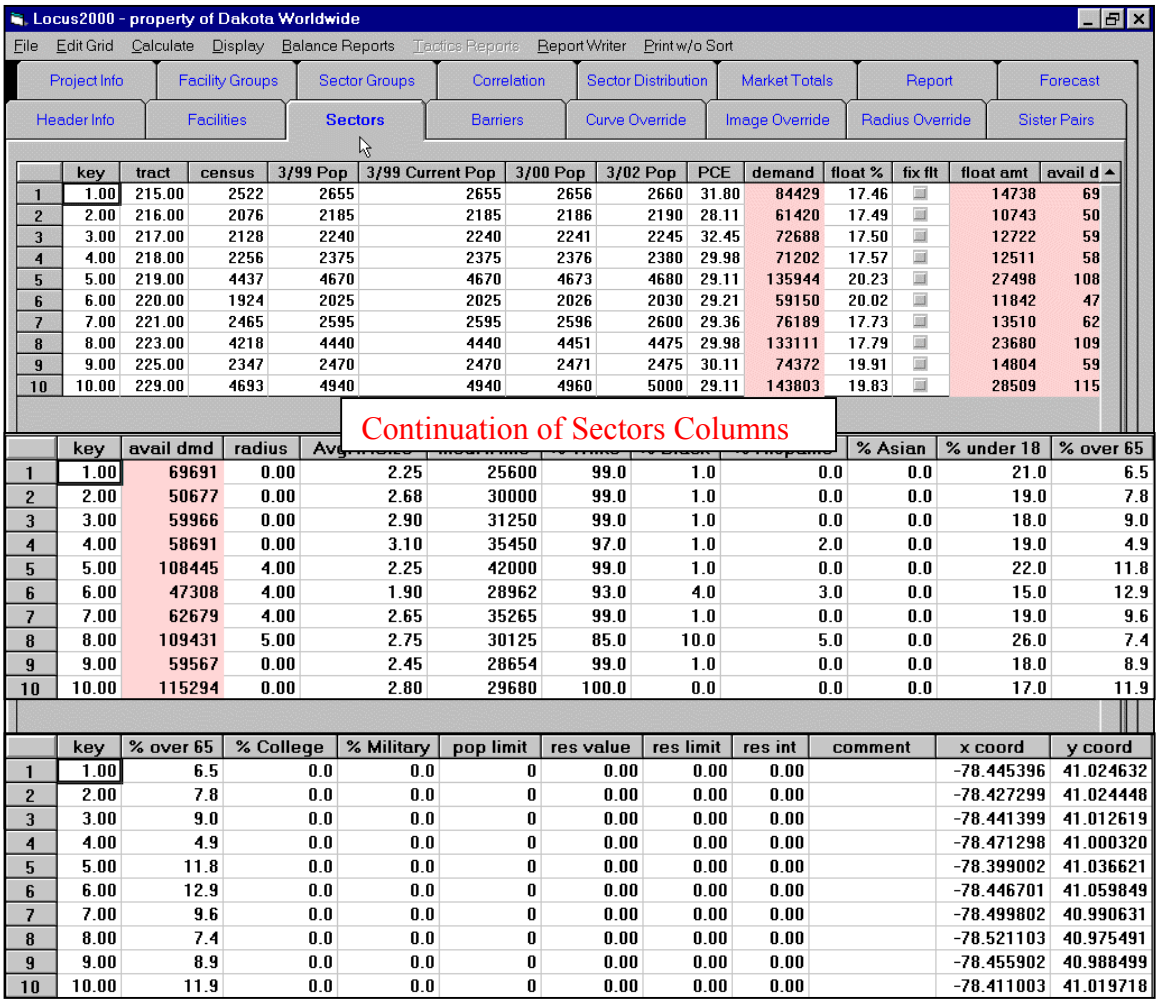
NOTE: You must use a comma (,) to separate each store (*i.e.*, 1,2,3-20,22).

3. Sectors Folder

The analyst may manually enter, remove or adjust all elements of a sector, such as population, PCE, float and demographic data. There are five population columns in this folder. The first is the census population and is not used for calculations; however, it is shown in the trade area description and can be used by the analyst as a basis for establishing the current and future populations.

The second population column, in this example, is labeled as **3/99 Pop** and represents the population of the sector at the time of the field work. LOCUS™ 2000 uses this to calculate the balanced model. The third or **Current Pop** column is the same as the **3/99 Pop** in the balanced model, but becomes the market date population in tactics modeling.

The fourth population column, shown as **3/00 Pop** in this example, is the same as the 2nd Year population column in previous LOCUS™ versions, otherwise known as intermediate population. The fifth population column, shown as **3/02 Pop**, is the same as the 3rd Year column in previous versions of LOCUS™.



	key	tract	census	3/99 Pop	3/99 Current Pop	3/00 Pop	3/02 Pop	PCE	demand	float %	fix flt	float amt	avail d
1	1.00	215.00	2522	2655	2655	2656	2660	31.80	84429	17.46		14738	69
2	2.00	216.00	2076	2185	2185	2186	2190	28.11	61420	17.49		10743	50
3	3.00	217.00	2128	2240	2240	2241	2245	32.45	72688	17.50		12722	59
4	4.00	218.00	2256	2375	2375	2376	2380	29.98	71202	17.57		12511	58
5	5.00	219.00	4437	4670	4670	4673	4680	29.11	135944	20.23		27498	108
6	6.00	220.00	1924	2025	2025	2026	2030	29.21	59150	20.02		11842	47
7	7.00	221.00	2465	2595	2595	2596	2600	29.36	76189	17.73		13510	62
8	8.00	223.00	4218	4440	4440	4451	4475	29.98	133111	17.79		23680	109
9	9.00	225.00	2347	2470	2470	2471	2475	30.11	74372	19.91		14804	59
10	10.00	229.00	4693	4940	4940	4960	5000	29.11	143803	19.83		28509	115

	key	avail dmd	radius	Avg	% Asian	% under 18	% over 65
1	1.00	69691	0.00	2.25	0.0	21.0	6.5
2	2.00	50677	0.00	2.68	0.0	19.0	7.8
3	3.00	59966	0.00	2.90	0.0	18.0	9.0
4	4.00	58691	0.00	3.10	0.0	19.0	4.9
5	5.00	108445	4.00	2.25	0.0	22.0	11.8
6	6.00	47308	4.00	1.90	0.0	15.0	12.9
7	7.00	62679	4.00	2.65	0.0	19.0	9.6
8	8.00	109431	5.00	2.75	0.0	26.0	7.4
9	9.00	59567	0.00	2.45	0.0	18.0	8.9
10	10.00	115294	0.00	2.80	0.0	17.0	11.9

	key	% over 65	% College	% Military	pop limit	res value	res limit	res int	comment	x coord	y coord
1	1.00	6.5	0.0	0.0	0	0.00	0.00	0.00		-78.445396	41.024632
2	2.00	7.8	0.0	0.0	0	0.00	0.00	0.00		-78.427299	41.024448
3	3.00	9.0	0.0	0.0	0	0.00	0.00	0.00		-78.441399	41.012619
4	4.00	4.9	0.0	0.0	0	0.00	0.00	0.00		-78.471298	41.000320
5	5.00	11.8	0.0	0.0	0	0.00	0.00	0.00		-78.399002	41.036621
6	6.00	12.9	0.0	0.0	0	0.00	0.00	0.00		-78.446701	41.059849
7	7.00	9.6	0.0	0.0	0	0.00	0.00	0.00		-78.499802	40.990631
8	8.00	7.4	0.0	0.0	0	0.00	0.00	0.00		-78.521103	40.975491
9	9.00	8.9	0.0	0.0	0	0.00	0.00	0.00		-78.455902	40.988499
10	10.00	11.9	0.0	0.0	0	0.00	0.00	0.00		-78.411003	41.019718

Figure 3-10: Sectors Folder with Sample Data.

4. Sector Groups Folder

This will allow for the grouping of sectors to be used in advanced model techniques, such as district modeling, that will be offered in a future version of LOCUS™ 2000.

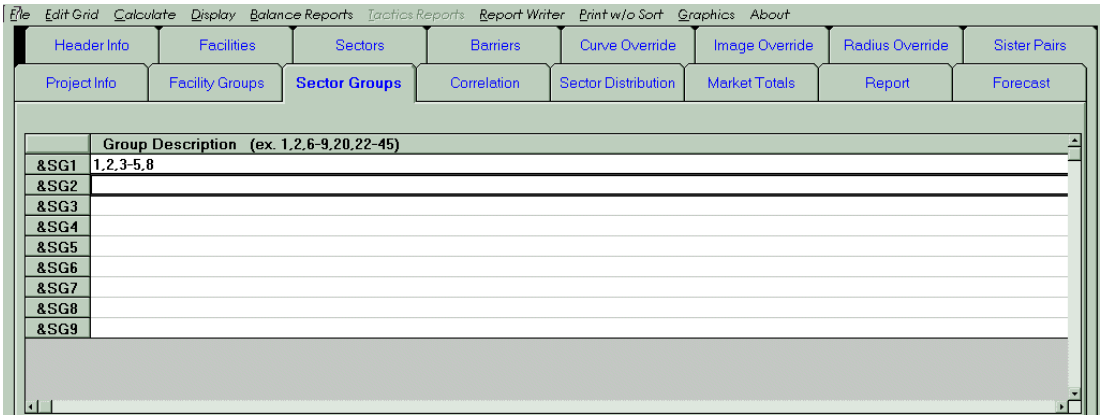


Figure 3-11: Sector Groups Folder.

NOTE: You must use a comma (,) to separate each store (*i.e.*, 1,2,3-14,20,21,24-50,55).

5. Correlation Folder

Analyst may manually enter and adjust customer origin data.

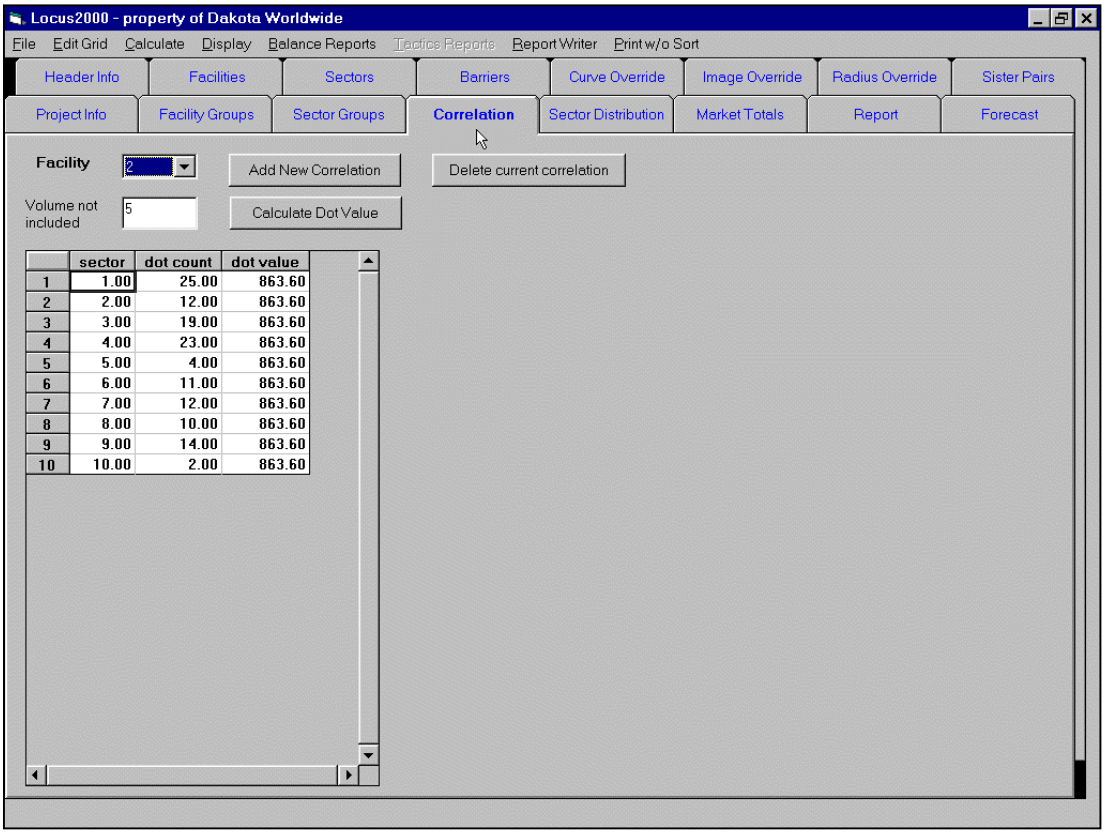


Figure 3-12: Correlation Folder.

6. Barriers Folder

Analyst may manually enter, remove or adjust barrier data. We recommend you add barriers in **Display**/**Path** pull down menu (Refer to *Chapter 5, Creating the Model*).

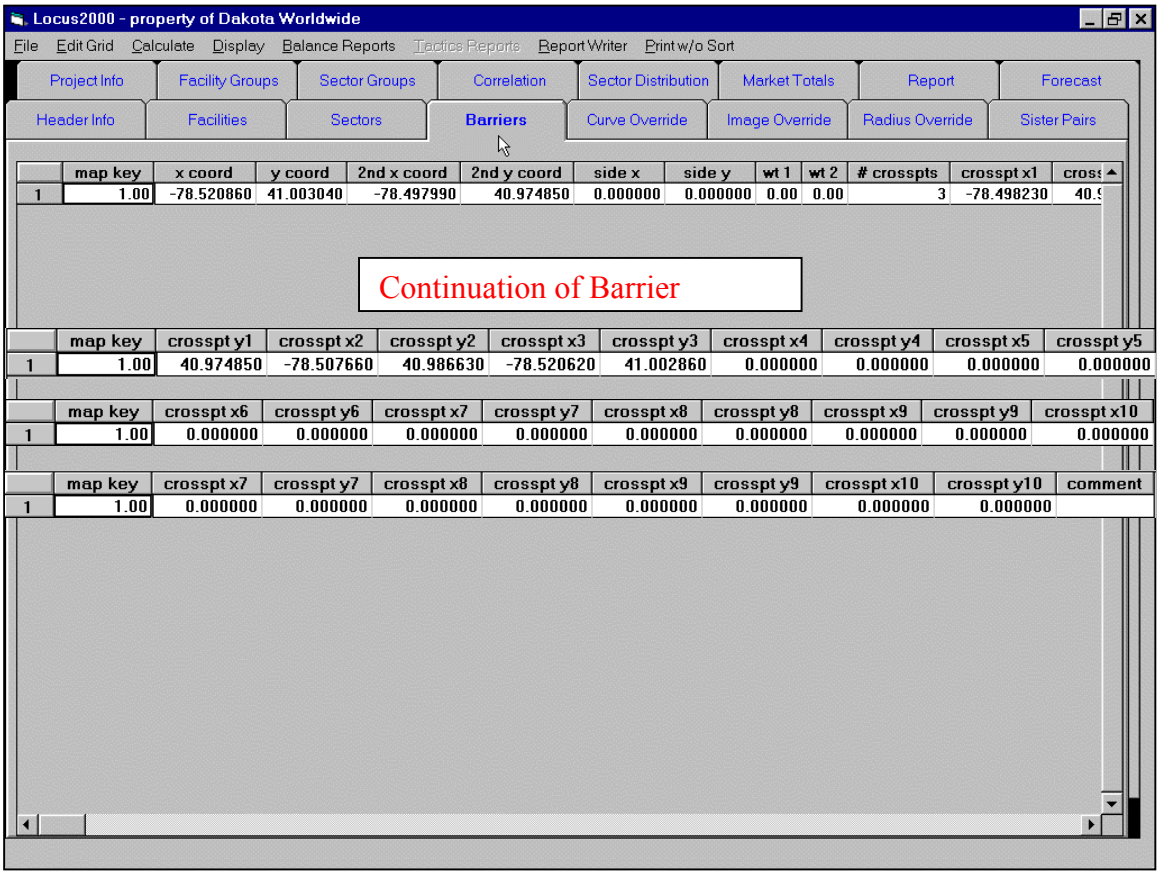
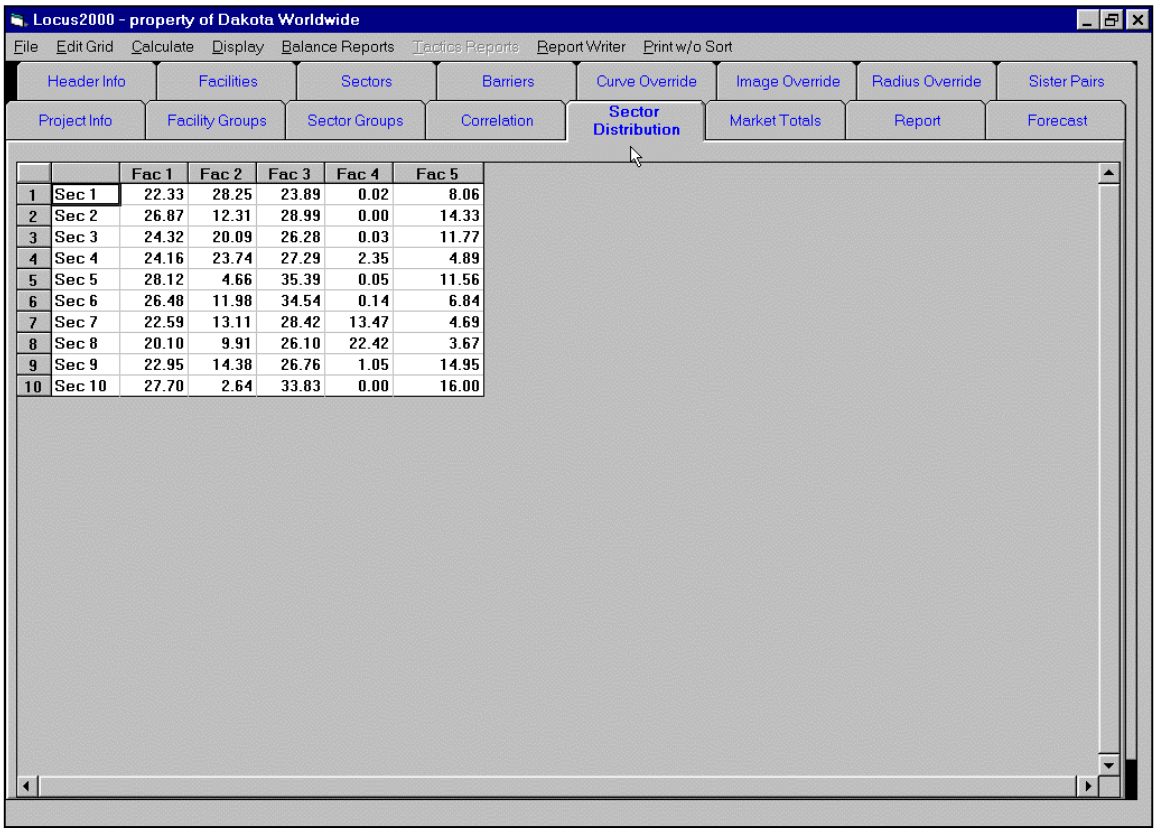


Figure 3-13: Barriers Folder.

7. Sector Distribution Folder

This is a display-only report that shows the facilities and their respective market shares by sector.



		Fac 1	Fac 2	Fac 3	Fac 4	Fac 5
1	Sec 1	22.33	28.25	23.89	0.02	8.06
2	Sec 2	26.87	12.31	28.99	0.00	14.33
3	Sec 3	24.32	20.09	26.28	0.03	11.77
4	Sec 4	24.16	23.74	27.29	2.35	4.89
5	Sec 5	28.12	4.66	35.39	0.05	11.56
6	Sec 6	26.48	11.98	34.54	0.14	6.84
7	Sec 7	22.59	13.11	28.42	13.47	4.69
8	Sec 8	20.10	9.91	26.10	22.42	3.67
9	Sec 9	22.95	14.38	26.76	1.05	14.95
10	Sec 10	27.70	2.64	33.83	0.00	16.00

Figure 3-14: Sector Distribution Folder.

8. Curve Override Folder

Analyst may manually enter, remove or adjust facility curve overrides.

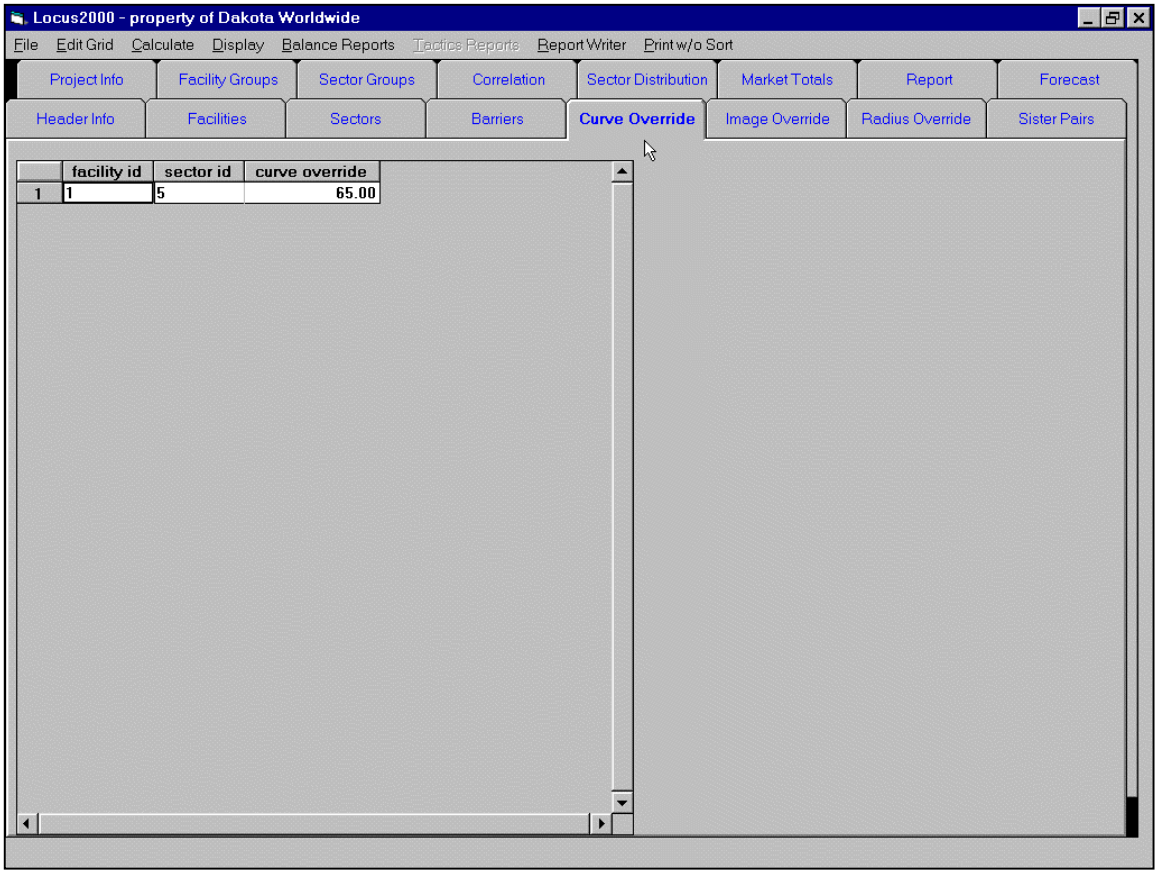


Figure 3-15: Curve Override Folder.

9. Market Totals Folder

This display-only report shows a summary of pertinent model information, including market population, potential, facility volume, number of facilities, number of sectors, census population, field date population, current population, 2nd and 3rd year populations, market float, explained float, percent float, average volume per square foot and facility totals.

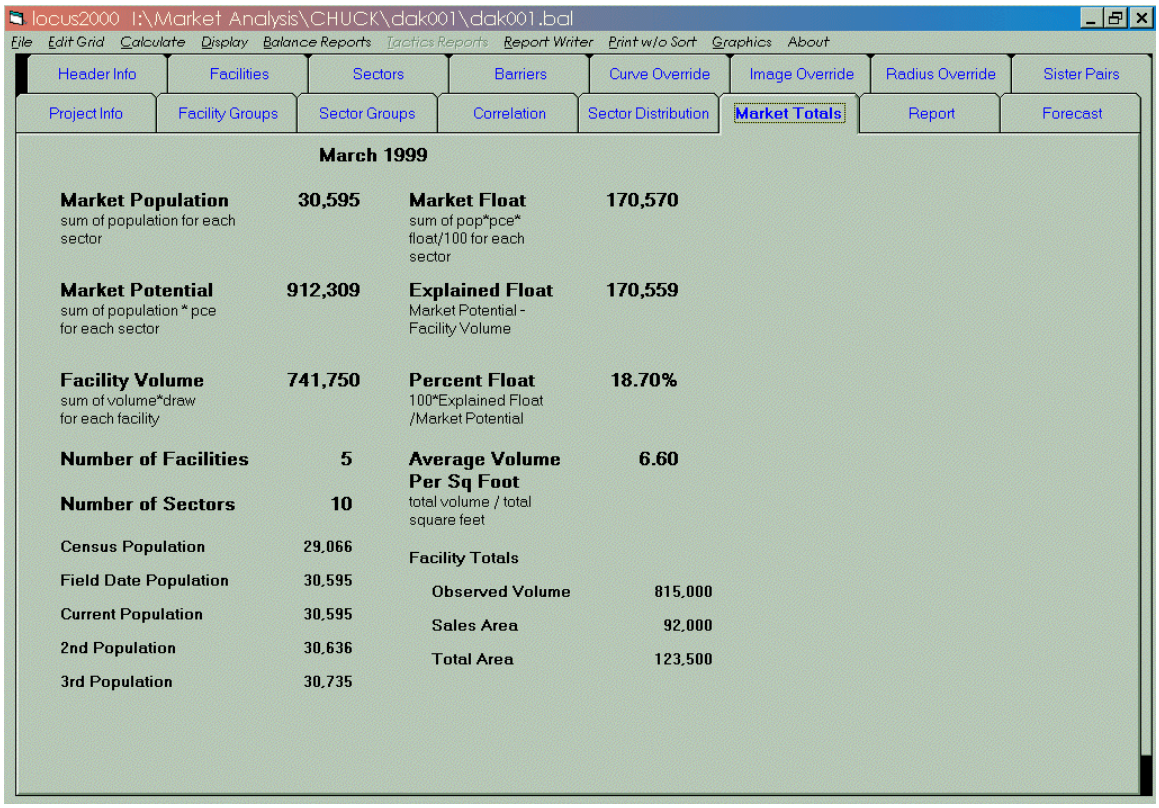


Figure 3-16: Market Totals Folder with Sample Results.

The information on this page changes in **Tactics** mode.

10. Image Override Folder

Analyst may manually enter, remove or adjust facility image overrides.

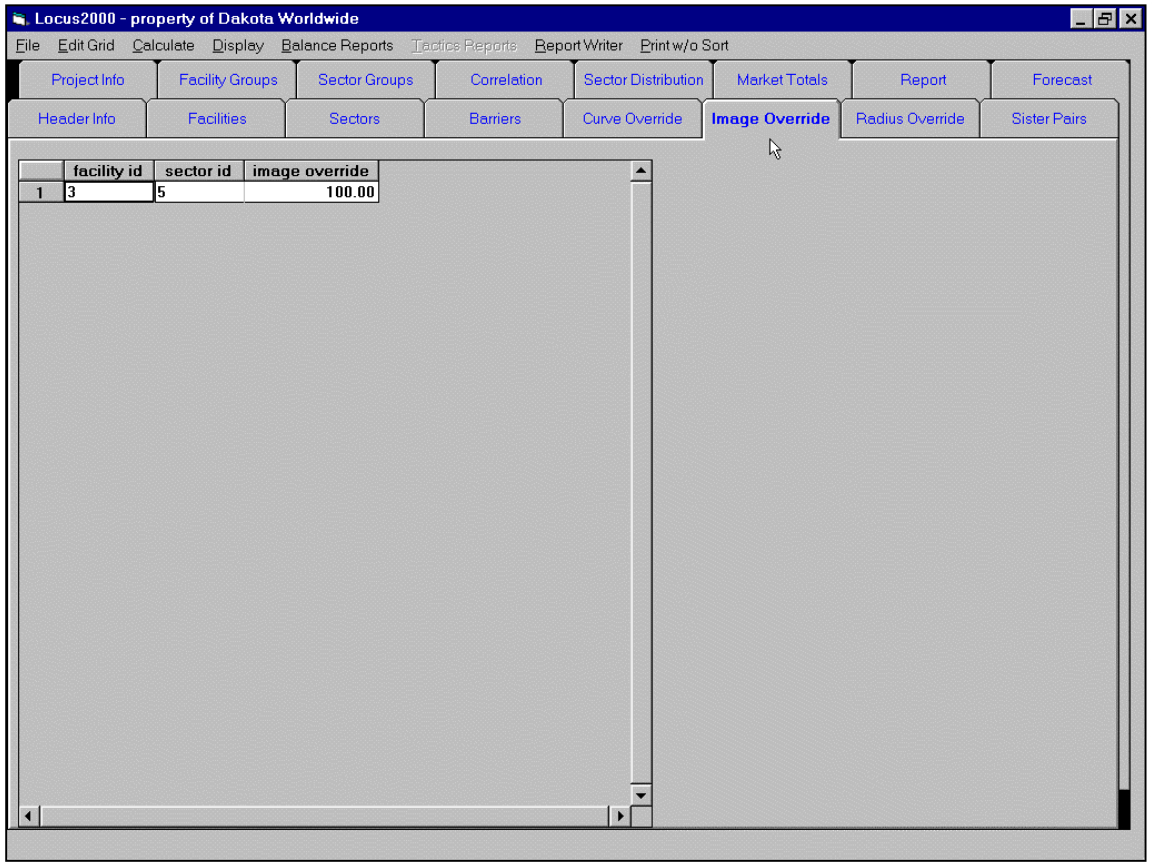


Figure 3-17: Image Override Folder.

11. Report Folder

This is where the basic **Balance** and **Tactic** reports are shown, including *Trade Area Totals*, *Stores in Operation, Sector Summary, Facility Market Share by Sector, Store Volume by Sector, Chain Summary, Market Shares by Distance, Correlation Report, Competitor Information, Competitor Scorecard* and *Trade Area Data by Sector.*

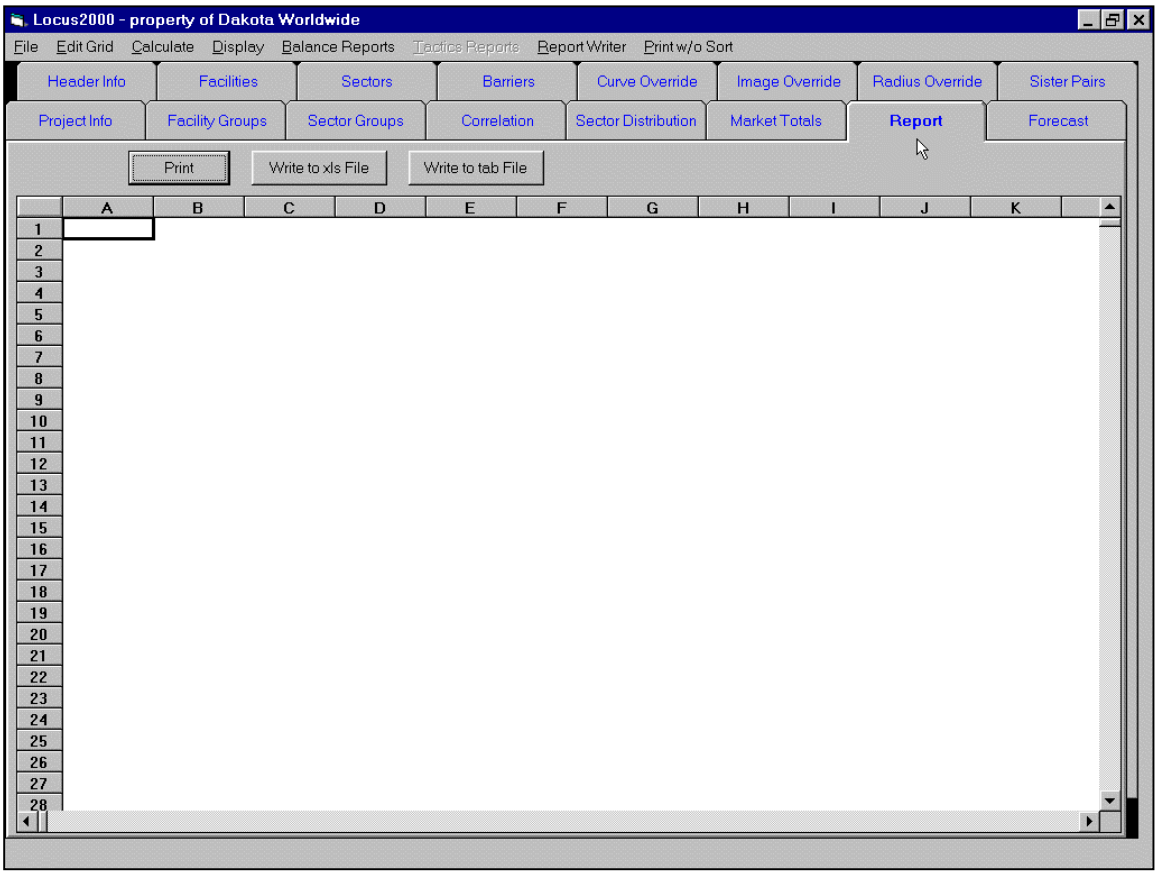


Figure 3-18: Reports Folder.

User may print or export data to an Excel file or a tab-delimited ASCII text file.

12. Radius Override Folder

Analyst may manually enter, remove or adjust facility radius overrides.

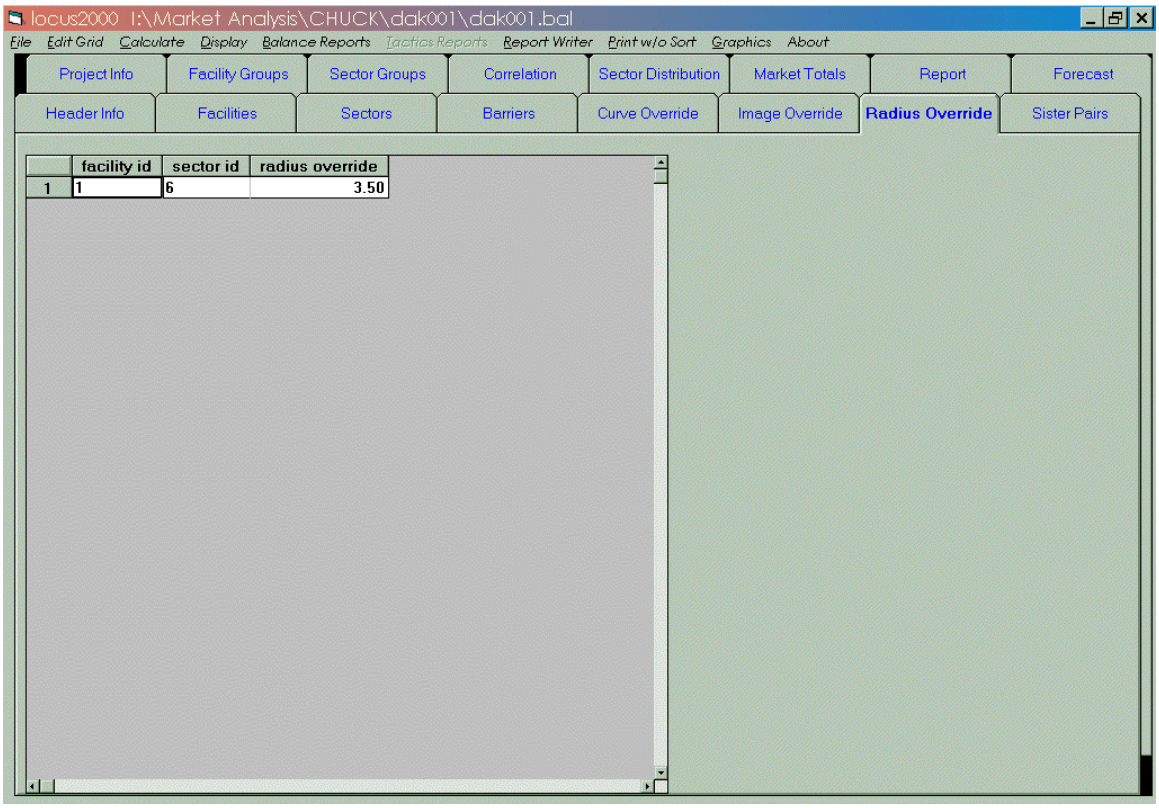


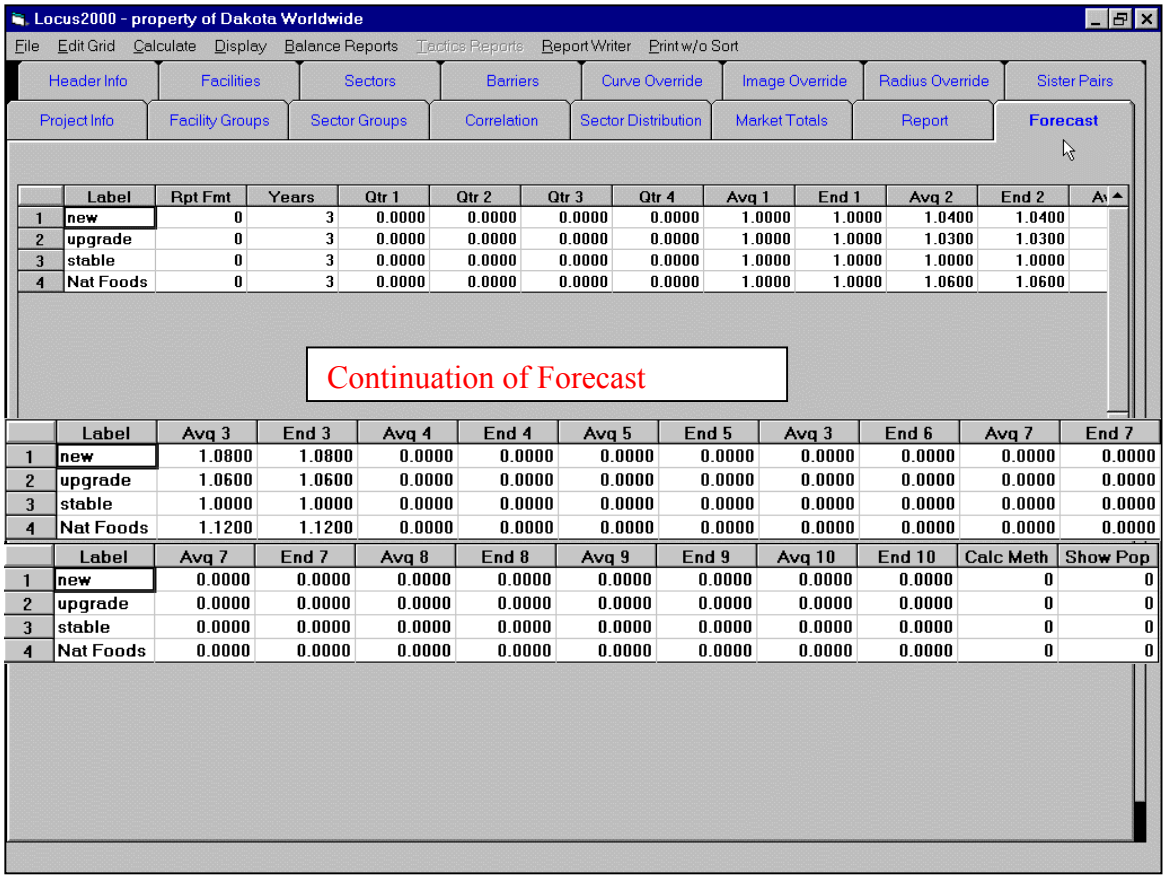
Figure 3-19: Radius Override Folder.

13. Forecast Folder

Analyst may manually enter, remove or adjust forecast parameters.

Select your calculation method, abbreviated in the column as **Calc Meth**, for the type of forecast method you wish to use in the growth reports. If you select the default (1), you will direct the program to use a linear calculation method. LOCUS™ 2000 will multiply the sales projection number by the multipliers currently set for year 1, year 2 and year 3. If you select (0) you will direct the program to use a weighted calculation that incorporates population growth and inflation (adjusting PCE). If you select (2), you will direct LOCUS 2000 to recalculate volumes without modifying the pulling powers.

Any changes you make to *New, Upgrade, Stable* or *Natural Foods* forecasts will not be saved. However, if you create additional forecast parameters, they can be saved by clicking on **File/Save**, then **Forecast Info to fcst.txt**. Your changes will then be available for future use.



	Label	Rpt Fmt	Years	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Avg 1	End 1	Avg 2	End 2
1	new	0	3	0.0000	0.0000	0.0000	0.0000	1.0000	1.0000	1.0400	1.0400
2	upgrade	0	3	0.0000	0.0000	0.0000	0.0000	1.0000	1.0000	1.0300	1.0300
3	stable	0	3	0.0000	0.0000	0.0000	0.0000	1.0000	1.0000	1.0000	1.0000
4	Nat Foods	0	3	0.0000	0.0000	0.0000	0.0000	1.0000	1.0000	1.0600	1.0600

	Label	Avg 3	End 3	Avg 4	End 4	Avg 5	End 5	Avg 3	End 6	Avg 7	End 7
1	new	1.0800	1.0800	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	upgrade	1.0600	1.0600	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	stable	1.0000	1.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	Nat Foods	1.1200	1.1200	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

	Label	Avg 7	End 7	Avg 8	End 8	Avg 9	End 9	Avg 10	End 10	Calc Meth	Show Pop
1	new	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0	0
2	upgrade	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0	0
3	stable	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0	0
4	Nat Foods	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0	0

Figure 3-20: Forecast Folder.

Forecast Calculation Methods include:

CalcMethod=0 Weighted

Volumes are recalculated. The image is multiplied by the relevant forecast factor (average year 1, average year 2, end year 1, end year 2, etc.). This is the same as increasing the facilities pulling power by the relevant factor. The population and PCE are calculated for the relevant forecast date. (For example, if the market date is 6/2000, then the date for end year 2 is 6/2001).

> ***Formula:*** *Year 2 end volume for Facility1* = potential year 2 * end year 2 factor * pulling power for facil$_1$ / (pulling power for the sector + pulling power for facil$_1$ * (end year 2 factor – 1))

CalcMethod=1 Linear

The current market date facility volume is multiplied by the relevant forecast factor.

> ***Formula:*** *Year 2 end volume* = market date calculated volume * end year 2 factor

Definition: ***CalcMethod2=2 Linear+pop+pce***
Volumes are recalculated, but the pulling powers are not modified. The population and pce are calculated for the relevant date. Each facility sector volume is multiplied by the relevant forecast factor.

Formula:	*Year 2 end volume* = potential year 2 * end year 2 factor * pulling power for $facil_1$ / (pulling power for the sector)

For example, consider a model with 2 facilities and 1 sector. The sector potential for the market date is 3000. The sector potential for year 2 end is 3030 due to a 1% population increase (inflation = 0). The end year 1 factor is 1 and the end year 2 factor is 1.05. The pulling power for facility 1 ($facil_1$) is 100 and the pulling power for facility 2 ($facil_2$) is 200. This makes the pulling power for the sector 300 (100+200). The market date calculated volume for the facilities is 1000 and 2000. The problem is to find end year 2 volumes for $facil_1$ using all three methods.

Example: ***CalcMethod=0 Weighted***

Year 2 End Volume = 3030 * 1.05 * 100 / (300 + 100 * (1.05 – 1)) = 1043 (approx.)

Example: ***CalcMethod=1 Linear Formula***

Year 2 end volume = 1000 * 1.05 = 1050

Example: ***CalMethod=2 Linear+pop+pce***

Year 2 end volume = 3030 * 1.05 *100 / 300 = 1060.5

Note that when there is more than one sector, calculation for Methods 0 and 2 are not only made for each sector; individual volumes are added together.

14. Sister Pairs Folder

Analyst may manually enter, remove or adjust sister pair parameters.

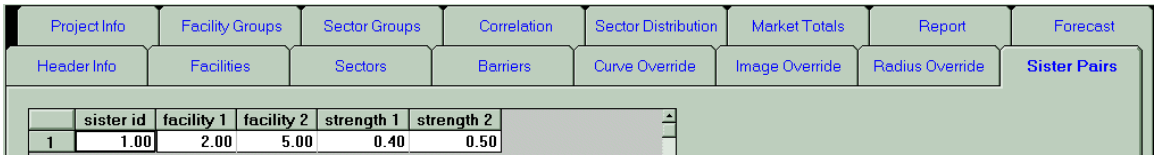


Figure 3-21: Sister Pairs Folder.

D. Accessing Folders

Since LOCUS™ 2000 is designed in a Windows format, you may move from one function to another by simply clicking on the desired folder with your cursor.

E. Keyboard Movement Options

LOCUS™ 2000 **Main Menu**: The following keyboard movement options are available:

Arrow Keys	Use the up arrow (↑), down arrow (↓), right arrow (→) or left arrow (←) keys to move from cell to cell. Or click on desired cell to move quickly. **Tab** will also move you from cell to cell.
Backspace	In some cases, you can use the **Backspace** key to delete information so that you can type in new data.
Spacebar	Allows you to add text.
Enter	Press **Enter** after you have typed your entry to go to the next field.
Esc	The **Esc** key cancels whatever you have entered in the field.

F. Quitting a LOCUS™ 2000 Session

The **File/Quit** command allows you to exit from LOCUS™ 2000 and return to Windows. If you have made any modifications that you have not saved, you will get a warning message as shown in Figure 3-22.

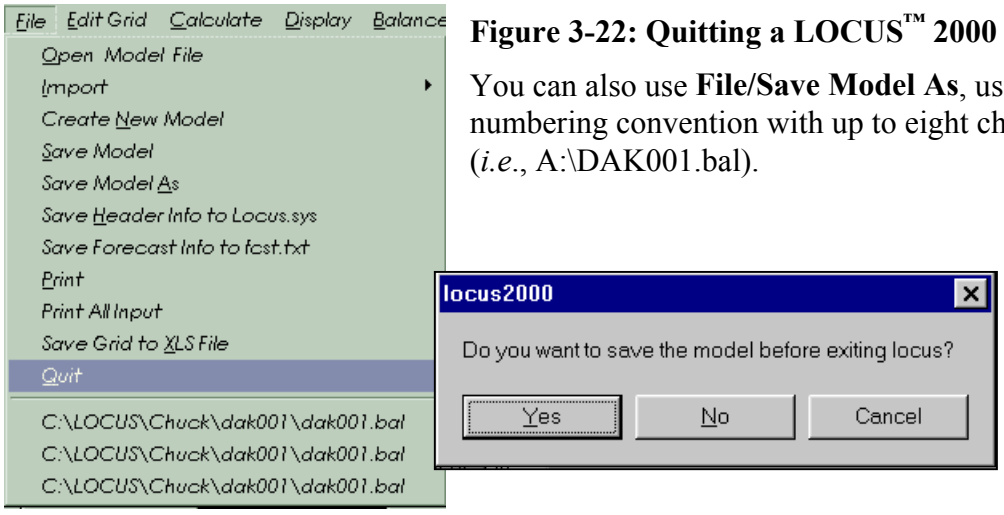


Figure 3-22: Quitting a LOCUS™ 2000 Session.

You can also use **File/Save Model As**, using a numbering convention with up to eight characters (*i.e.*, A:\DAK001.bal).

G. Naming Files

When you create a balanced model, or if you obtain a market model someone else has balanced using LOCUS™ 2000, you will notice that LOCUS™ 2000 assigns a ***.bal** extension to the file. In this way, LOCUS™ 2000 prevents you from making tactical changes and saving them to a *.bal (balanced model) file.

> **NOTE:** To prevent accidentally writing over a balanced model, we strongly recommend that you always use a *.bal extension whenever you are copying or renaming a balanced model file.

H. Edit Grid

Figure 3-23: Edit Grid Menu.

This pull-down or right click function is used to insert, delete, append, add rows, delete rows, copy, paste, sort, multiply, add or subtract and renumber during balancing or in **Tactics** mode.

I. Balance Reports

Figure 3-24: Balance Reports Menu.

This pull-down menu allows you to view the described reports, such as the *Trade Area Totals* in Figure 3-25 below. To print the report, click on **Print**. To write to a Microsoft Excel (XLS) file, click on **Write to XLS File**.

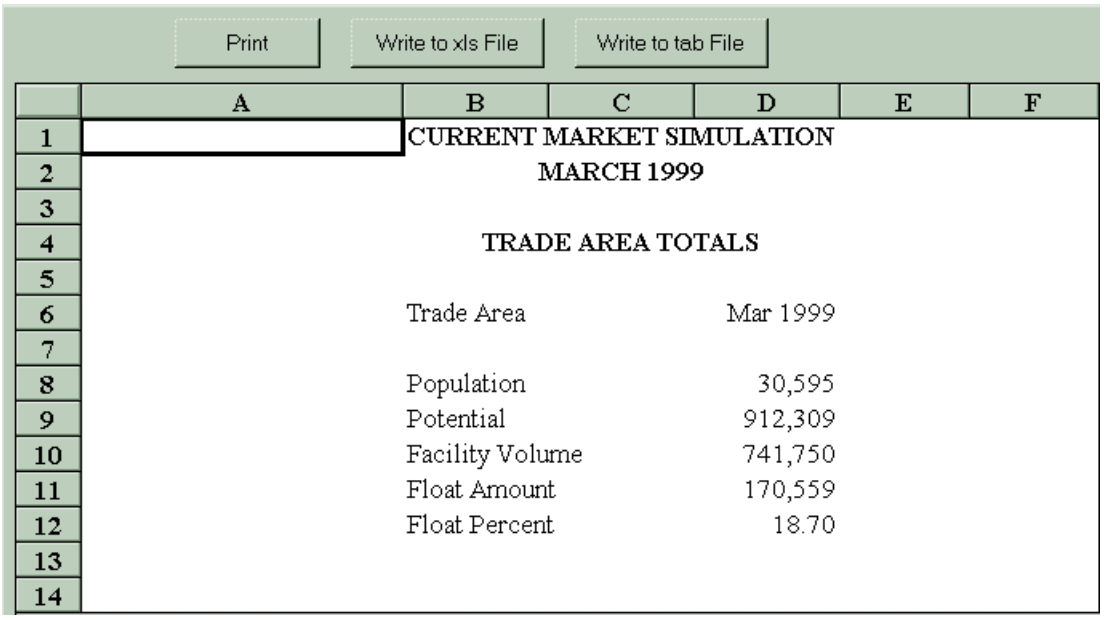
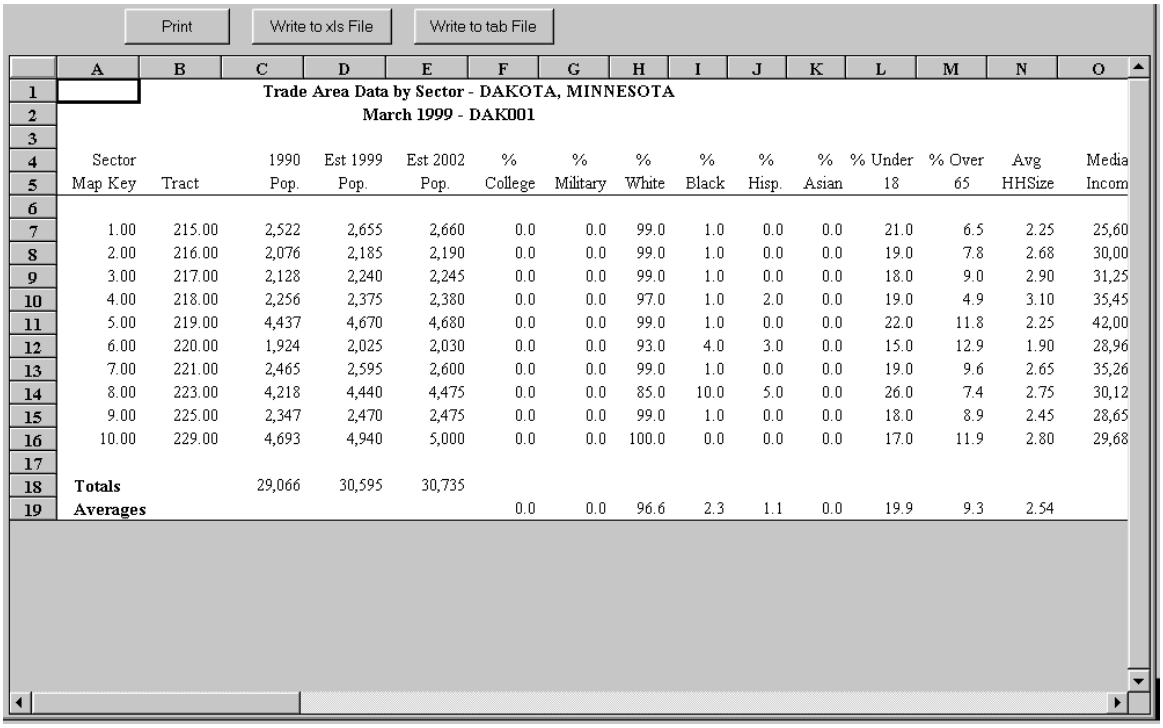


Figure 3-25: Sample of Trade Area Totals Report.

The *Trade Area Data by Sector*, as shown in Figure 3-26, can be exported as a Microsoft Excel (*.xls) file by clicking on **Write to xls File**. It will be given the model's name (*i.e.*, DAK001TA.xls). The *Competitor Information* and *Competitor Score Card* reports may also be exported to Excel in similar fashion.



	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
1					Trade Area Data by Sector - DAKOTA, MINNESOTA										
2					March 1999 - DAK001										
3															
4	Sector		1990	Est 1999	Est 2002	%	%	%	%	%	%	% Under	% Over	Avg	Media
5	Map Key	Tract	Pop.	Pop.	Pop.	College	Military	White	Black	Hisp.	Asian	18	65	HHSize	Incom
6															
7	1.00	215.00	2,522	2,655	2,660	0.0	0.0	99.0	1.0	0.0	0.0	21.0	6.5	2.25	25,60
8	2.00	216.00	2,076	2,185	2,190	0.0	0.0	99.0	1.0	0.0	0.0	19.0	7.8	2.68	30,00
9	3.00	217.00	2,128	2,240	2,245	0.0	0.0	99.0	1.0	0.0	0.0	18.0	9.0	2.90	31,25
10	4.00	218.00	2,256	2,375	2,380	0.0	0.0	97.0	1.0	2.0	0.0	19.0	4.9	3.10	35,45
11	5.00	219.00	4,437	4,670	4,680	0.0	0.0	99.0	1.0	0.0	0.0	22.0	11.8	2.25	42,00
12	6.00	220.00	1,924	2,025	2,030	0.0	0.0	93.0	4.0	3.0	0.0	15.0	12.9	1.90	28,96
13	7.00	221.00	2,465	2,595	2,600	0.0	0.0	99.0	1.0	0.0	0.0	19.0	9.6	2.65	35,26
14	8.00	223.00	4,218	4,440	4,475	0.0	0.0	85.0	10.0	5.0	0.0	26.0	7.4	2.75	30,12
15	9.00	225.00	2,347	2,470	2,475	0.0	0.0	99.0	1.0	0.0	0.0	18.0	8.9	2.45	28,65
16	10.00	229.00	4,693	4,940	5,000	0.0	0.0	100.0	0.0	0.0	0.0	17.0	11.9	2.80	29,68
17															
18	**Totals**		29,066	30,595	30,735										
19	**Averages**					0.0	0.0	96.6	2.3	1.1	0.0	19.9	9.3	2.54	

Figure 3-26: Sample of Trade Area Data by Sector Report.

Chapter 4
Defining the LOCUS™ 2000 Parameters

Each LOCUS™ 2000 model can be assigned unique parameters and default values. This chapter explains the procedures you need to know to create model default parameters and model limits.

A. Setting Up LOCUS™ 2000 Parameters

LOCUS™ 2000 comes to you with a number of parameters already defined for system workspace and model options. You may accept these defaults or enter your own. These configuration parameters apply to all new models you create, and the parameters are saved with each new model when you first save it.

LOCUS™ 2000 parameters define an empty model, or "shell," which you fill in as you add data. In some cases, defaults also serve as limits for data values that you enter later, allowing LOCUS™ 2000 to ensure the data entered is of reasonable value.

LOCUS™ 2000 parameters are set using the **Header Info** folder on the LOCUS™ 2000 **Balance** Main Menu.

> **NOTE:** You cannot change configuration values (for example: size, location, distance mode, and so forth) in the LOCUS™ 2000 **Tactics** mode. You must redefine these from the LOCUS™ 2000 **Balance** mode.

1. Modifying Limits

The fields shown in Figure 4-1, the **Header Info** folder, define the size and working area for your model database.

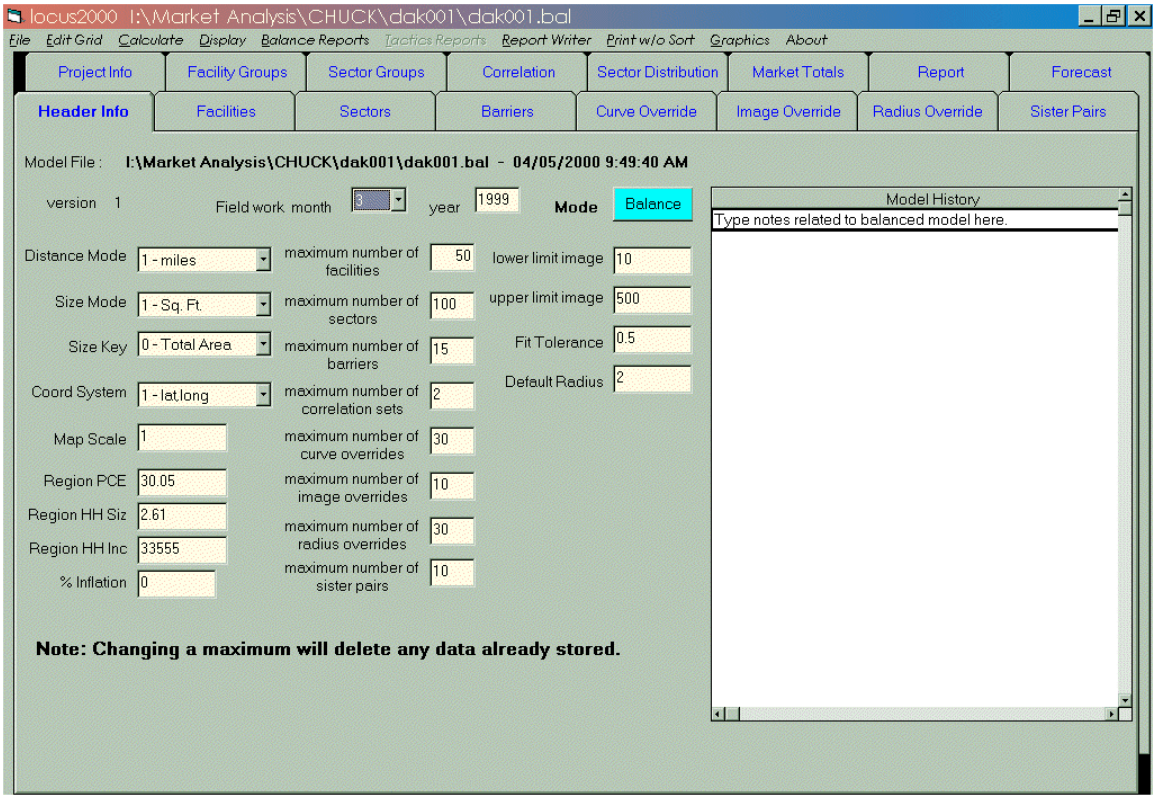


Figure 4-1: Header Info Folder

LOCUS™ 2000 comes to you with values already defined for these workspace parameters:

- Facilities = 50
- Sectors = 100
- Barriers = 15
- Correlation sets = 2
- Curve overrides = 30
- Image overrides = 30
- Radius overrides = 30
- Sister Pairs = 10

If you need a larger or smaller model, increase or decrease any of these **Header Info** folder parameters to your model database requirements. This will conserve disk and memory allocation on your system and allow your computer to operate more efficiently.

Either accept the default values displayed or enter the number of facilities, sectors, barriers and overrides you will allow in this model. Your modified defaults should

include the total number currently in the marketplace, plus the test sites. Define your data ranges so you don't exceed limits that would cause the system to stop the modeling process. When you have entered all your changes, click on the next desired folder to continue creating your model. **Save** your model at this point.

2. Modifying Units of Measurement

Use the **Header Info** folder to define how you will measure certain elements of your model.

Map Scale

Use 1 for lat/long. For x/y, enter the ratio of miles per inch (or kilometers per centimeter) used when measuring the map. For instance, if your work map has a scale of 1 mile = 3 inches, your map scale would be 1/3, entered as the decimal value .333. Enter a value greater than 0, up through 99.999.

Distance Mode

Your report can be in either miles or metric kilometers. Select the appropriate option: 0 = kilometers, 1 = miles.

Size Mode

Facility size can be measured in either square feet or square meters. Select the appropriate option: 0 = square meters, 1 = square feet.

Size Key

You may measure sales volume against either total facility size, or just the area customers can access (sales area). Select the appropriate option: 0 = total area, 1 = sales area.

3. Modifying Report Controls

Use the **Project Info** folder to modify the report controls for your model (see **Project Info** folder, Figure 3-6 in *Chapter 3*).

Accept the default values or enter new values for the following fields:

Low Draw

The program will not display or print the estimated volume of any facility with a draw of this limit or below.

Market Share Cutoff

The program will not display or print any information on any sector with a reported market share below this value.

B. Changing the File Limits

When you are adding facilities, sectors, barriers or overrides to your model, you may exceed the limits you defined when you first created your LOCUS™ 2000 model.

For example, when you created the model, you may have defined a limit of 100 sectors, but later you realize you need 110 sectors instead. The **Header Info** folder allows you to change this limit from 100 to 110.

Selecting **File/Save Header Info to locus.sys** allows you to change system workspace restrictions for subsequent models.

Chapter 5
Creating the Model

This chapter discusses how to build your preliminary model database from the information you have collected from field work. Use these steps in creating your model database:

1. Give the model a unique ID (file name)
2. Add sectors
3. Add facilities
4. Add any barriers
5. Add consumer research (correlation) information, if available*
6. Verify and correct the information
7. Save your preliminary model

After your preliminary model is saved, you may print various reports and lists to determine if the preliminary model is an accurate picture of the actual market. If it is, you may begin tactical simulation. If it is not, then you must balance the model so it matches actual market conditions before running any tactics.

* **NOTE:** Consumer research data is discussed in *Chapter 7, Entering Correlation Data.*

A. Creating a New File

To create a new model, click on **File** and highlight **Create New Model**.

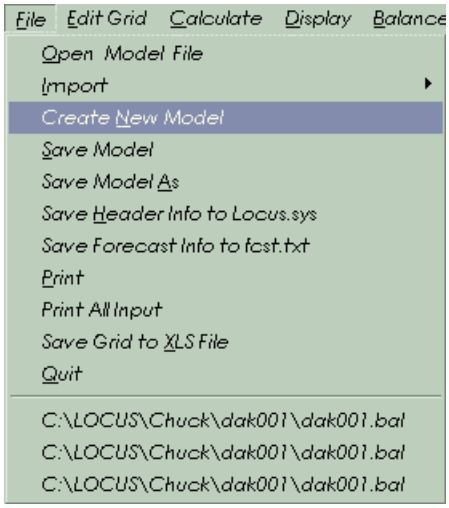


Figure 5-1: Creating a New Model.

The **New Model** work screen appears (Figure 5-2). You can enter the information from your field study in the fields displayed.

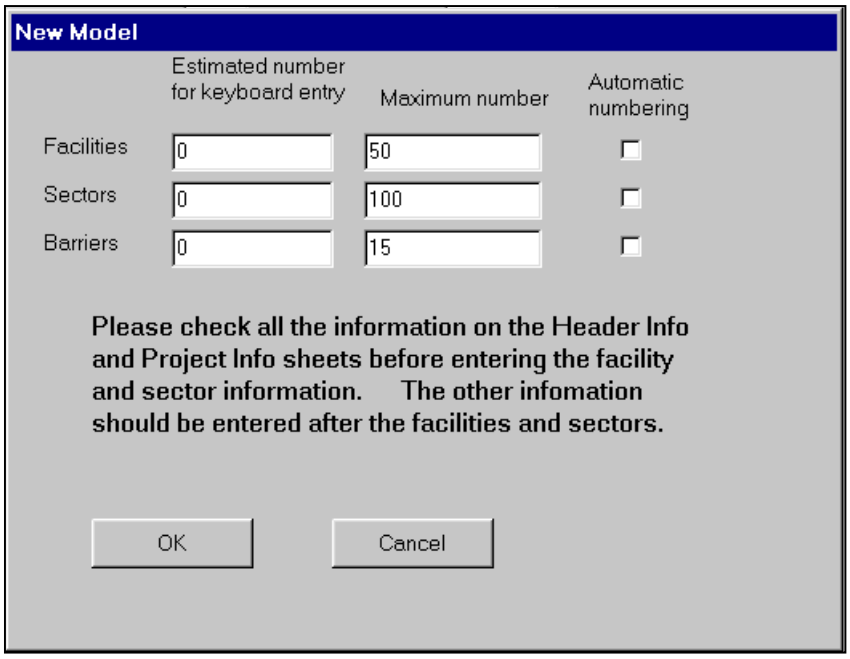


Figure 5-2: New Model Work Screen.

Enter in the number of *Facilities*, *Sectors* and *Barriers* to be used. Allow for the number of sites and market changes you plan to add in **Tactics**.

> **NOTE:** The *Maximum number* is a standard default. If you need to have more facilities, sectors or barriers than the default total allows, change the maximum in the **Header Info** folder to the required number.

Next, fill in all pertinent **Header Info** data, as discussed in *Chapter 3* and shown in Figure 5-3.

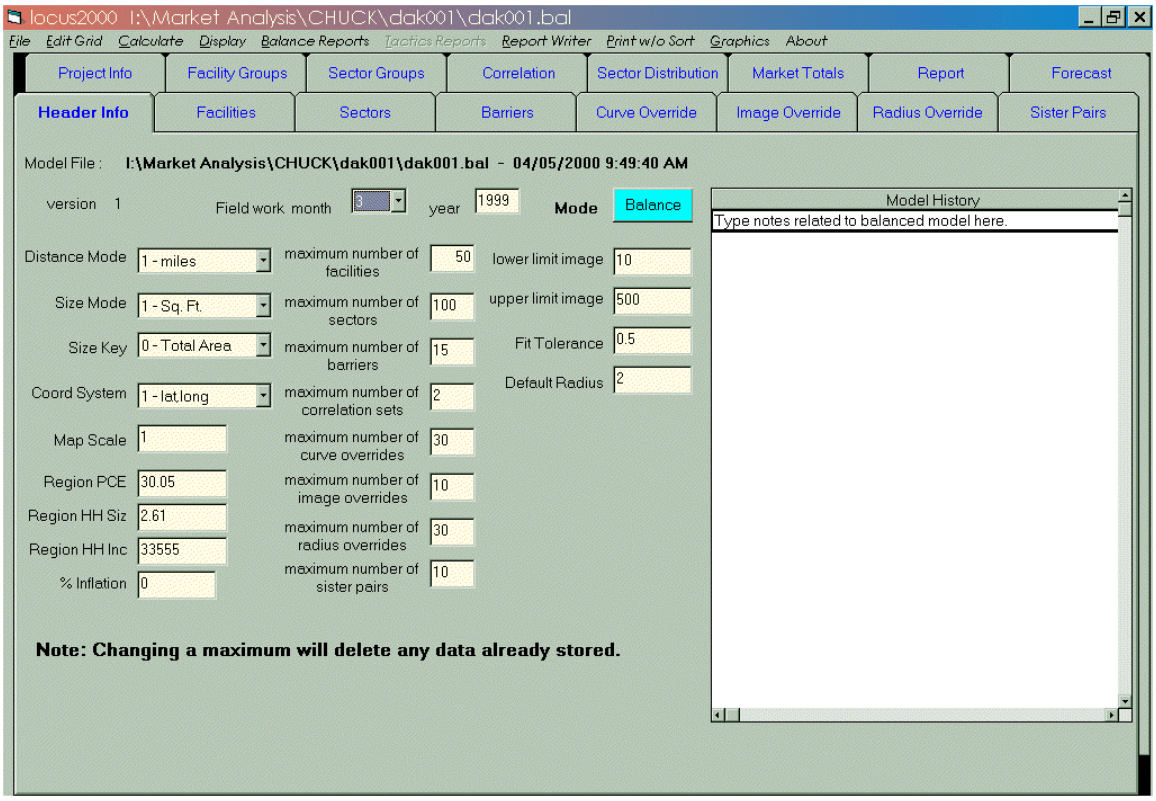


Figure 5-3: Header Info Folder.

You can accept the defaults or enter different information.

Field Work

Enter the month and year when you completed the field work.

- Month: 1 = January, 12 = December.
- Year: The program displays the default year. Either accept the default or enter the year when you completed the field work.

Map Scale

The default is 1 for lat/long users. If you are still using x/y's, make the appropriate changes. This map scale is a ratio of miles per inch or kilometers per centimeter. For instance, if your work map has a scale of 1 mile = 3 inches, your map scale would be 1/3, entered in the decimal value .333. Enter a value greater than 0, up through 99.999.

Model Radius

The system default value is 2. Enter the new value if you want to change this radius. Enter a value greater than or equal to .01, up through 100.

B. Adding Project Information

Next, click on the **Project Info** folder (Figure 5-4) and add pertinent data to the displayed fields.

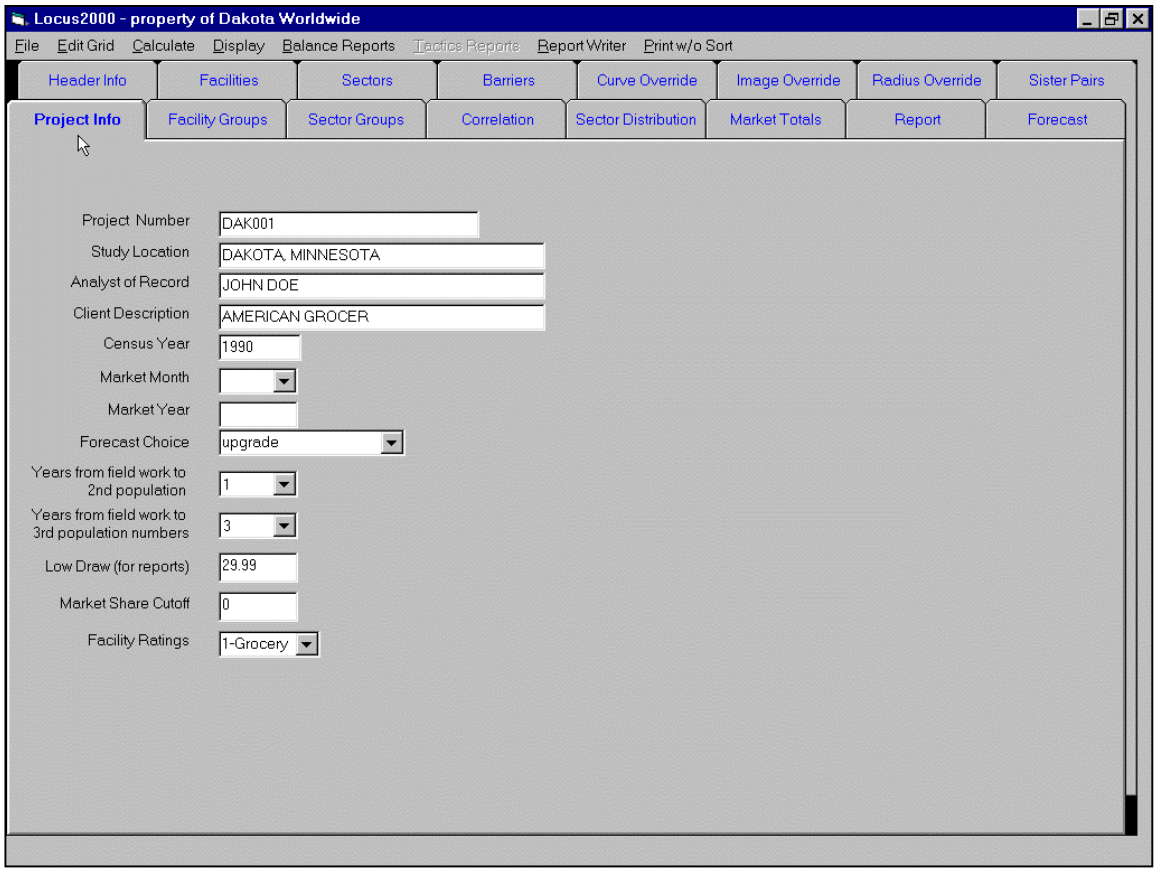


Figure 5-4: Project Info Folder.

The following fields are required:

Project Number:	If your organization uses a unique project number for accounting purposes, enter it here (limited to 22 characters).
Location:	Enter a description of the study area (limited to 32 characters).
Analyst:	Enter the name of the analyst (limited to 32 characters).
Client:	Enter the name of the client (limited to 32 characters).

At this point, you may want to change the LOCUS™ 2000 defaults or the parameters you set up when you were configuring your model. If you make a change, you will override the default LOCUS™ 2000 parameters previously set for this model.

> **NOTE:** Modifying the database limits, units of measure, and report controls is discussed in *Chapter 4.*

When you have finished your entries, **Save** file as, for example, *a:\Dak001.bal*.

C. Adding Facilities

Use the **Facilities** folder to either import or manually enter facilities as follows:

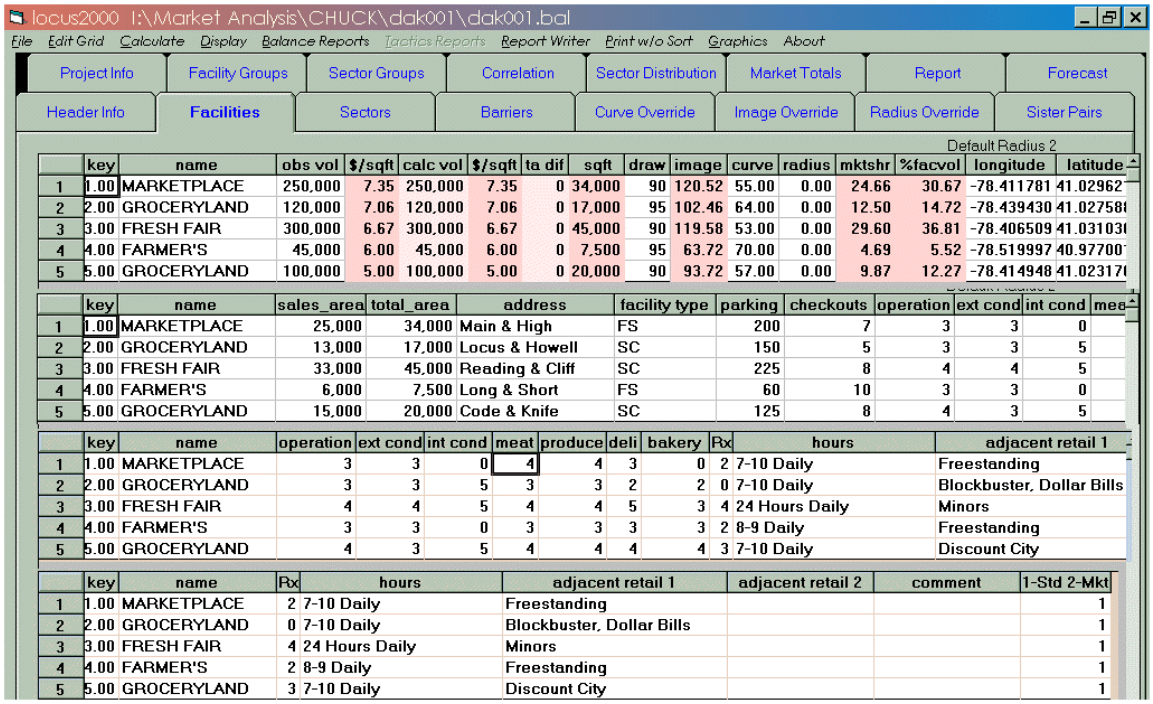


Figure 5-5: Facilities Folder with Sample Data.

Now that you have created a file, begin adding information from your field work. You can import facilities as described in *Chapter 3*, *Step 4*, or add information store by store from a data sheet or spreadsheet file (such as Excel or Quattro Pro).

To add a facility, click on the **Facilities** folder. Right click your mouse and use the **Edit Grid** pull-down menu to insert a new row, creating a new facility line. You may also insert, append, add and delete as many rows as desired (*i.e.,* ask for ten rows and ten rows appear). Figure 5-6 displays the pull-down menu.

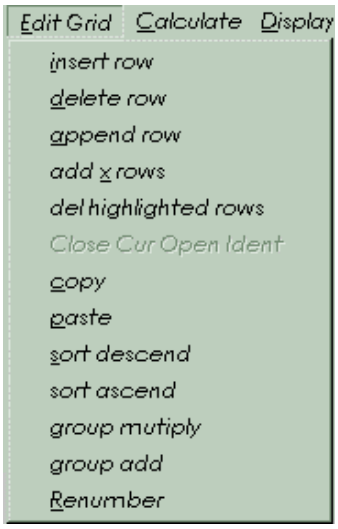


Figure 5-6: Edit Grid Menu.

To add facilities to the **Facilities** folder (See Figure 5-5), fill in all required data, along with any optional data, as listed below:

1. Required Data

Required data includes *Name, Map Key, Sales Area* or *Total Area, Volume, Draw, Curve*, *Radius* (use "0" if it is model default), *X-coordinate* (*long*), *Y-coordinate (lat*) and *Sales Display* (1 = Standard, 2 = Market).

Name
The name of the facility, limited to 16 characters.

Map Key
Enter a value greater than 0, through 99999.99.

Sales Area
The interior floor space of the facility, in square feet/square meters, that the customer can access (does not include storage and preparation areas). Enter a value from 1 through 999999.

Total Area
The total size of building/facility, in square feet/square meters. Enter a value from 1 through 999999.

NOTE: LOCUS™ 2000 requires that you enter either *Sales* or *Total Area*. The program will use the one you have selected in your configuration options to perform calculations. The user will then use the other data set as reference.

Volume
The sales attributed to the area of the facility being modeled. This value can be entered as weekly, monthly or yearly volume. This amount is also referred to as *observed volume.* Enter a value from 1 through 999999999.

(Longitude) X-Coordinate
The Longitude coordinate pinpoints the physical location of a facility east or west of the prime meridian.

(Latitude) Y-Coordinate

The Latitude coordinate pinpoints the physical location of a facility north or south of the equator.

Draw

The percent of the facility's observed volume that is derived from the trade area. Enter a value from 1 through 99.

Curve

The measurement of a facility's pulling power or ability to attract customers over distance. Enter a value from 1 through 99.

Radius

The radius defines the facility's ability to reach out over distance. A facility may have a different radius from the overall model radius. This is not a mandatory field. You can accept the default model radius that is displayed in this field by entering 0. If you enter a different radius for this facility, it must be a value greater than .1, through 99.99.

2. Optional Data

The rest of the data in the **Facilities** folder is not required for modeling, but can be used as reference information, or to produce a competitor analysis listing.

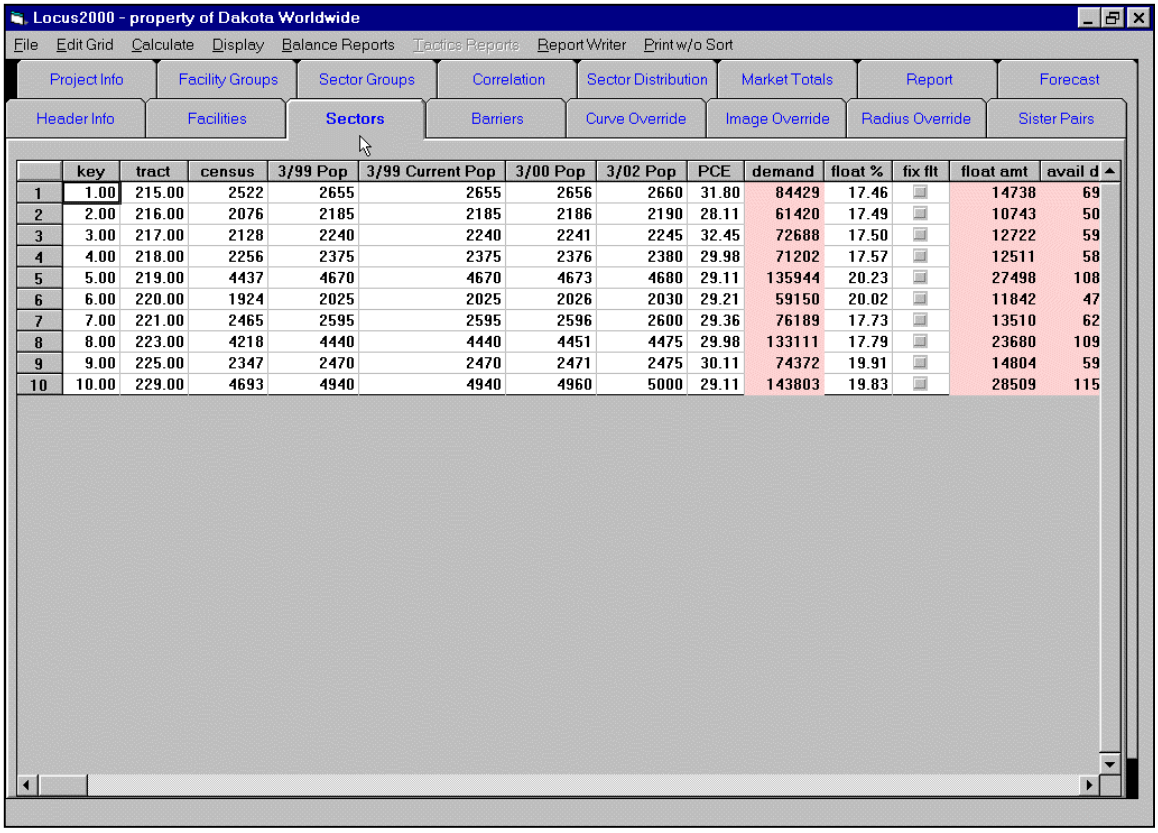
Optional data include:

- *Address*
- *Facility Type*
- *Parking Checkouts*
- *Operation*
- *Exterior Condition*
- *Interior Condition*
- *Meat*
- *Produce*
- *Deli*
- *Bakery*
- *Pharmacy*
- *Hours*
- *Adjacent Retail 1*
- *Adjacent Retail 2*
- *Comment*

D. Adding Sectors

Next, add the sectors you have defined into your database, either through import or manual input.

Select the **Sectors** folder from the Main Menu.



	key	tract	census	3/99 Pop	3/99 Current Pop	3/00 Pop	3/02 Pop	PCE	demand	float %	fix flt	float amt	avail d
1	1.00	215.00	2522	2655	2655	2656	2660	31.80	84429	17.46		14738	69
2	2.00	216.00	2076	2185	2185	2186	2190	28.11	61420	17.49		10743	50
3	3.00	217.00	2128	2240	2240	2241	2245	32.45	72688	17.50		12722	59
4	4.00	218.00	2256	2375	2375	2376	2380	29.98	71202	17.57		12511	58
5	5.00	219.00	4437	4670	4670	4673	4680	29.11	135944	20.23		27498	108
6	6.00	220.00	1924	2025	2025	2026	2030	29.21	59150	20.02		11842	47
7	7.00	221.00	2465	2595	2595	2596	2600	29.36	76189	17.73		13510	62
8	8.00	223.00	4218	4440	4440	4451	4475	29.98	133111	17.79		23680	109
9	9.00	225.00	2347	2470	2470	2471	2475	30.11	74372	19.91		14804	59
10	10.00	229.00	4693	4940	4940	4960	5000	29.11	143803	19.83		28509	115

Figure 5-7: Sectors Folder with Sample Data.

When you completed your LOCUS™ 2000 Input Sheet, you identified the sector X and Y coordinates, the expenditure and the population. Using this form, enter the information in the fields displayed.

Right click on the mouse to access the **Edit Grid** pull-down menu and add rows. Enter the number of rows to be added and they will appear. The following information is required:

Map Key

The unique numerical reference used to identify the sector within this data set. Enter a value greater than 0, through 99999.99.

(Longitude) X-Coordinate

The Longitude coordinate pinpoints the physical location of a sector east or west of the prime meridian.

(Latitude) Y-Coordinate

The Latitude coordinate pinpoints the physical location of a sector north or south of the equator.

Expenditure

The per capita expenditure as of the date of the field work. Enter a value from 0 through 9999.99. The expenditure must be in the same unit of measure as is the facility volume. For example, if you specified the facility volume as monthly, then you must specify the expenditure as monthly.

Population

Base - The estimated current population of the sector. This is a required entry. Enter a value from 0 through 32767.

1st year - The projected population of the sector one year after field work.

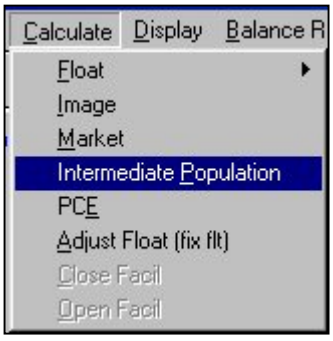
3rd year - The projected population of the sector three years after field work.

NOTE: You must enter the 1st and 3rd year populations.

Calculate Intermediate Population

LOCUS™ 2000 will calculate the intermediate population when you select **Intermediate Population** from the **Calculate** pull-down menu.

Figure 5-8: Calculating Intermediate Population.



The intermediate population changes from 0 as shown in Figure 5-9...

Figure 5-9: Intermediate Population Before Calculation.

	key	tract	census	3/99 Pop	3/99 Current Pop	3/00 Pop	3/02 Pop	PCE
1	1.00	215.00	2,522	2,655	2,655	0	2,660	31.80
2	2.00	216.00	2,076	2,185	2,185	0	2,190	28.11
3	3.00	217.00	2,128	2,240	2,240	0	2,245	32.45
4	4.00	218.00	2,256	2,375	2,375	0	2,380	29.98
5	5.00	219.00	4,437	4,670	4,670	0	4,680	29.11
6	6.00	220.00	1,924	2,025	2,025	0	2,030	29.21
7	7.00	221.00	2,465	2,595	2,595	0	2,600	29.36
8	8.00	223.00	4,218	4,440	4,440	0	4,475	29.98
9	9.00	225.00	2,347	2,470	2,470	0	2,475	30.11
10	10.00	229.00	4,693	4,940	4,940	0	5,000	29.11

to the population shown below.

Figure 5-10: Intermediate Population After Calculation.

	key	tract	census	3/99 Pop	3/99 Current Pop	3/00 Pop	3/02 Pop	PCE
1	1.00	215.00	2,522	2,655	2,655	2,657	2,660	31.80
2	2.00	216.00	2,076	2,185	2,185	2,187	2,190	28.11
3	3.00	217.00	2,128	2,240	2,240	2,242	2,245	32.45
4	4.00	218.00	2,256	2,375	2,375	2,377	2,380	29.98
5	5.00	219.00	4,437	4,670	4,670	4,673	4,680	29.11
6	6.00	220.00	1,924	2,025	2,025	2,027	2,030	29.21
7	7.00	221.00	2,465	2,595	2,595	2,597	2,600	29.36
8	8.00	223.00	4,218	4,440	4,440	4,452	4,475	29.98
9	9.00	225.00	2,347	2,470	2,470	2,472	2,475	30.11
10	10.00	229.00	4,693	4,940	4,940	4,960	5,000	29.11

Calculate PCE

LOCUS™ 2000 will calculate PCE, or Per Capita Expenditure, if you select **PCE** from the **Calculate** pull-down menu. Be sure you have filled in the *Regional PCE, Regional Household Size* and *Regional Household Income* fields of the **Header Info** folder before attempting this calculation.

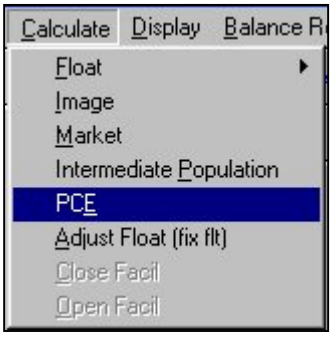


Figure 5-11: Calculate PCE.

Formula: (@log(Sector Income/Region Income) * 0.5+1) * (@log(Region HH size/Sector HH size) * 0.6+1)

Calculating the PCE from the import amount of 1, as shown in Figure 5-12...

Figure 5-12: PCE Before Calculation.

	key	tract	census	3/99 Pop	3/99 Current Pop	3/00 Pop	3/02 Pop	PCE
1	1.00	215.00	2,522	2,655	2,655	2,656	2,660	1.00
2	2.00	216.00	2,076	2,185	2,185	2,186	2,190	1.00
3	3.00	217.00	2,128	2,240	2,240	2,241	2,245	1.00
4	4.00	218.00	2,256	2,375	2,375	2,376	2,380	1.00
5	5.00	219.00	4,437	4,670	4,670	4,673	4,680	1.00
6	6.00	220.00	1,924	2,025	2,025	2,026	2,030	1.00
7	7.00	221.00	2,465	2,595	2,595	2,596	2,600	1.00
8	8.00	223.00	4,218	4,440	4,440	4,451	4,475	1.00
9	9.00	225.00	2,347	2,470	2,470	2,471	2,475	1.00
10	10.00	229.00	4,693	4,940	4,940	4,960	5,000	1.00

to the amount for this model as shown in Figure 5-13.

Figure 5-13: PCE After Calculation.

	key	tract	census	3/99 Pop	3/99 Current Pop	3/00 Pop	3/02 Pop	PCE
1	1.00	215.00	2,522	2,655	2,655	2,656	2,660	31.80
2	2.00	216.00	2,076	2,185	2,185	2,186	2,190	28.11
3	3.00	217.00	2,128	2,240	2,240	2,241	2,245	32.45
4	4.00	218.00	2,256	2,375	2,375	2,376	2,380	29.98
5	5.00	219.00	4,437	4,670	4,670	4,673	4,680	29.11
6	6.00	220.00	1,924	2,025	2,025	2,026	2,030	29.21
7	7.00	221.00	2,465	2,595	2,595	2,596	2,600	29.36
8	8.00	223.00	4,218	4,440	4,440	4,451	4,475	29.98
9	9.00	225.00	2,347	2,470	2,470	2,471	2,475	30.11
10	10.00	229.00	4,693	4,940	4,940	4,960	5,000	29.11

Comment

Use this field to enter any comments you may have about this sector, up to 20 characters.

NOTE: Remember to **Save** your model before continuing (*i.e., a:\dak001.bal*).

E. Adding Barriers

At this point, add barriers to your model if they exist.

Barriers are obstacles that restrict travel from one area to another. Many markets have physical (standard) or psychological (weighted) barriers that affect the way consumers shop. Physical barriers are landscape features such as rivers, railroad tracks and other obstacles which consumers may find inconvenient or impossible to cross. Psychological barriers may be ethnic or economic, but they also discourage shoppers from traveling into or out of certain areas.

Adding barriers to a model affects the distance between facilities and sectors. Distance is calculated from the sector to the facility using the most logical route. A barrier adds to the distance because people must travel around it to get to the facility. A weighted barrier influences the distance calculation between a sector and facility. All of this changes the market share distribution and image allocation.

It is recommended that you use the **Display Path** window to draw your barriers into the model. To open your Display window, select **Display** from the menu located above the main folders, choose **Path**, and the **Display Path** window appears.

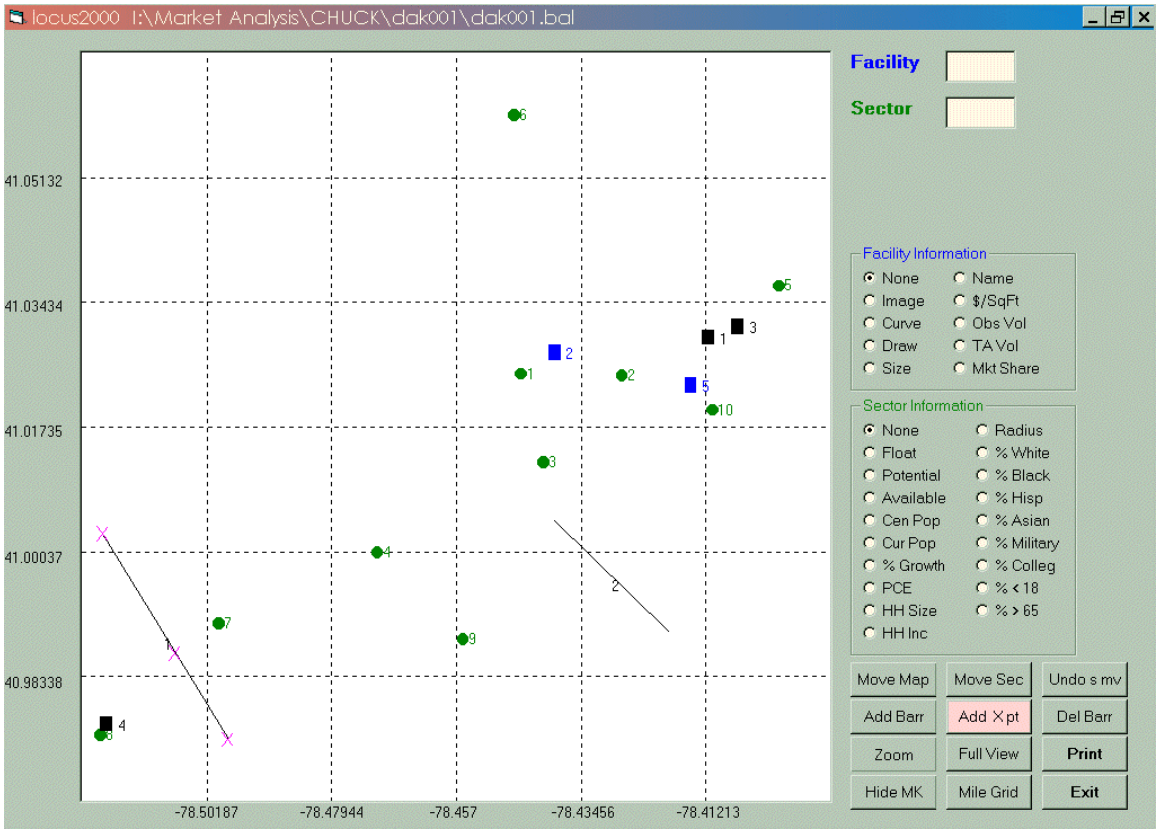


Figure 5-14: Display Path Window Showing Two Barriers.

To add a barrier, click on **Add Barr**, and it will be highlighted as shown in Figure 5-14. Place the cursor where you want your new barrier to begin, left click and drag to where you want it to end, and release finger from left click. Your barrier is now drawn.

To add crosspoints, click on your new barrier (or click anywhere in the map area) to make crosspoints appear, as shown in Figure 5-15. To stop adding crosspoints, click on **Add X pt** to deactivate this function.

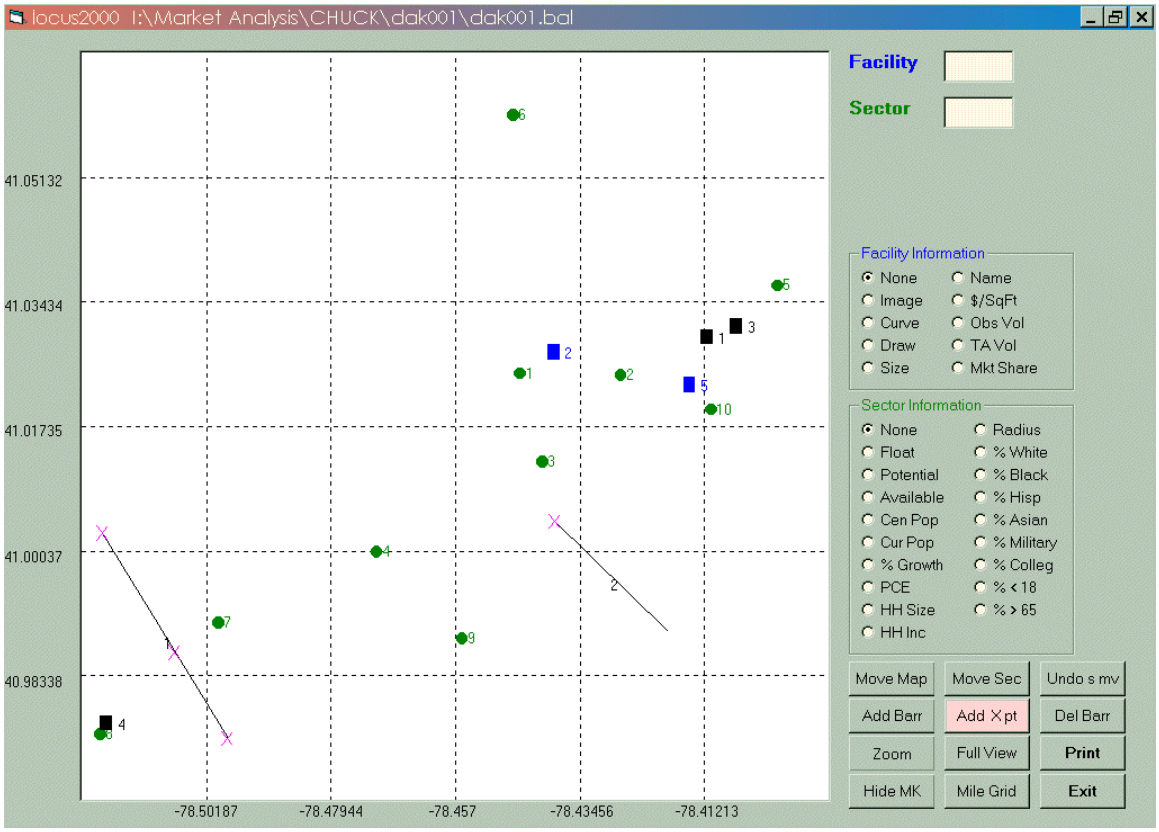


Figure 5-15: Adding Crosspoints.

To add crosspoints to a specific barrier, click on **Add X pt** to activate this function, and the **select barrier** box will appear. Select which barrier to use and then add crosspoints by clicking on the barrier.

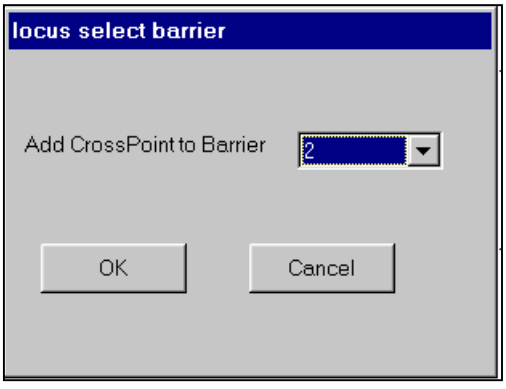


Figure 5-16: Selecting a Barrier.

You may also delete a barrier when you click on the **Del Barr** button.

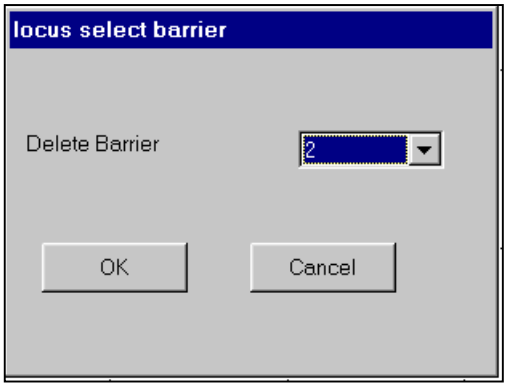


Figure 5-17: Deleting a Barrier.

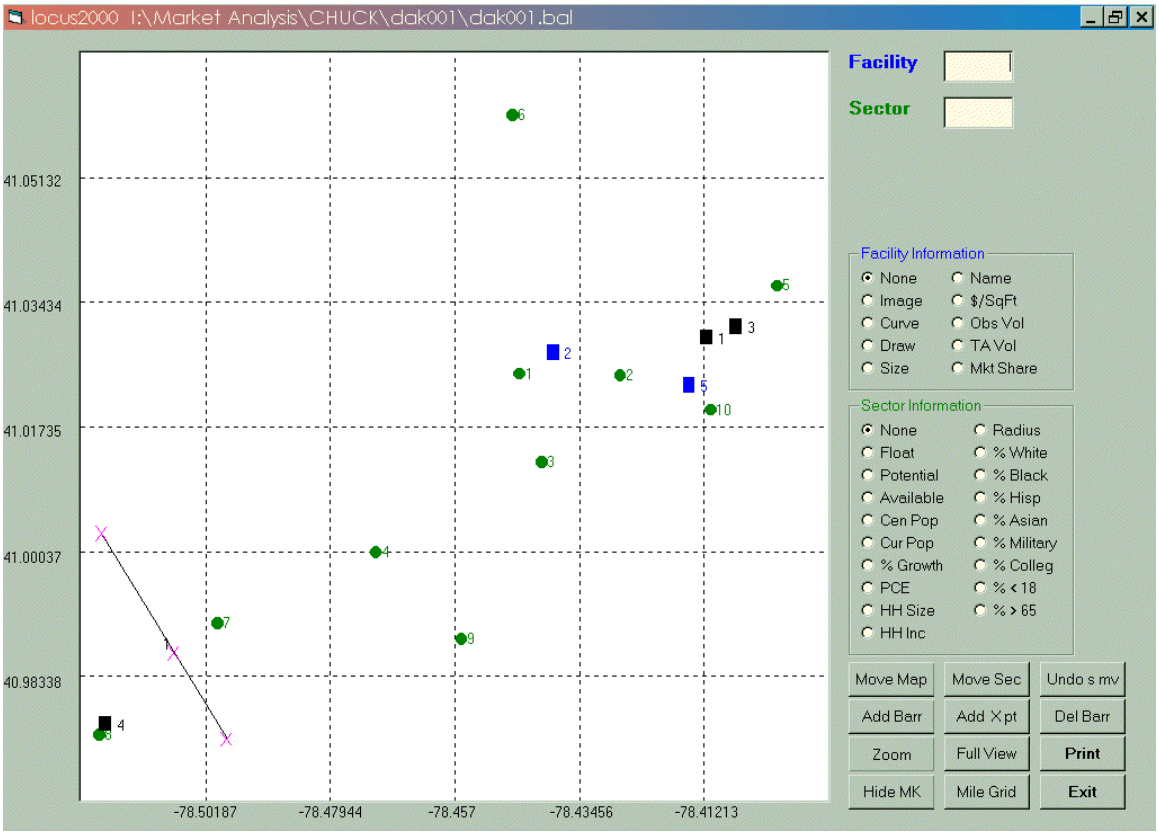


Figure 5-18: Results after a Barrier is Deleted.

1. Barriers

Standard
A barrier with no weights and up to ten crosspoints. Use standard barriers to simulate physical barriers.

Weighted
A barrier with a "weight" specified for each side, influencing the distance calculation between a sector and a facility. Use weighted barriers to simulate psychological barriers. To weight a barrier, add the desired weight in the **Barriers** folder. Otherwise, it will be a standard barrier.

Crosspoint (X-point)
A specific point (crosspoint) from which the program calculates distances. A crosspoint is similar to a bridge across a river; you can cross wherever you have defined a crosspoint. If you add a crosspoint, the program calculates the distance as a straight line from the sector to the crosspoint, then as a straight line from the crosspoint to the facility or next barrier.

When you add multiple barriers to a model, the weights and crosspoints will have a cumulative effect on the distance calculations between a sector and a facility.

2. End Points

Each barrier is defined with a map key, a starting point and an ending point. LOCUS™ 2000 arbitrarily names these points "end points 1 and 2." Each end point is defined by an x-coordinate and a y-coordinate.

Map Key
The unique numerical reference used to identify a specific barrier within this model. Enter a value greater than 0, through 99999.99.

End point (Longitude) X-Coordinate
The Longitude coordinate pinpoints the physical location of an end point east or west of the prime meridian.

End point (Latitude) Y-Coordinate
The Latitude coordinate pinpoints the physical location of an end point north or south of the equator.

NOTE: Do not assume that end points also serve as crosspoints. If you want an end point to be a crosspoint, you must enter its location as one of the barrier crosspoints. If you choose to weight a barrier, you must always assign weights to both sides. LOCUS™ 2000 measures the distance from the sector to the facility. When the program encounters a weighted barrier, the distance from the sector to the facility does not change. However, the distance from the barrier to the facility is multiplied by the weight on that side of the barrier.

3. Two-Sided Weights

The relative weight of one side of the barrier to the other side allows LOCUS™ 2000 to model situations where people will go outside of their trade area to shop, but people outside will not go into the trade area to shop.

Side Point:
This is a reference point that you identify on one side of the barrier.

Weight 1:
LOCUS™ 2000 assigns this weight to the side of the barrier containing the reference point assigned above. This weight can be any number greater than 0 and less than 10. The program rounds to two significant digits after the decimal point. Thus, if you specified a weight of 3.206, LOCUS™ 2000 would store it as 3.21.

Weight 2:
LOCUS™ 2000 assigns this weight to the side opposite the one containing the reference point. The limits are the same as those specified for Weight 1.

Crosspoints 1 through 10:
When you have defined the barrier, you must enter the Longitude and Latitude (x and y) coordinates that pinpoint the location of the crosspoint on the grid for each crosspoint.

F. Removing Model Information

To remove information from your model, go to the appropriate folder, such as the **Facilities** folder. Click on the row that you desire to delete, then right click, highlight **Delete Row** and the row will be removed.

!!CAUTION!! When you delete a row you erase information from your LOCUS™ 2000 file. If you wish to restore this information, you must re-enter it.

Follow the same procedure to remove a sector or barrier.

G. Displaying Paths

You can display (draw) a path to show the distance between a facility and a sector while you are in the LOCUS™ 2000 **Balance** mode. This command is also available in the LOCUS™ 2000 **Tactics** mode. Displaying paths allows you to look at the route used by LOCUS™ 2000 to calculate the distance between a sector location and a facility. If you have added barriers and crosspoints, drawing paths will show you the path from the sector location to the crosspoint to the facility.

To display a path, select **Display**/**Path** from the pull-down LOCUS™ 2000 **Balance** Main Menu.

Figure 5-19: Display Menu.

The **Display Path** window will show the barriers you have entered, if any, and the facility and sector map key entered. The program will display the path and distance, as shown in Figure 5-20.

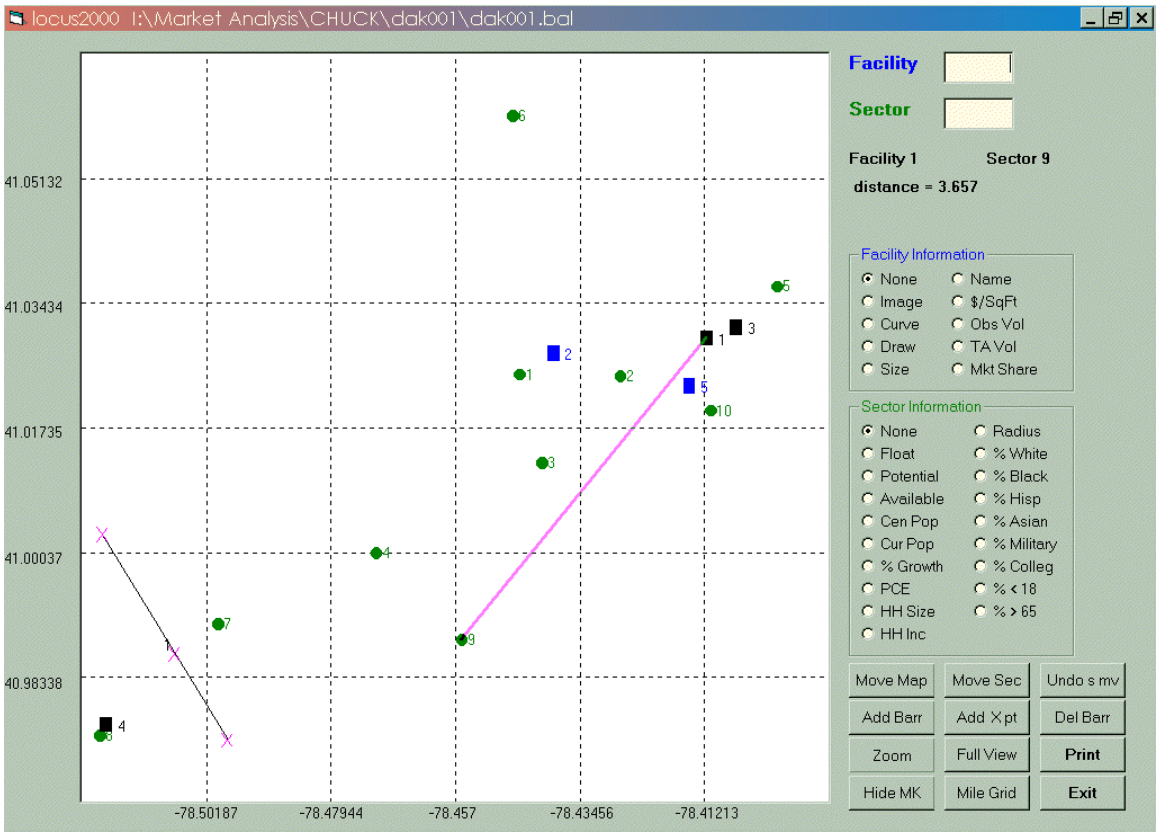


Figure 5-20: Display Path Window Showing Path and Distance.

The symbols on the graph are as follows:

Straight line	Represents a barrier
X	Represents a crosspoint
Sphere	Represents a sector
Box	Represents a facility

In this example, the distance between Facility 1 and Sector 9 is 3.657 miles.

1. Displaying Paths with a Standard Barrier

If you add a barrier with a crosspoint, the distance from a sector to a facility will change.

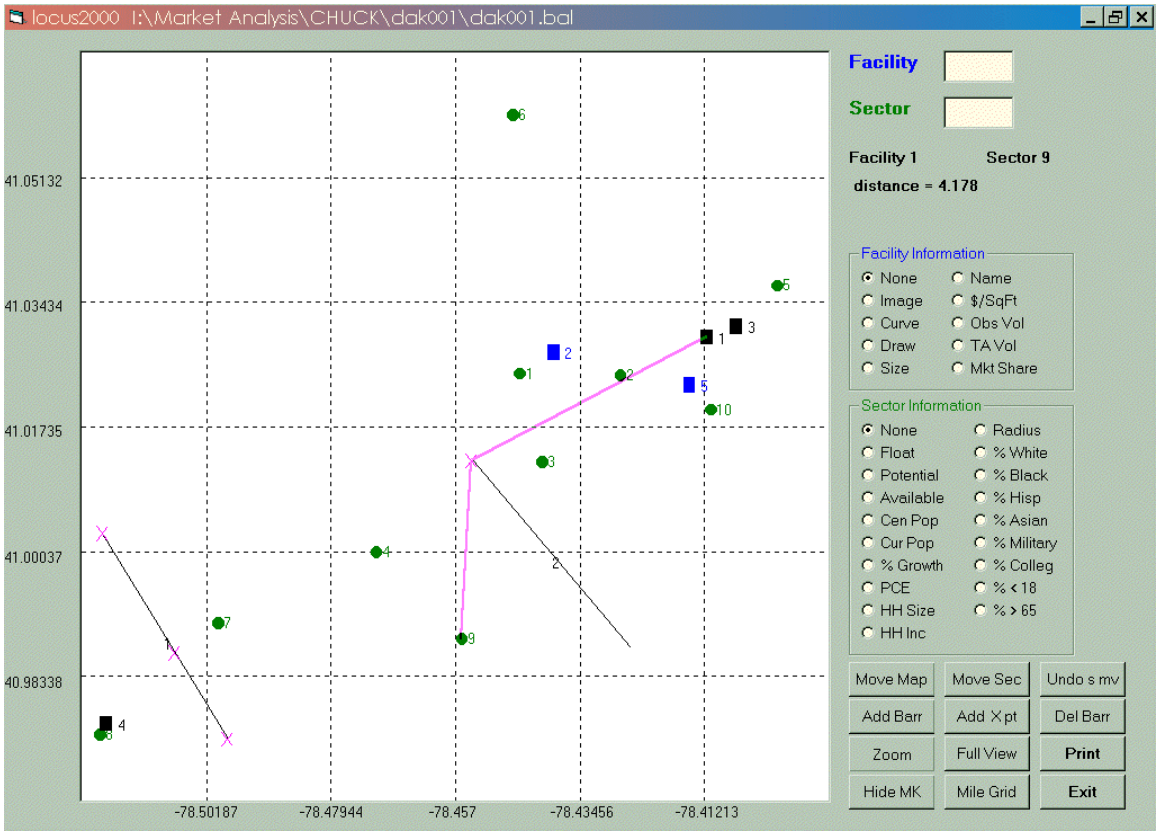


Figure 5-21: Displaying Paths with a Standard Barrier.

Notice that the distance has changed from 3.657 to 4.178 miles. The program calculates the distance as a straight line from the sector to the crosspoint, then as a straight line from the crosspoint to the facility.

2. Displaying Paths with a Weighted Barrier

If you introduce a weighted barrier, the graphic will show a distance change. Figure 5-22 shows Barrier 2 is now weighted with "wt 1 = 1.50" and "wt 2 = 1.50".

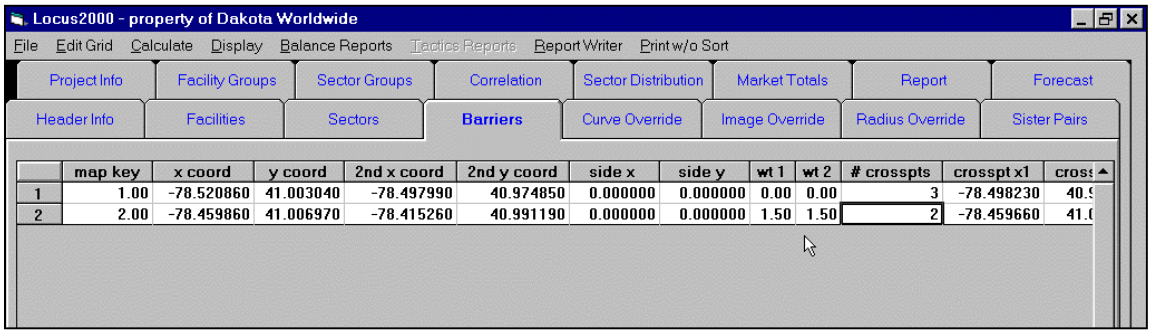


Figure 5-22: Introducing a Weighted Barrier.

Figure 5-21 had shown the distance from Sector 9 to Facility 1 as 4.178 miles. When you introduce a weighted barrier, this distance will change, as shown in Figure 5-23. Notice that the distance from Sector 9 to Facility 1 has increased to 5.43 miles.

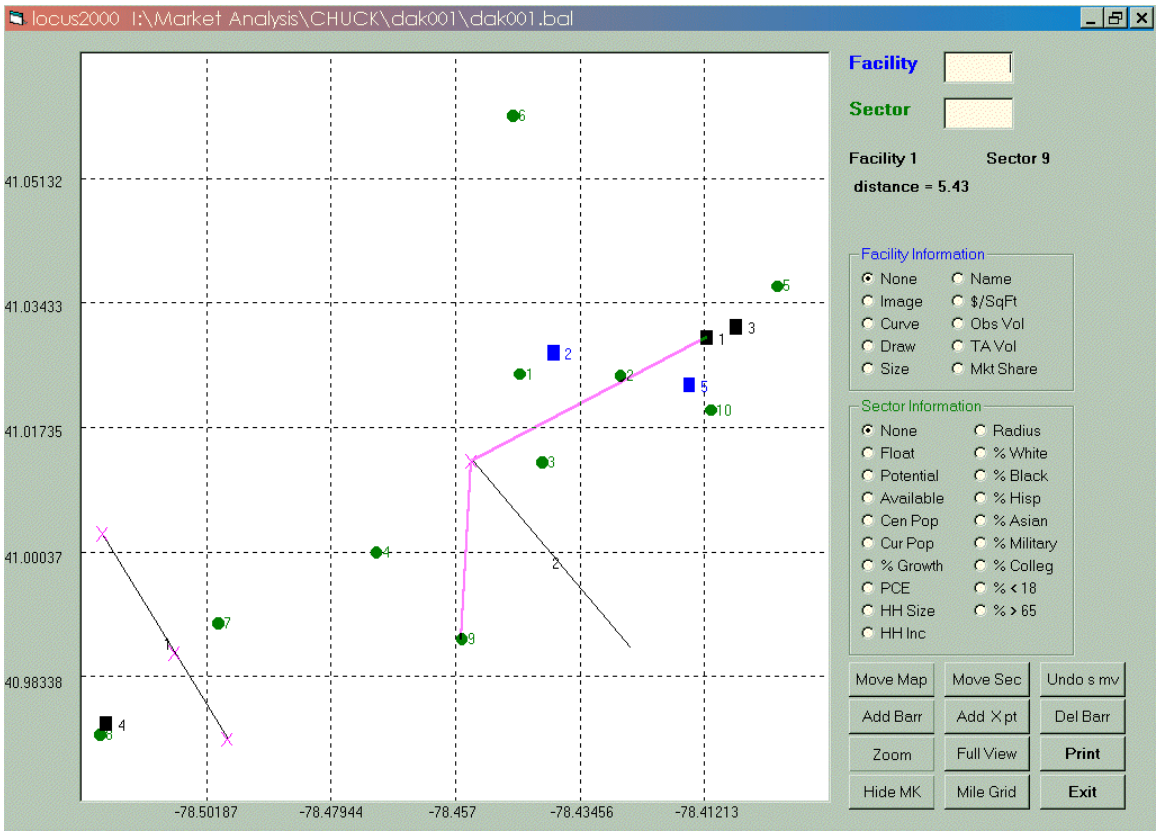


Figure 5-23: Displaying Paths with a Weighted Barrier.

When calculating distances with weighted barriers, the distance from the sector to the barrier remains unweighted, but the distance from the barrier to the facility is weighted.

H. Checking Data for Entry Errors

Your next step is to check the data you entered to make sure it is accurate. This will save you time later when you are balancing the model.

To check your data, you may print each individual folder. Simply highlight the data to be printed, click on the pull-down menu **Print w/o Sort** and print the folder's contents.

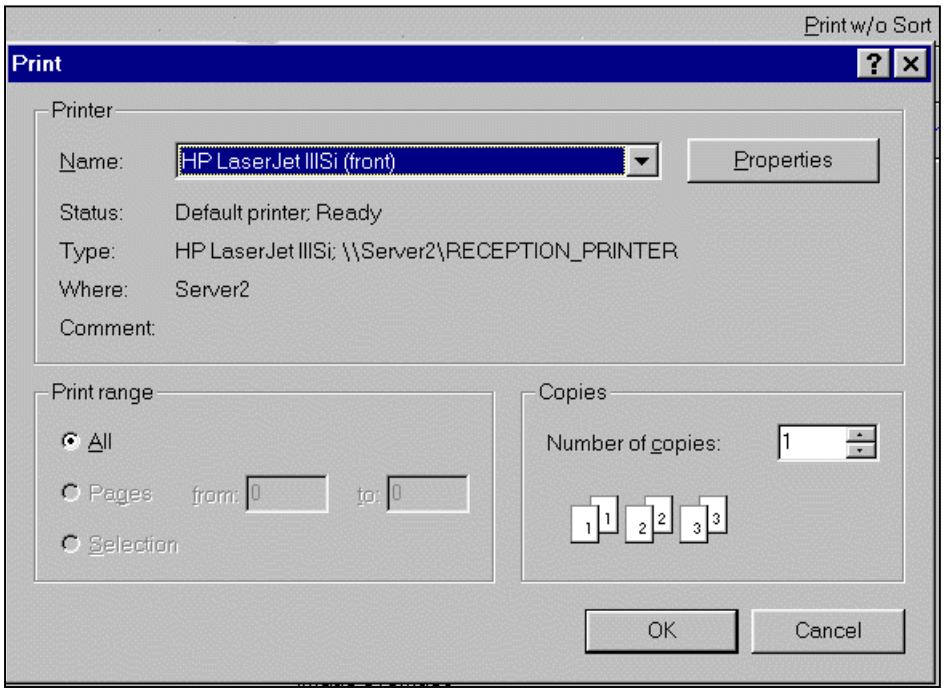


Figure 5-24: Print Box.

Figure 5-24 shows the **Print** instruction box. You may change the printer, its properties or the number of copies desired.

I. Printing a Model Summary

To print the entire data set from your model, click on the pull-down menu **File**/**Print All Input**. All folders' data will now be printed.

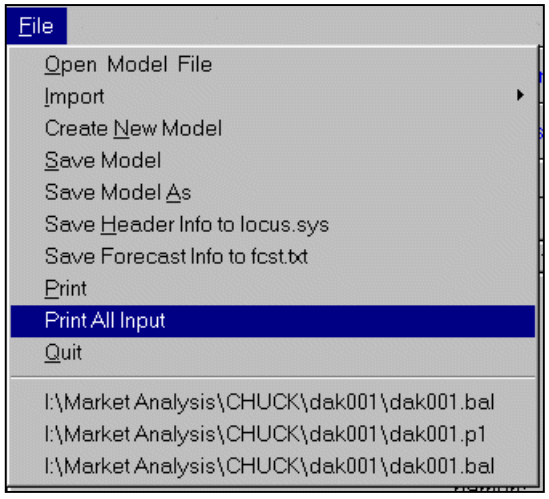


Figure 5-25: Printing a Model Summary.

J. Correcting Data

Your data entry is now complete. The next step is to verify your data. If you find input errors or inaccuracies, make the appropriate corrections in any of the folders.

K. Saving Your File

The **File/Save** pull-down menu command allows you to store the contents of the workspace to a specified file. Whenever you have entered data into your model or made changes to it, you will want to save it before you quit your LOCUS™ 2000 session.

To save your file, select the **File/Save** pull-down menu. Enter the name of the file you want to save, including the path, if necessary. Add any extension characters that you want to use in the file name. For example, to save a file named MIDLAND.BAL in the LOCUS™ 2000 directory, which is in the "C" drive, type:

C:\LOCUS 2000\MIDLAND.BAL

and press **Enter**.

In LOCUS™ 2000 **Balance**, if you do not enter an extension, a *.bal extension is automatically assigned to your preliminary model.

Chapter 6
Balancing the Model

Up to this point, you have built and verified a preliminary model. You are ready to examine this preliminary model to see what needs to be done to make it reflect the conditions you observed in your trade area.

You may need to alter the model's draw, curve, radius and/or add other subjective parameters to make the model more accurately represent your marketplace. This process is called "balancing" the model.

As LOCUS™ 2000 is a spreadsheet format, you will find the ease of balancing a definite time saver.

A. Establishing the Trade Area Float

Float, as previously defined, is the amount of potential not being captured by the facilities defined in this model, or

Float = Potential- Σ(Facility Volume x Draw)

where *Potential* is defined as the *summation of Population x PCE* for the sectors, and Σ is the *sum of each facility volume times its draw*.

To determine whether the correct amount of float has been designated for the trade area, click on the **Market Totals** folder to view the float for the entire marketplace (as well as additional model data).

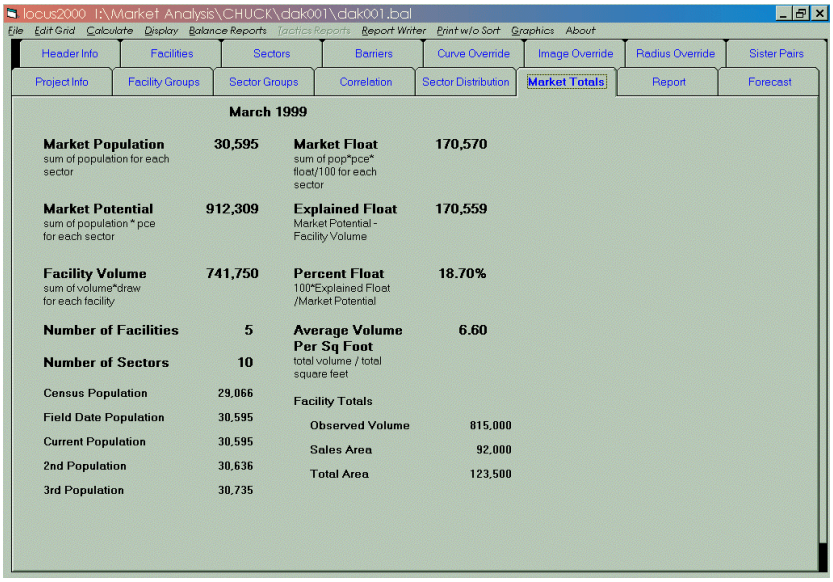


Figure 6-1: Market Totals Folder.

1. Printing Market Totals

If you desire a print out of the **Market Totals** folder, click on the pull-down menu **Print w/o Sort** and the entire folder is printed.

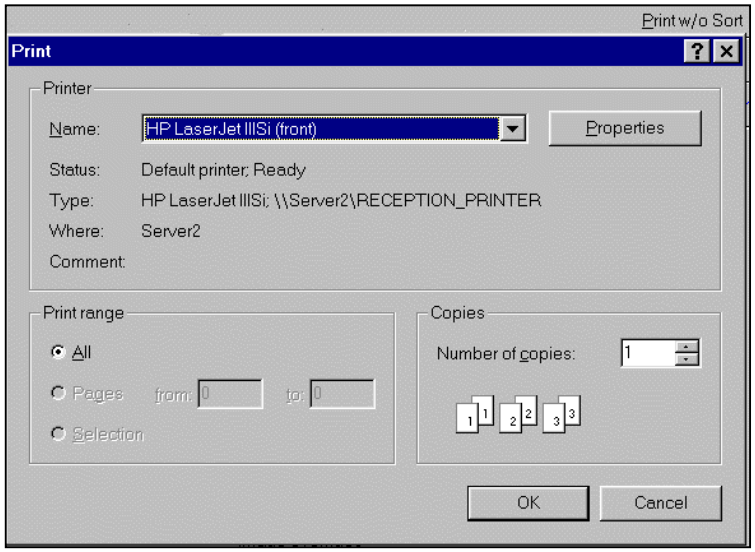


Figure 6-2: Print w/o Sort.

Evaluate the current model's total float amount and percent. If the float for the model is acceptable, you can proceed to Step 4, *Balancing Float by Sector*.

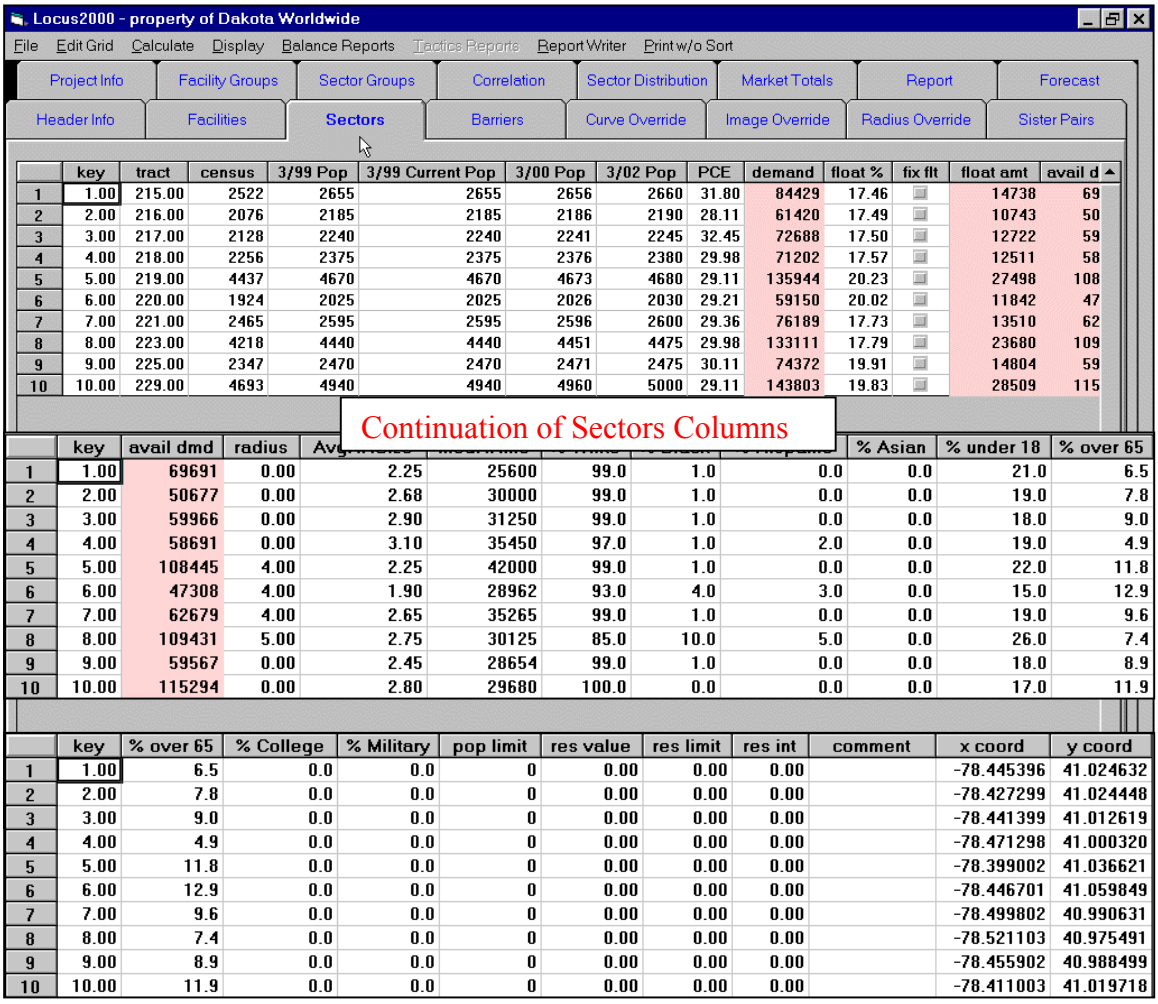
If the float needs to be adjusted, you can alter it by updating the draw, volume, PCE or population as necessary.

2. Updating Facility Data

Select the **Facilities** folder and the entire facility database is available for your adjustment. Change desired data.

3. Updating Sector Data

To change any sector data, select the **Sectors** folder and all of the sectors database is available for your adjustment. Change desired data.



	key	tract	census	3/99 Pop	3/99 Current Pop	3/00 Pop	3/02 Pop	PCE	demand	float %	fix flt	float amt	avail d
1	1.00	215.00	2522	2655	2655	2656	2660	31.80	84429	17.46		14738	69
2	2.00	216.00	2076	2185	2185	2186	2190	28.11	61420	17.49		10743	50
3	3.00	217.00	2128	2240	2240	2241	2245	32.45	72688	17.50		12722	59
4	4.00	218.00	2256	2375	2375	2376	2380	29.98	71202	17.57		12511	58
5	5.00	219.00	4437	4670	4670	4673	4680	29.11	135944	20.23		27498	108
6	6.00	220.00	1924	2025	2025	2026	2030	29.21	59150	20.02		11842	47
7	7.00	221.00	2465	2595	2595	2596	2600	29.36	76189	17.73		13510	62
8	8.00	223.00	4218	4440	4440	4451	4475	29.98	133111	17.79		23680	109
9	9.00	225.00	2347	2470	2470	2471	2475	30.11	74372	19.91		14804	59
10	10.00	229.00	4693	4940	4940	4960	5000	29.11	143803	19.83		28509	115

	key	avail dmd	radius	Av					% Asian	% under 18	% over 65
1	1.00	69691	0.00	2.25	25600	99.0	1.0	0.0	0.0	21.0	6.5
2	2.00	50677	0.00	2.68	30000	99.0	1.0	0.0	0.0	19.0	7.8
3	3.00	59966	0.00	2.90	31250	99.0	1.0	0.0	0.0	18.0	9.0
4	4.00	58691	0.00	3.10	35450	97.0	1.0	2.0	0.0	19.0	4.9
5	5.00	108445	4.00	2.25	42000	99.0	1.0	0.0	0.0	22.0	11.8
6	6.00	47308	4.00	1.90	28962	93.0	4.0	3.0	0.0	15.0	12.9
7	7.00	62679	4.00	2.65	35265	99.0	1.0	0.0	0.0	19.0	9.6
8	8.00	109431	5.00	2.75	30125	85.0	10.0	5.0	0.0	26.0	7.4
9	9.00	59567	0.00	2.45	28654	99.0	1.0	0.0	0.0	18.0	8.9
10	10.00	115294	0.00	2.80	29680	100.0	0.0	0.0	0.0	17.0	11.9

	key	% over 65	% College	% Military	pop limit	res value	res limit	res int	comment	x coord	y coord
1	1.00	6.5	0.0	0.0	0	0.00	0.00	0.00		-78.445396	41.024632
2	2.00	7.8	0.0	0.0	0	0.00	0.00	0.00		-78.427299	41.024448
3	3.00	9.0	0.0	0.0	0	0.00	0.00	0.00		-78.441399	41.012619
4	4.00	4.9	0.0	0.0	0	0.00	0.00	0.00		-78.471298	41.000320
5	5.00	11.8	0.0	0.0	0	0.00	0.00	0.00		-78.399002	41.036621
6	6.00	12.9	0.0	0.0	0	0.00	0.00	0.00		-78.446701	41.059849
7	7.00	9.6	0.0	0.0	0	0.00	0.00	0.00		-78.499802	40.990631
8	8.00	7.4	0.0	0.0	0	0.00	0.00	0.00		-78.521103	40.975491
9	9.00	8.9	0.0	0.0	0	0.00	0.00	0.00		-78.455902	40.988499
10	10.00	11.9	0.0	0.0	0	0.00	0.00	0.00		-78.411003	41.019718

Figure 6-3: Sectors Folder with Sample Data.

NOTE: Verify the updates you have made. For example, to monitor the float for the entire marketplace, click on the **Market Totals** folder.

4. Balancing Float By Sector

When the total model float is acceptable, you are ready to have LOCUS™ 2000 calculate the initial float percentages for each sector. To do this, select the **Calculate** option from the pull-down menu and highlight **Float**. Figure 6-4 displays the **Calculate/Float** menu.

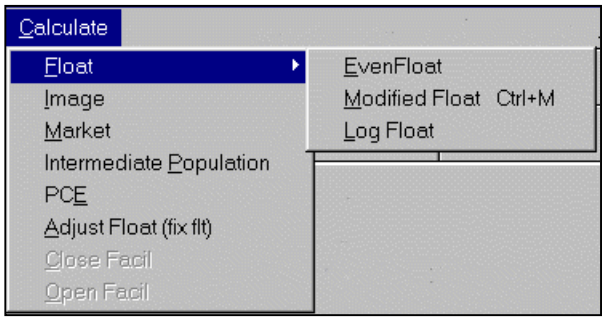


Figure 6-4: Calculate/Float Menu.

5. Selecting Calculation Method

When you select the **Calculate/Float** option, you can specify one of three methods to calculate the initial float percentages for each sector. The options to calculate float are:

Even

Use this option to have LOCUS™ 2000 assign an equal float percentage to every sector.

Modified

Use this option to have LOCUS™ 2000 assign float percentages based on the distance between a sector and the facility nearest to that sector. The greater the distance between a sector and its closest facility, the greater the float assigned to that sector.

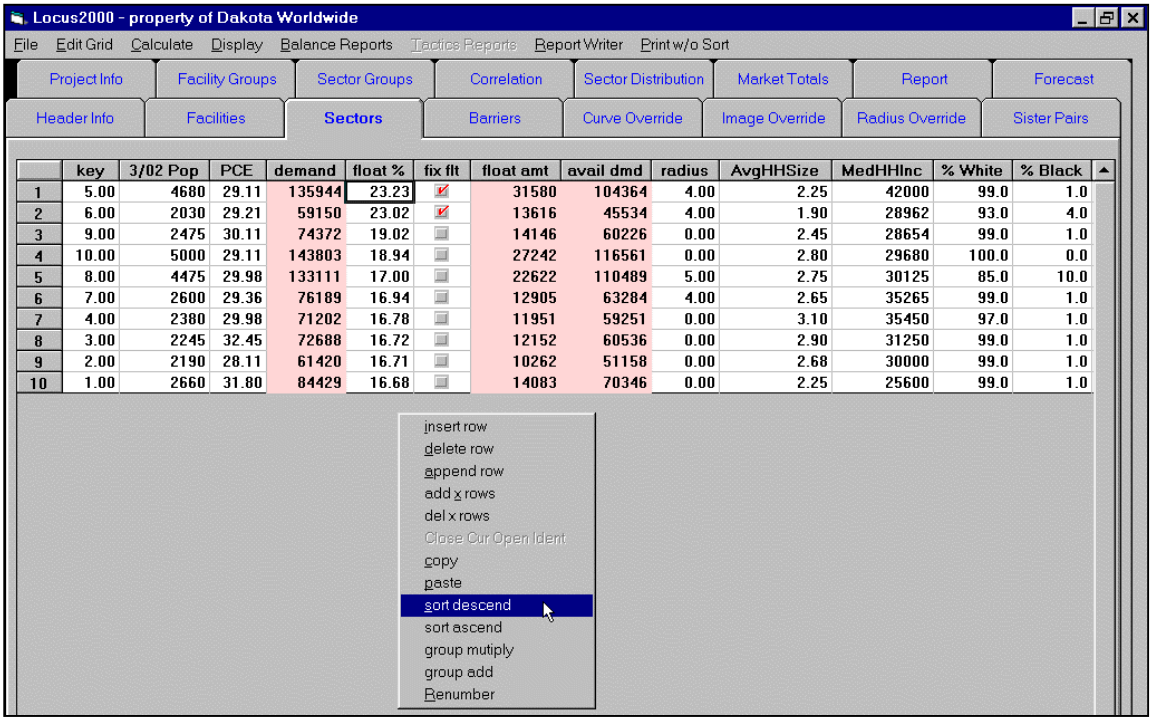
Log

Use this option to have LOCUS™ 2000 assign float based on the amount of pulling power exerted on a sector by all facilities in the trade area. Sectors feeling the greatest amount of pulling power from the facilities in the trade area will have the least amount of float assigned.

Whenever you add, delete or otherwise change information for your model during the balancing process, you must run the **Calculate/Adjust Float** command to redistribute the float.

Now review the float percentages for each sector in the **Sectors** folder. You may sort sectors' float percentages in ascending or descending order; click on the top of the column titled **float %**, right click and select **sort descend**.

Figure 6-5: Float Percentages in the Sectors Folder.



	key	3/02 Pop	PCE	demand	float %	fix flt	float amt	avail dmd	radius	AvgHHSize	MedHHInc	% White	% Black
1	5.00	4680	29.11	135944	23.23	☑	31580	104364	4.00	2.25	42000	99.0	1.0
2	6.00	2030	29.21	59150	23.02	☑	13616	45534	4.00	1.90	28962	93.0	4.0
3	9.00	2475	30.11	74372	19.02	☐	14146	60226	0.00	2.45	28654	99.0	1.0
4	10.00	5000	29.11	143803	18.94	☐	27242	116561	0.00	2.80	29680	100.0	0.0
5	8.00	4475	29.98	133111	17.00	☐	22622	110489	5.00	2.75	30125	85.0	10.0
6	7.00	2600	29.36	76189	16.94	☐	12905	63284	4.00	2.65	35265	99.0	1.0
7	4.00	2380	29.98	71202	16.78	☐	11951	59251	0.00	3.10	35450	97.0	1.0
8	3.00	2245	32.45	72688	16.72	☐	12152	60536	0.00	2.90	31250	99.0	1.0
9	2.00	2190	28.11	61420	16.71	☐	10262	51158	0.00	2.68	30000	99.0	1.0
10	1.00	2660	31.80	84429	16.68	☐	14083	70346	0.00	2.25	25600	99.0	1.0

The sectors are aligned in this order. If the float distribution is acceptable, go to the next step, calculating the image.

NOTE: If the float distribution is not acceptable, you have two options:

- Use one of the other **Calculate/Float** options, or
- Manually update the sector float.

You can continue to do this until the float is acceptable.

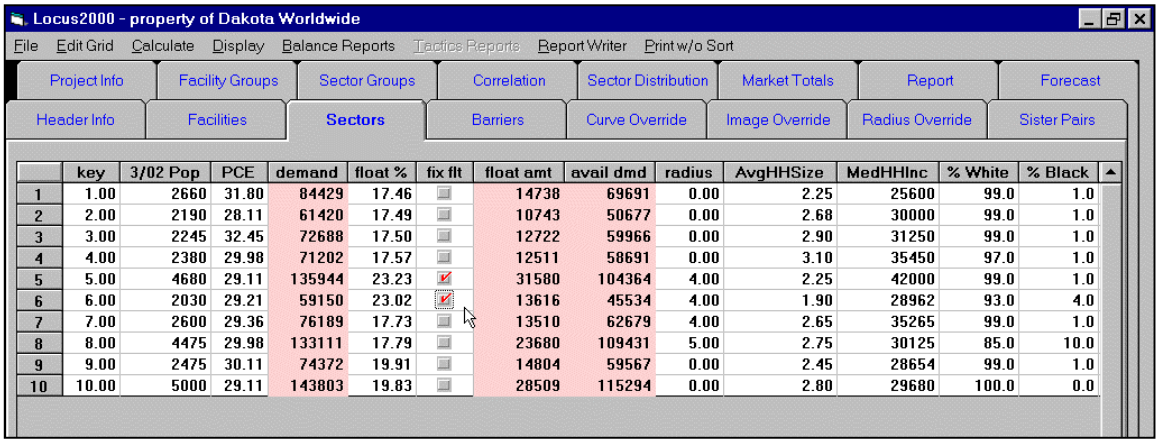
NOTE: If you have manually updated float for one or more sectors, do not use the **Calculate/Float** command because it will override your manual updates.

6. Updating Float for Individual Sectors

If none of the **Calculate/Float** commands accurately simulates the float distribution, you can manually adjust the float. Type in desired float percentage, make the check mark appear in the **fix flt** column and, using the pull-down menu, calculate and adjust float.

Enter the percent of the sector's potential that will be assigned to float. The percentage needs to be a number between 1 and 100% (*i.e.,* use 10.0 for ten percent, not 10% or .10).

NOTE: The program adjusts float slightly so that you will not see the exact number you entered. You cannot use the **Calculate/Float** command again, or you will redistribute the float only. Adjust the float (use **fix flt**) instead. [DO THIS EACH TIME YOU CHANGE THE DRAW OR VOLUME OF A STORE.]



	key	3/02 Pop	PCE	demand	float %	fix flt	float amt	avail dmd	radius	AvgHHSize	MedHHInc	% White	% Black
1	1.00	2660	31.80	84429	17.46	☐	14738	69691	0.00	2.25	25600	99.0	1.0
2	2.00	2190	28.11	61420	17.49	☐	10743	50677	0.00	2.68	30000	99.0	1.0
3	3.00	2245	32.45	72688	17.50	☐	12722	59966	0.00	2.90	31250	99.0	1.0
4	4.00	2380	29.98	71202	17.57	☐	12511	58691	0.00	3.10	35450	97.0	1.0
5	5.00	4680	29.11	135944	23.23	☑	31580	104364	4.00	2.25	42000	99.0	1.0
6	6.00	2030	29.21	59150	23.02	☑	13616	45534	4.00	1.90	28962	93.0	4.0
7	7.00	2600	29.36	76189	17.73	☐	13510	62679	4.00	2.65	35265	99.0	1.0
8	8.00	4475	29.98	133111	17.79	☐	23680	109431	5.00	2.75	30125	85.0	10.0
9	9.00	2475	30.11	74372	19.91	☐	14804	59567	0.00	2.45	28654	99.0	1.0
10	10.00	5000	29.11	143803	19.83	☐	28509	115294	0.00	2.80	29680	100.0	0.0

Figure 6-6: Adjusting the Float, Part 1.

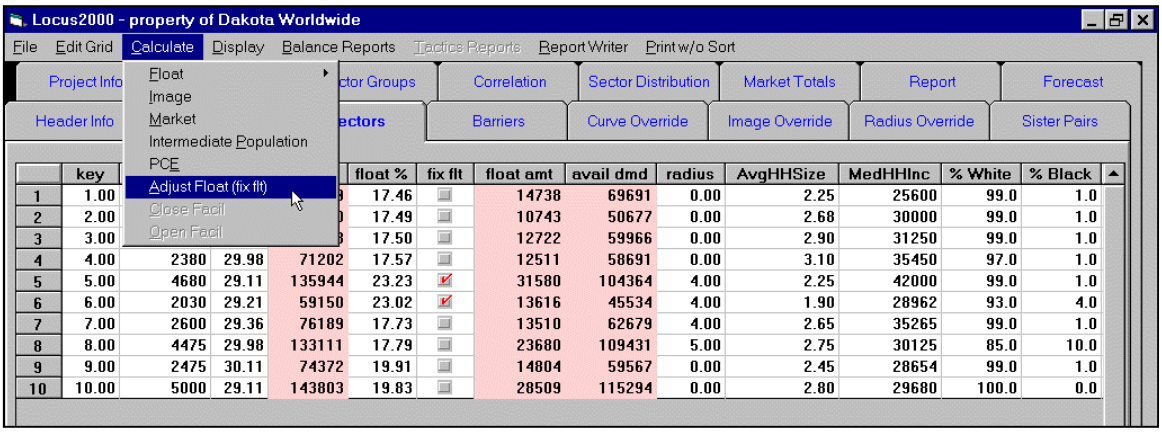


Figure 6-7: Adjusting the Float, Part 2.

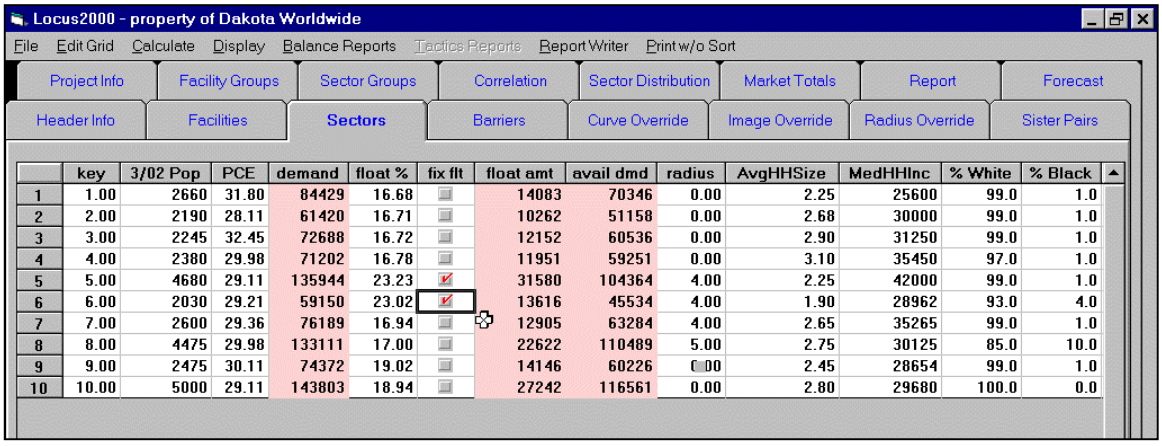


Figure 6-8: Adjusting the Float, Part 3.

After you are satisfied that the float is accurate for the entire model and for each sector, use the pull-down menu **Calculate/Image** to calculate the image for each facility.

> **NOTE:** If at some point you change the components of float (population, PCE and so on), you should re-evaluate the model and/or individual float.

7. Calculating Image

Next, you must perform a **Calculate Image** operation to rank the facilities. Select **Calculate/Image** from the pull-down menu.

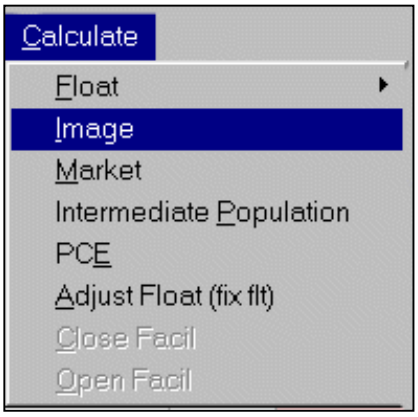


Figure 6-9: Calculating Image.

You may now view the calculated image results in the **Facilities** folder. Examine this report to decide:

- If the facility images correspond to your impressions of what is occurring in the marketplace.
- How the facility's image compares with other facilities in the model.
- If the facility's image is too high or too low.

The Function Key [F1] also calculates IMAGE

If the image is acceptable, go to Step 11, *Evaluating Market Share*.

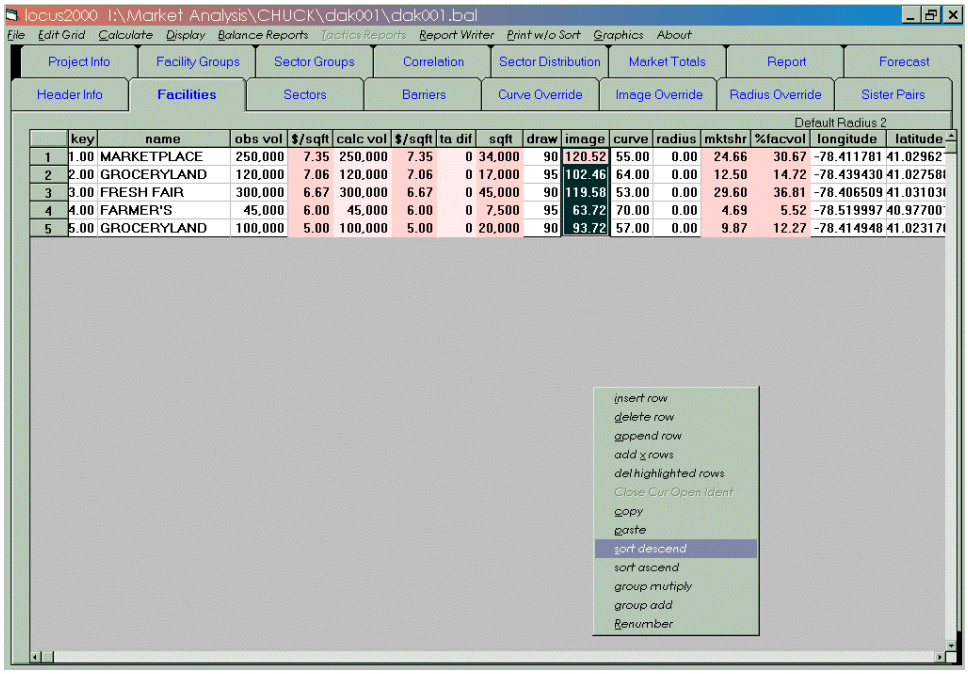
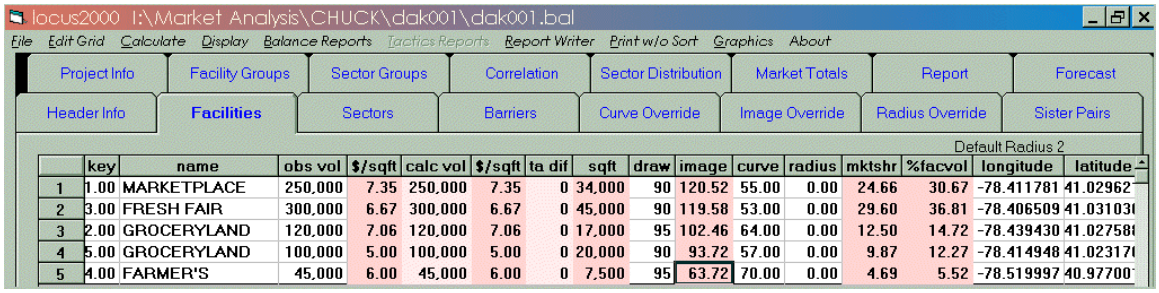


Figure 6-10: Sorting Images in Descending Order.



	key	name	obs vol	$/sqft	calc vol	$/sqft	ta dif	sqft	draw	image	curve	radius	mktshr	%facvol	longitude	latitude
1	1.00	MARKETPLACE	250,000	7.35	250,000	7.35	0	34,000	90	120.52	55.00	0.00	24.66	30.67	-78.411781	41.02962
2	3.00	FRESH FAIR	300,000	6.67	300,000	6.67	0	45,000	90	119.58	53.00	0.00	29.60	36.81	-78.406509	41.03103
3	2.00	GROCERYLAND	120,000	7.06	120,000	7.06	0	17,000	95	102.46	64.00	0.00	12.50	14.72	-78.439430	41.02758
4	5.00	GROCERYLAND	100,000	5.00	100,000	5.00	0	20,000	90	93.72	57.00	0.00	9.87	12.27	-78.414948	41.02317
5	4.00	FARMER'S	45,000	6.00	45,000	6.00	0	7,500	95	63.72	70.00	0.00	4.69	5.52	-78.519997	40.97700

Figure 6-11: Examining the Calculated Image in Descending Order.

If the image is not acceptable, you will need to make one of the following adjustments.

Increase the image by:

- *Increasing the curve of the facility* - this "tightens" the market share distribution.
- *Increasing the draw of the facility* - this increases the total market share of the facility in the trade area.
- *Increasing the float of the nearby sectors* - this reduces the available demand immediately surrounding the facility.
- *Decreasing the radius of the nearby sectors* - this "tightens" the market share distribution.
- *Decreasing the expenditure of the nearby sectors* - this reduces the available demand immediately surrounding the facility.
- *Decreasing the size of the facility* - this reduces the base strength of the facility.
- *Decreasing the population of the nearby sectors* - this reduces the available demand immediately surrounding the facility.

Decrease the image by:

- *Decreasing the curve of the facility* - this "flattens" the market share distribution.
- *Decreasing the draw of the facility* - this decreases the total market share of the facility in the trade area.
- *Decreasing the float of the nearby sectors* - this increases the available demand immediately surrounding the facility.
- *Increasing the radius of the nearby sectors* - this "flattens" the market share distribution.
- *Increasing the expenditure of the nearby sectors* - this increases the available demand immediately surrounding the facility.
- *Increasing the size of the facility* - this increases the base strength of the facility.
- *Increasing the population of the nearby sectors* - this increases the available demand immediately surrounding the facility.

Update the model radius for the entire model. Every model is different, but if you raise the default radius, you will generally "flatten" all the facility market shares. If you lower the default radius, you will "tighten" the market share distribution. Therefore, image allocation will vary depending on the model.

> **NOTE:** If you change the float, expenditure or population variables, you are affecting elements of the sector float. It is good practice to re-evaluate your sector float if you change one or more of these variables when adjusting facility image.

8. Updating a Facility's Curve

Altering a facility's curve changes the facility's image and market share distribution. To adjust the curve for a facility, type in desired number in **curve** column.

9. Updating a Facility's Radius

Adding an individual radius to a facility or altering an existing facility's radius (like altering the curve) will change the facility's image and market share distribution.

For example, if a facility has a radius of 0.75, the market shares from sectors within a short distance of the facility will be significantly higher than those from the other sectors in the model. If you were to change that facility's radius to 1.50, you would notice that the market shares from sectors within a short distance of the facility would have declined, but market shares from sectors further from the facility would have increased. There would now be a smaller difference between the market shares from sectors close to the facility and those sectors farther away.

You can change the radius for an individual facility by typing in the desired number in the **radius** column. To return an individual facility's radius to the model default value, enter 0 as the update value.

10. Changing the Default Model Radius

You can change the model radius value by entering the desired number in the **Header Info** folder.

Changing the model radius will change the radius of all facilities that do not have an individual radius assigned to them. For example, if there are ten facilities in the model and you only specify an individual radius for facilities 1 and 2, the program uses the model radius for the remaining eight (facilities 3 through 10). The individual radius for facilities 1 and 2 will not change.

Whenever you change the model radius, you change the pulling power of those facilities affected, which in turn changes their market share.

11. Evaluating Market Share

The next step is to evaluate the market share. You may click on the **Sector Distribution** folder and view results or use the **Display/Market Share** pull-down command and look at the graphic display. Either will let you answer the following questions:

- Does the market share correspond to what you observed in the field?
- How does the market share compare to the other facilities?

If the market share, images and float are acceptable, you have created a balanced model.

If the market share is not acceptable, you will have to restructure your model. Begin the review of your model with the first step discussed in this section, *Establishing the Trade Area Float.*

12. Saving The Model

Once you have balanced your model, you should save a copy of your work. To save a model, use the **File/Save Model** pull-down command.

13. Advanced Balancing Techniques

You may encounter situations that require additional refining to accurately simulate the marketplace. You may also want to add consumer research information to the model using the correlation function. Adding data to the correlation routine is described in *Chapter 7.* Advanced modeling techniques such as sector reach and curve, radius and image overrides, are discussed in *Chapter 9.*

B. Display Path Window

The graphics on this and the five following pages show various information available in the **Display/Path** pull-down window.

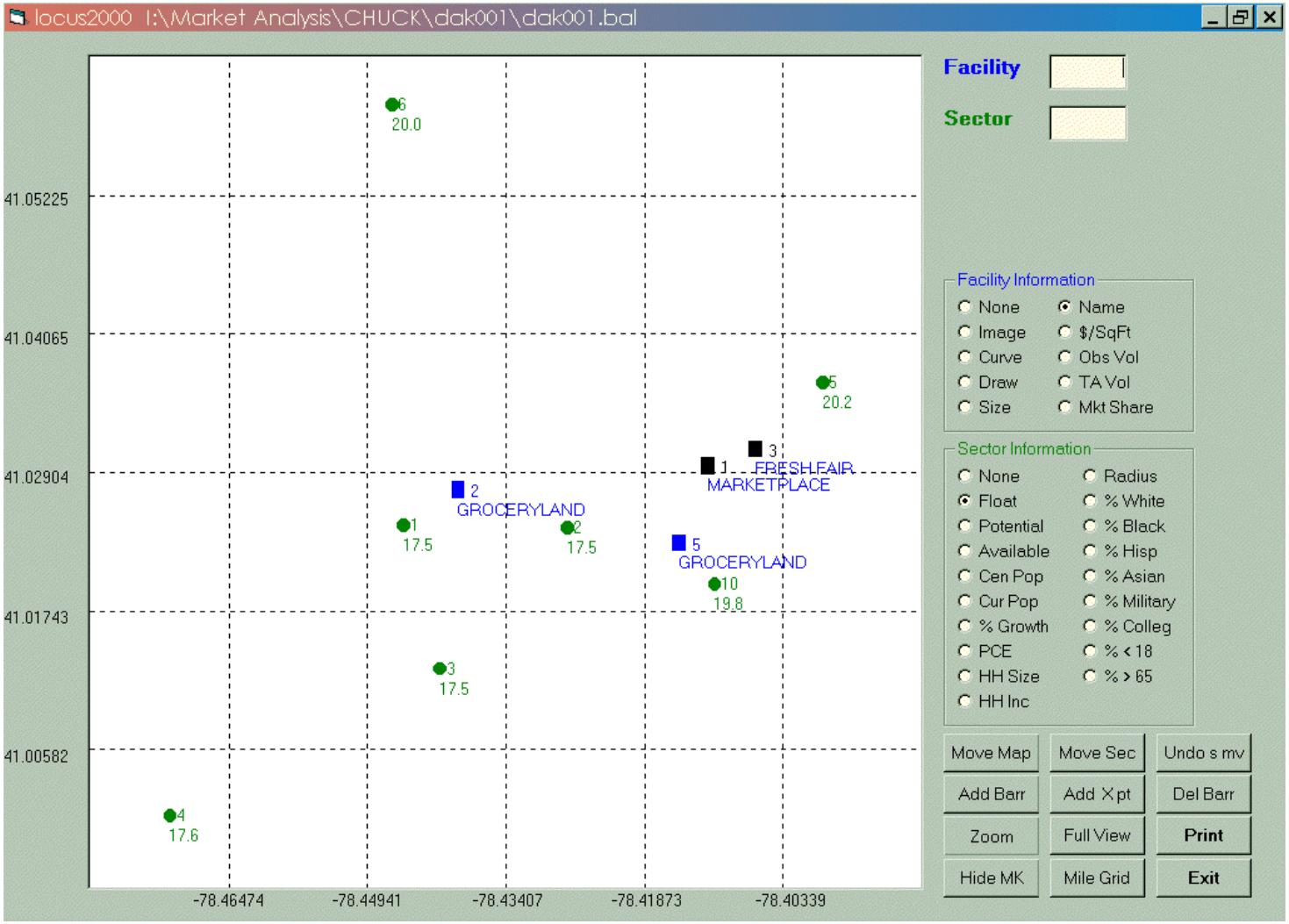


Figure 6-12: Facility Names and Sector Float.

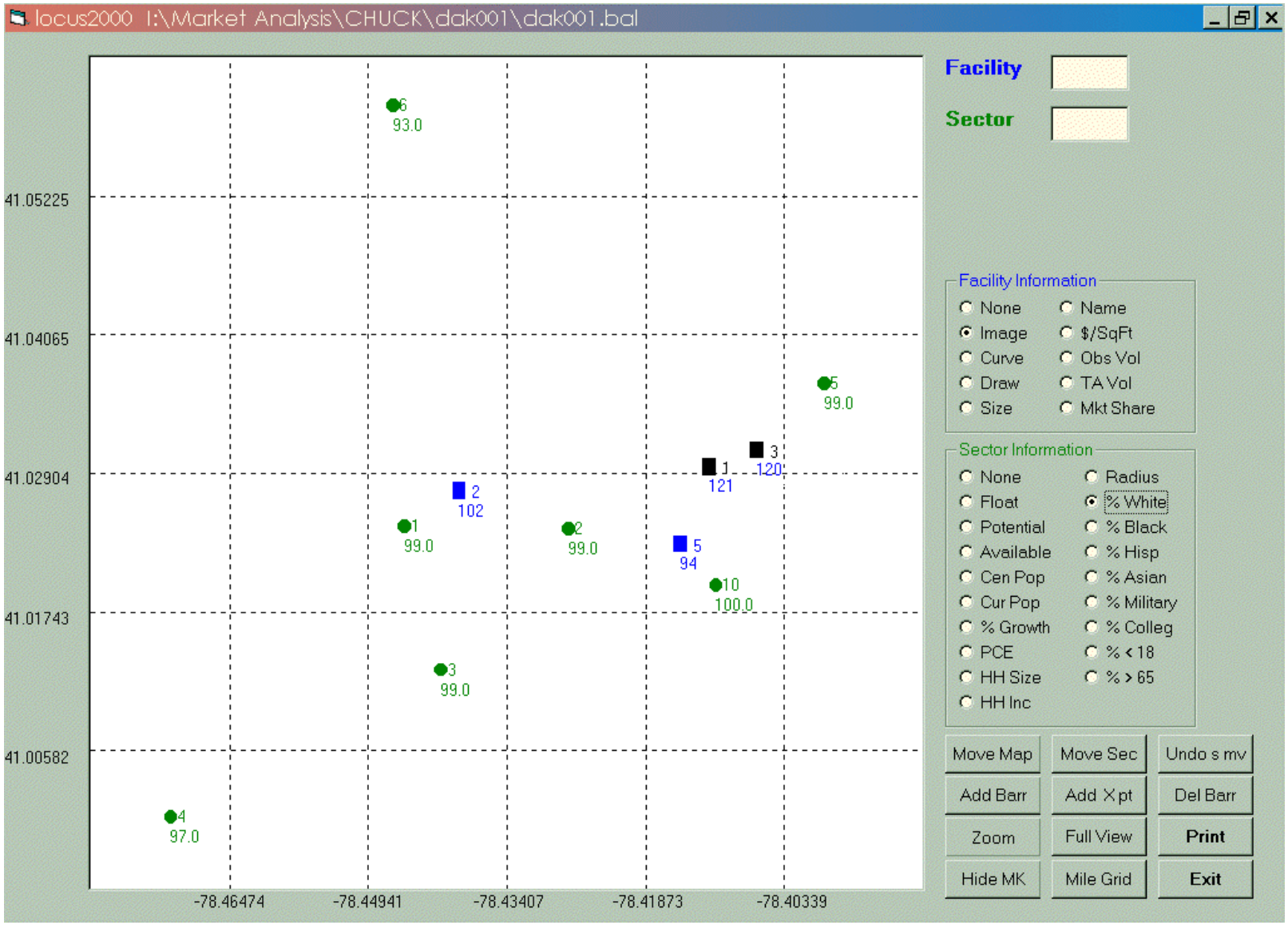


Figure 6-13: Facility Image and Sector Percent (%) White.

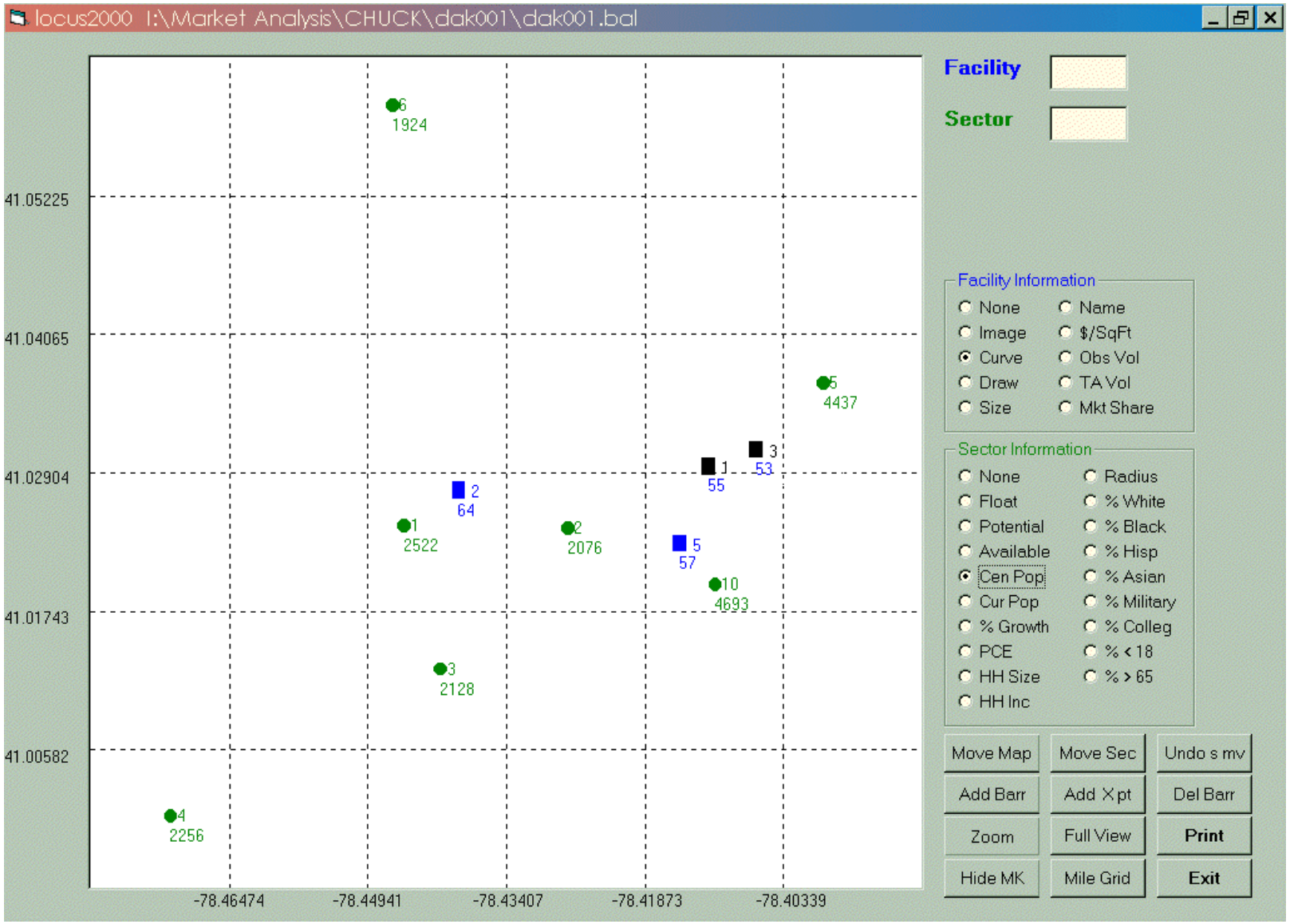


Figure 6-14: Facility Curve and Sector Census Population.

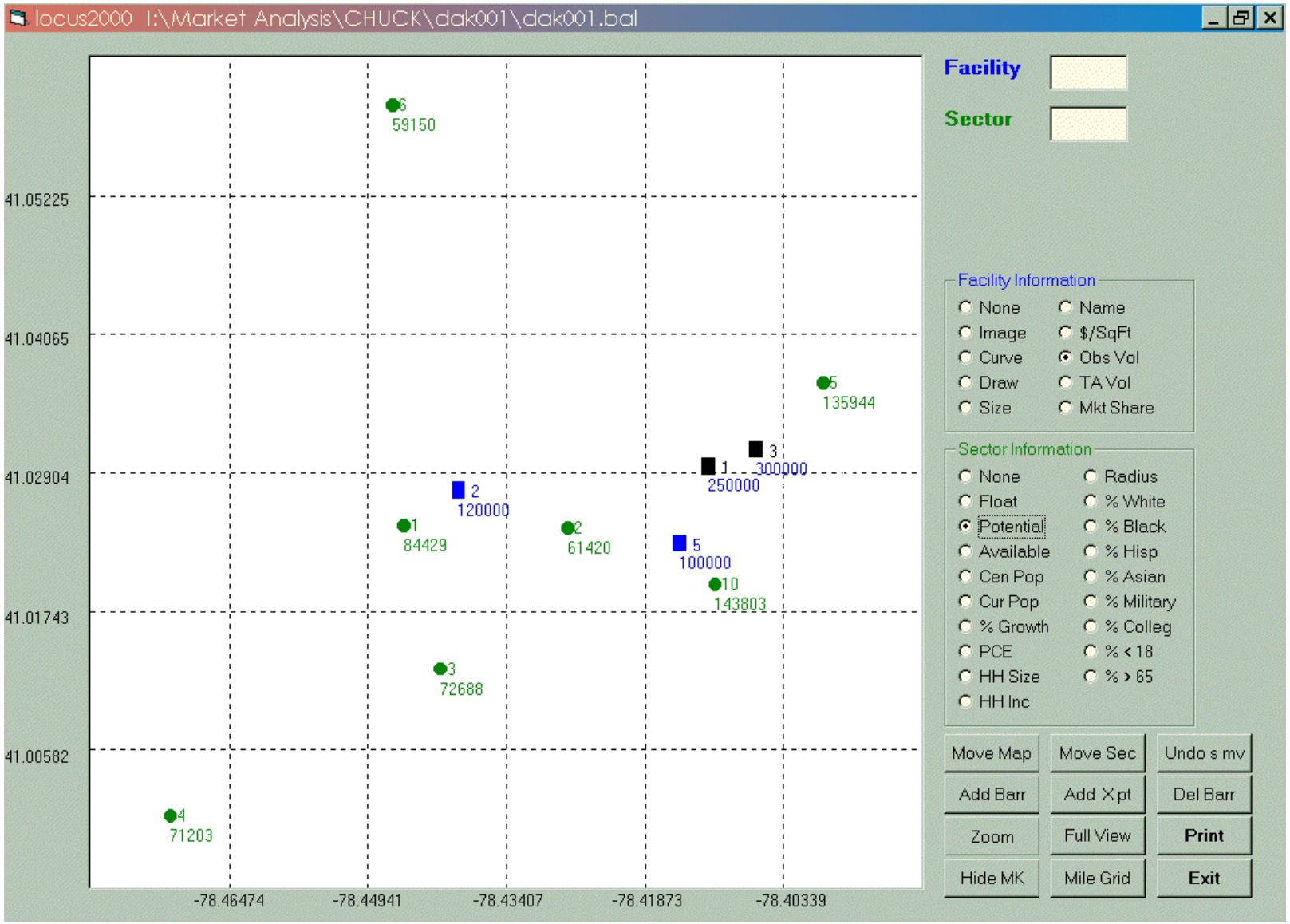


Figure 6-15: Facility Observed Volume and Sector Potential.

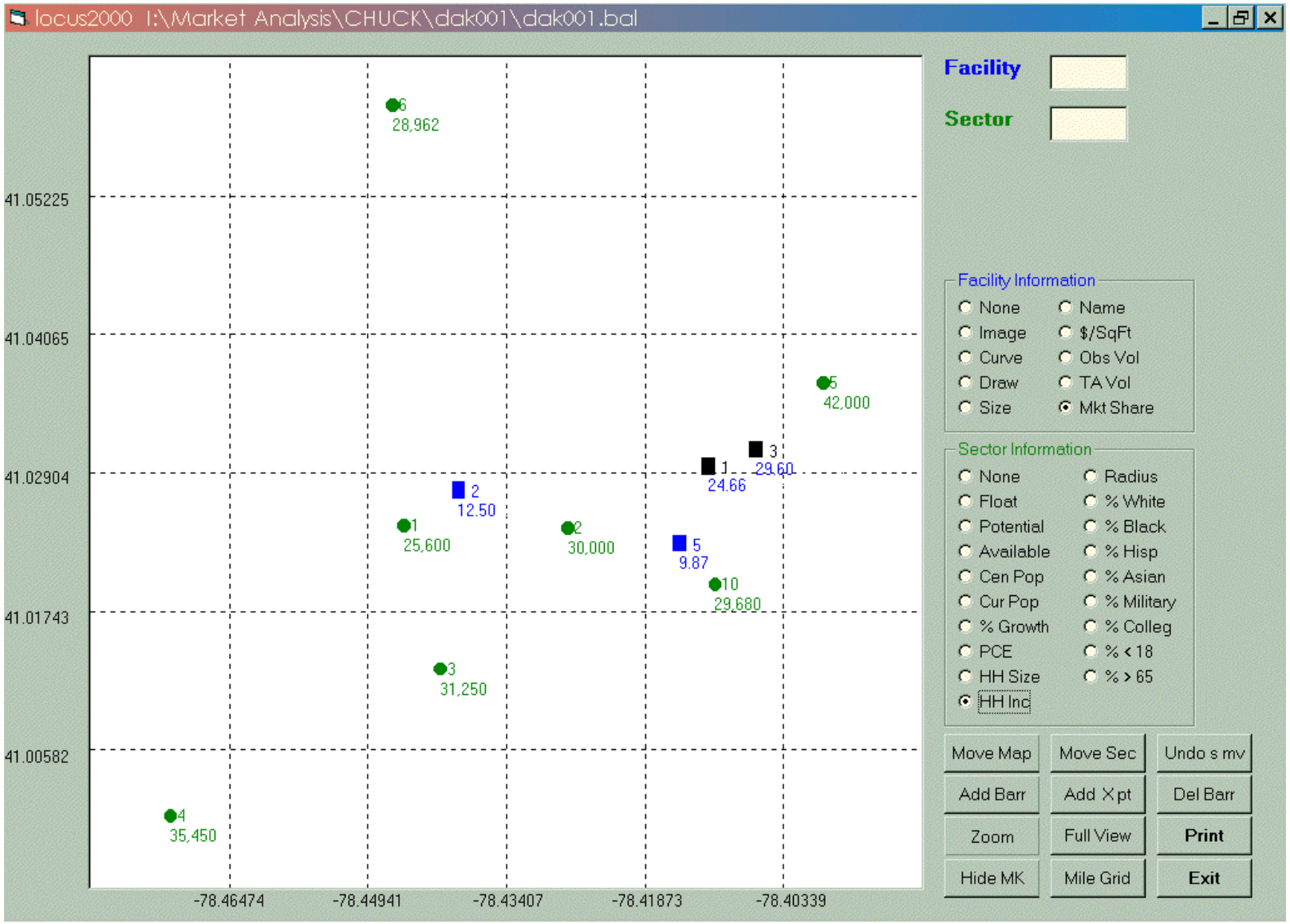


Figure 6-16: Facility Market Share and Sector Household Income.

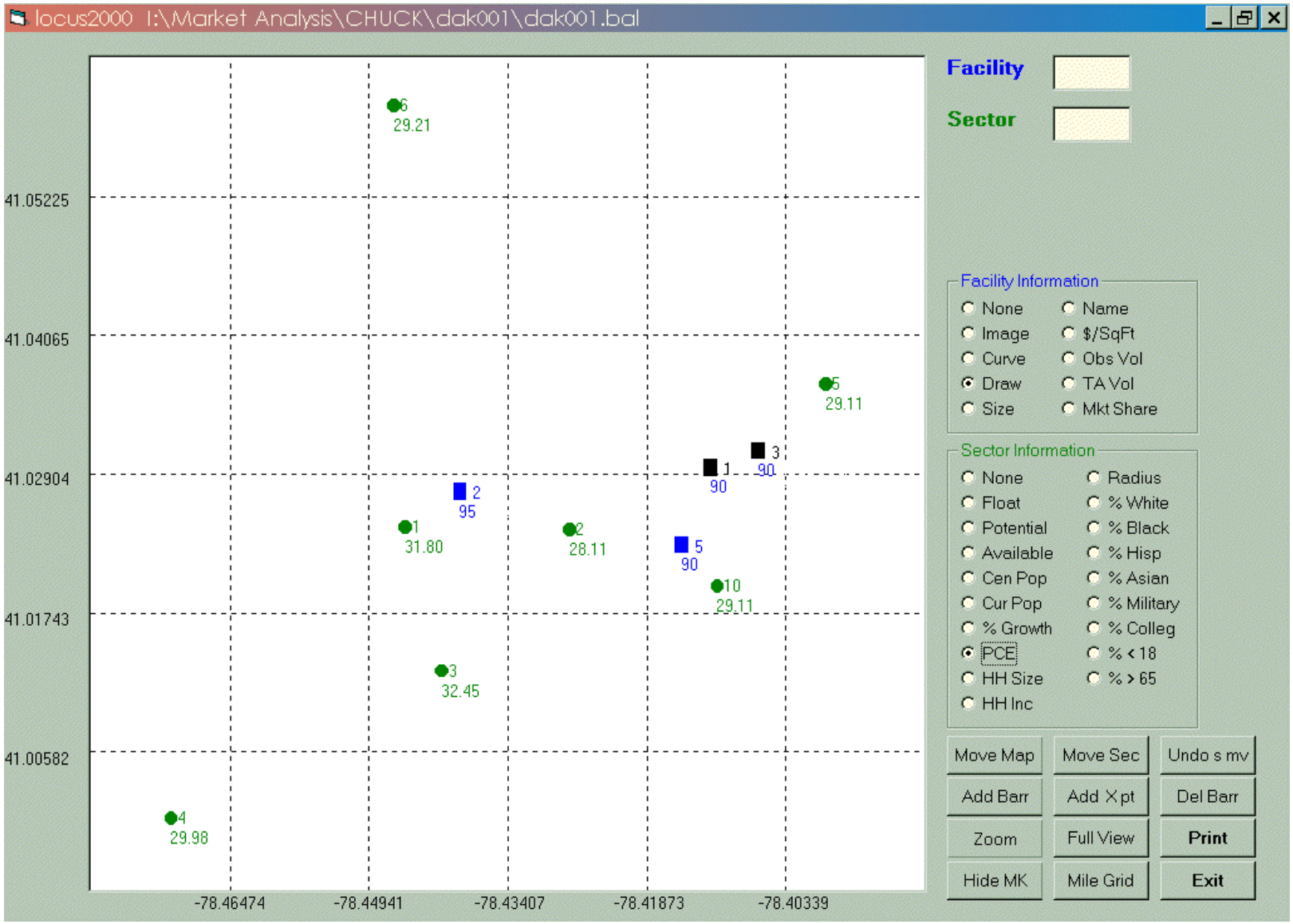


Figure 6-17: Facility Draw and P.C.E.

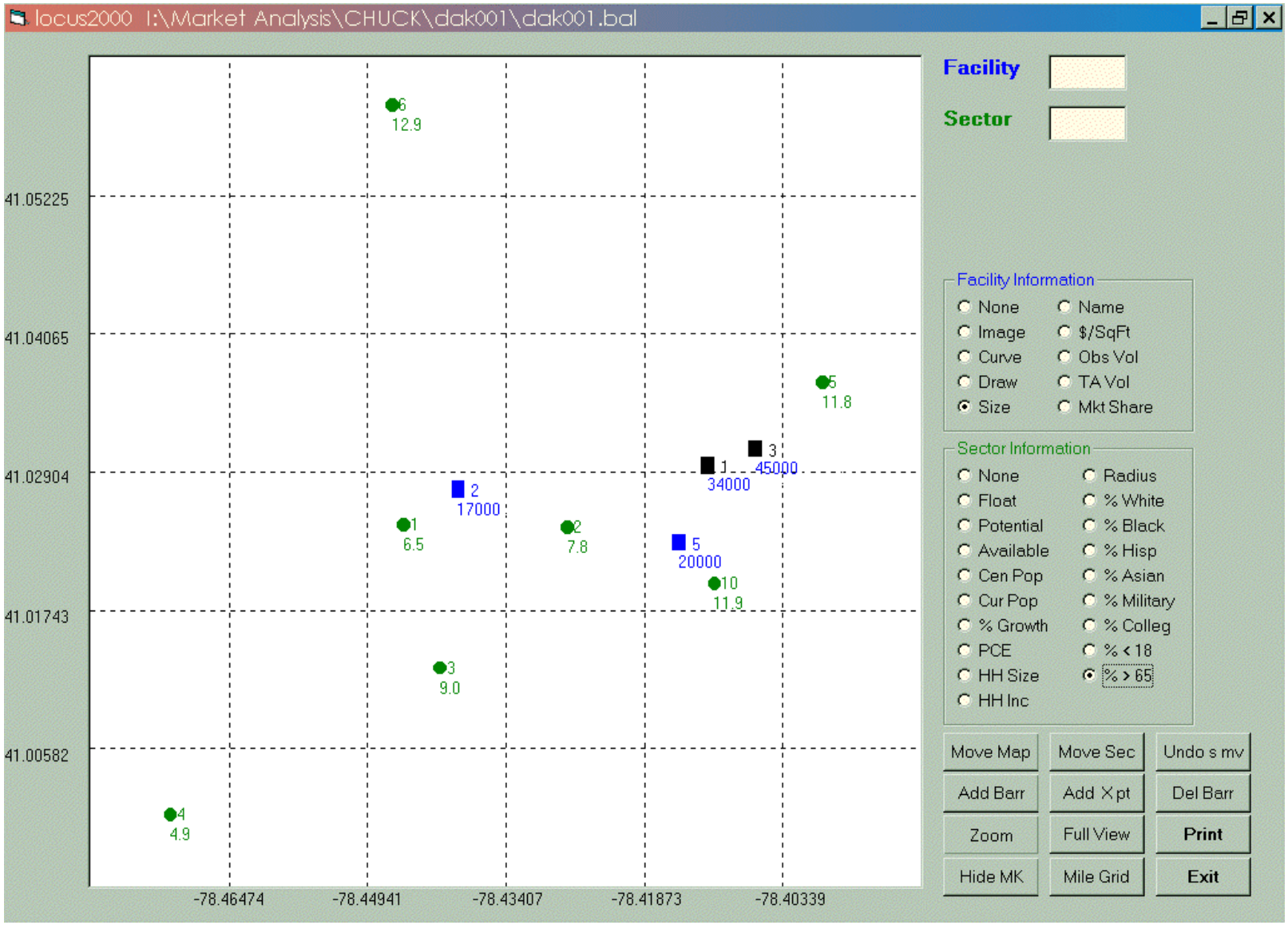


Figure 6-18: Facility Size and Percent (%) Over 65.

C. Display Market Share Window

The graphics on this and the two following pages show various information available in the **Display/ Market Share** pull-down window.

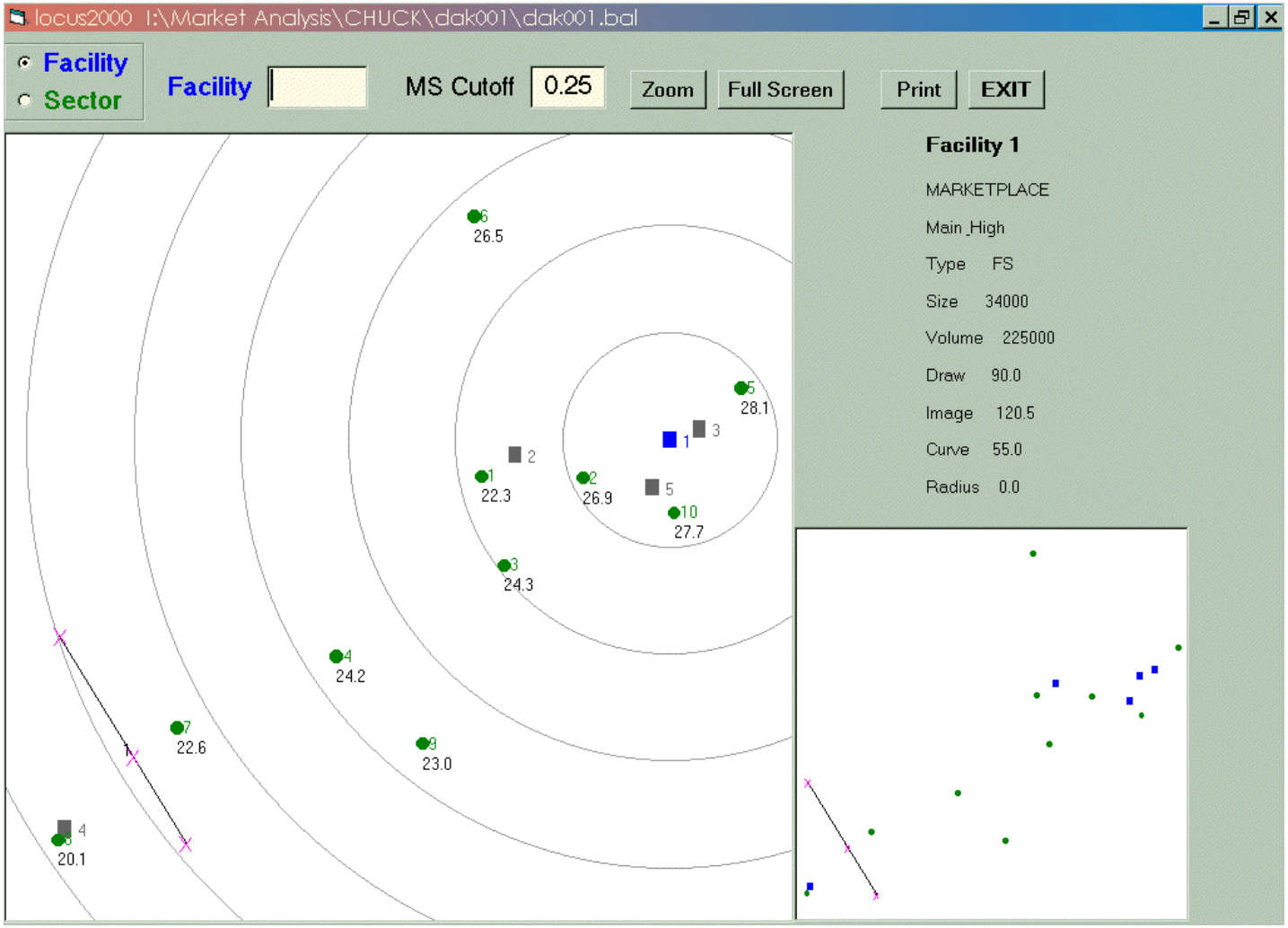


Figure 6-19: Facility Market Share by Sector Sample.

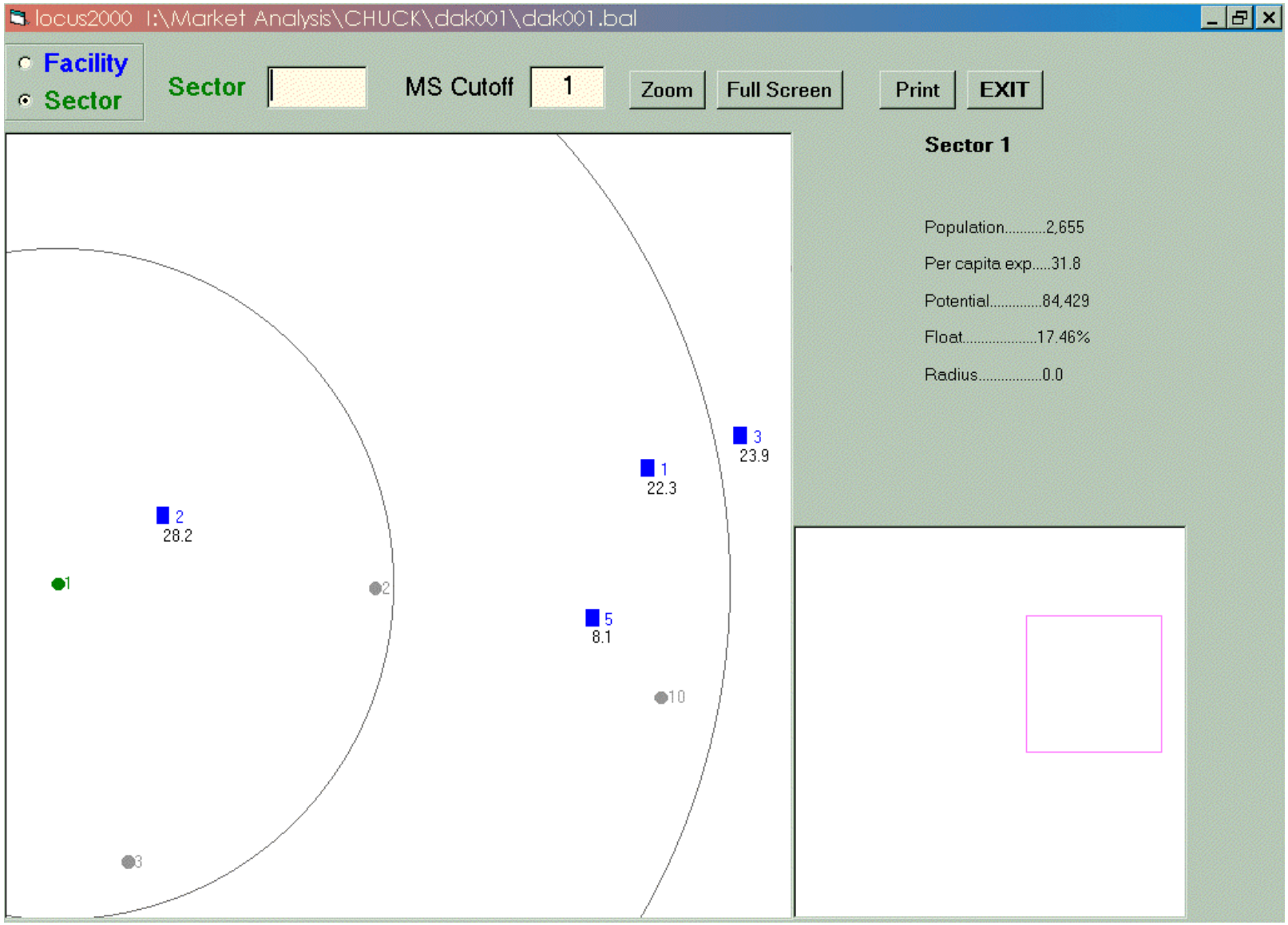


Figure 6-20: Sector Market Share by Facility Sample.

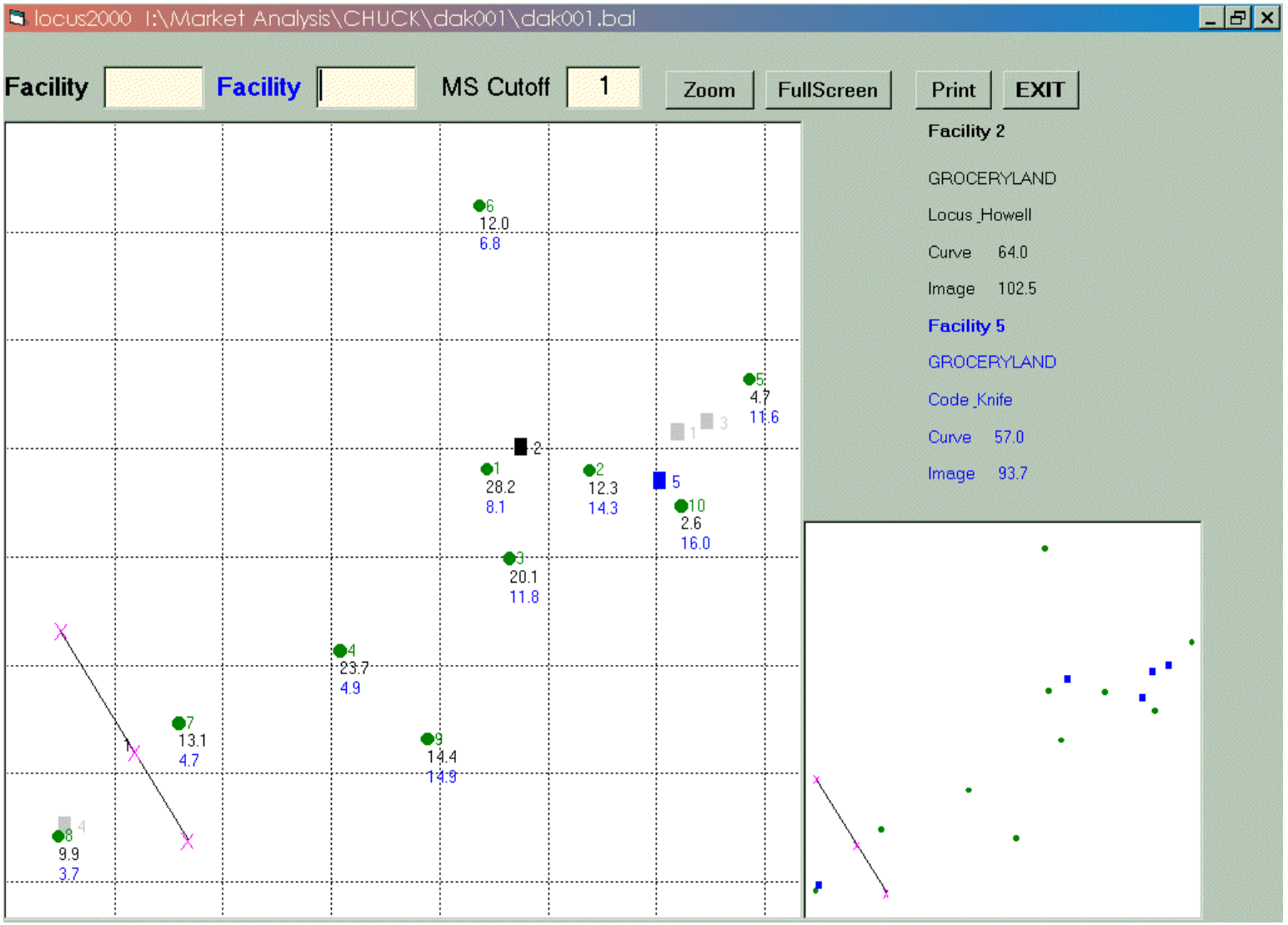


Figure 6-21: Crossover Market Shares of Two Facilities Sample.

D. Report Writer

This replaces the FI file editor and printing function from previous versions of LOCUS™. Click on **Report Writer** and either **Retrieve FI File** or **Start New FI File**.

Figure 6-22: Starting the Report Writer.

This is a sample FI file for you to observe.

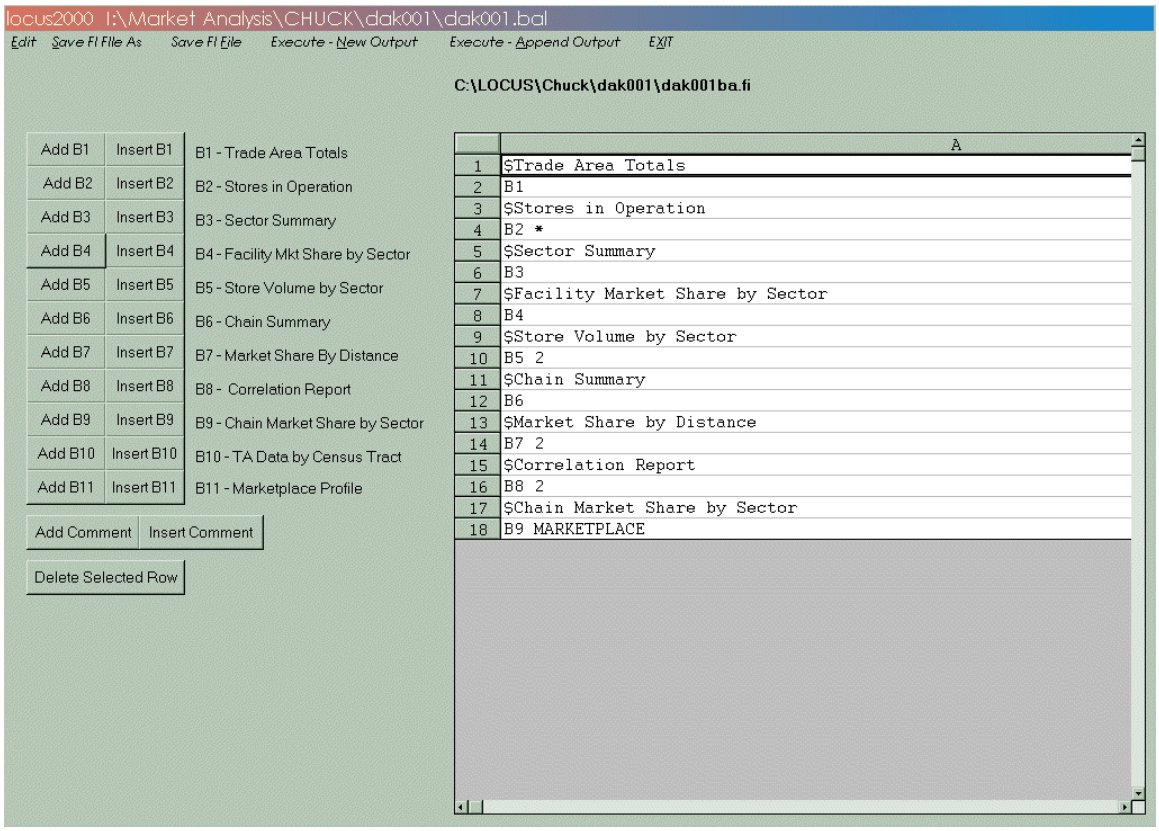


Figure 6-23: FI Form for Balance Reports.

This is a new addition to the model. You are in control of what report is requested and in what order it appears. To add comments, click on **Add Comment** and a "$" is added in the row. Type a description for the report (in our example, "Trade Area Totals") as a header, then click **Add B1** (Trade Area Totals). If you wish to place the FI command on top of the comment, choose **Insert B1** (Trade Area Totals). Continue adding desired reports in this fashion.

Once you are done with the Report Writer, select **Save FI File As**, give the Balance FI your model ID code (*i.e., DAK001BA.FI*), and the FI saves.

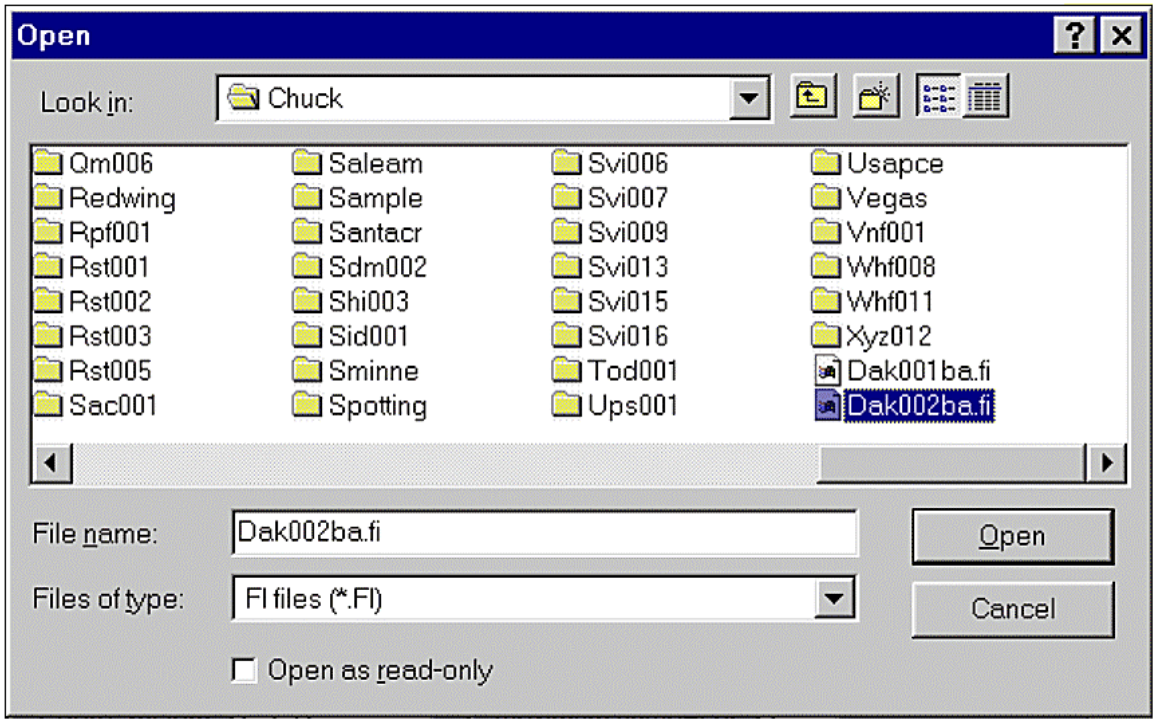


Figure 6-24: Opening an FI file.

The next step is to **Execute New Output**. This creates a text file with all your requested computer runs on it. It is recommended you end the file name with br.txt (*i.e., DAK001BR.TXT)*, so as to distinguish it as the balance run versus the projection run, which would be labeled with pr.txt (*i.e., DAK001PR.TXT*). You may use any naming convention, but it must be a *.txt file. These files import into Microsoft Word.

E. Formatting LOCUS™ 2000 Runs in Microsoft Word

Set margins

File/Page Setup/Margins

Top:	.70”
Bottom:	.30”
Left:	.75”
Right:	.25”

Set font

Edit/Select All, then **Format/Font**

Font Name:	Letter Gothic12BT
Font Size:	10 point

Center the report

Edit/Select All, then click on **Center** alignment button

Space report headings

Enter 1 line before the report heading, enter 2 lines after the heading

F. Sample Reports

The following are sample LOCUS™ 2000 **Balance** computer report runs:

TRADE AREA TOTALS

Trade Area	Mar 1999
Population	30,595
Potential	912,309
Facility Volume	741,750
Float Amount	170,559
Float Percent	18.70%

STORES IN OPERATION

Facility Map Key	Name	---Mar 1999 --- Volume	/Sq. Ft	Total Area	Draw	Image
1	MARKETPLACE	250,000	7.35	34,000	90.00	121
2	GROCERYLAND	120,000	7.06	17,000	95.00	102
3	FRESH FAIR	300,000	6.67	45,000	90.00	120
4	FARMER'S	45,000	6.00	7,500	95.00	64
5	GROCERYLAND	100,000	5.00	20,000	90.00	94
	Average	163,000	6.60	24,700		100

SECTOR SUMMARY

Sector Map Key	-----Mar 1999----- Population	PCE	Potential	-------Float------- Percent	Amount
1	2,655	31.80	84,429	17.46	14,738
2	2,185	28.11	61,420	17.49	10,743
3	2,240	32.45	72,688	17.50	12,722
4	2,375	29.98	71,203	17.57	12,511
5	4,670	29.11	135,944	20.23	27,498
6	2,025	29.21	59,150	20.02	11,842
7	2,595	29.36	76,189	17.73	13,510
8	4,440	29.98	133,111	17.79	23,680
9	2,470	30.11	74,372	19.91	14,804
10	4,940	29.11	143,803	19.83	28,509
Total	30,595		912,309		170,559
Average		29.82		18.70	

FACILITY MARKET SHARE BY SECTOR

Mar 1999 Facility Sector	1 MARKETPL --M.S.--	2 GROCERYL --M.S.--	3 FRESH FA --M.S.--	4 FARMER'S --M.S.--	5 GROCERYL --M.S.--
1	22.33	28.25	23.89	.02	8.06
2	26.87	12.31	28.99	.00	14.33
3	24.32	20.09	26.28	.03	11.77
4	24.16	23.74	27.29	2.35	4.89
5	28.12	4.66	35.39	.05	11.56
6	26.48	11.98	34.54	.14	6.84
7	22.59	13.11	28.42	13.47	4.69
8	20.10	9.91	26.10	22.42	3.67
9	22.95	14.38	26.76	1.05	14.95
10	27.70	2.64	33.83	.00	16.00
Market	24.66	12.50	29.60	4.69	9.87

STORE VOLUME REPORT BY SECTOR

Facility Map Key = 2 Mar 1999 Draw = 95

Sector Map Key	Sector Share	Expected Volume	Population	Potential	Float
1	28.25	23,850	2,655	84,429	17.46
2	12.31	7,562	2,185	61,420	17.49
3	20.09	14,604	2,240	72,688	17.50
4	23.74	16,903	2,375	71,203	17.57
5	4.66	6,332	4,670	135,944	20.23
6	11.98	7,085	2,025	59,150	20.02
7	13.11	9,986	2,595	76,189	17.73
8	9.91	13,191	4,440	133,111	17.79
9	14.38	10,695	2,470	74,372	19.91
10	2.64	3,791	4,940	143,803	19.83
Total/Avg	12.50	114,000	30,595	912,309	18.70

CHAIN SUMMARY

Chain Name	# of Facs	Chain Total Volume	Chain Total Average	Chain Total Size	Chain Total Average	Vol/ SqFt	Avg Image	Market Share
MARKETPLACE	1	250,000	250,000	34,000	34,000	7.35	121	24.66
GROCERYLAND	2	220,000	110,000	37,000	18,500	5.95	99	22.36
FRESH FAIR	1	300,000	300,000	45,000	45,000	6.67	120	29.60
FARMER'S	1	45,000	45,000	7,500	7,500	6.00	64	4.69
Totals	5	815,000		123,500				81.30
Averages			163,000		24,700	6.60		

MARKET SHARES BY DISTANCE

Facility Map Key = 2 Mar 1999 Draw=95

					Cumulative			
Distance	Pop.	M.S.	Volume	%Sales	Pop.	M.S.	Volume	%Sales
0.00- 0.50	2,655	28.25	23,850	19.88	2,655	28.25	23,850	19.88
0.50- 1.00	2,185	12.31	7,562	6.30	4,840	21.54	31,413	26.18
1.00- 1.50	2,240	20.09	14,604	12.17	7,080	21.06	46,017	38.35
1.50- 2.00	0	0.00	0	0.00	7,080	21.06	46,017	38.35
2.00- 2.50	6,965	5.36	10,876	9.06	14,045	13.50	56,893	47.41
2.50- 3.00	9,515	12.05	33,930	28.28	23,560	12.92	90,823	75.69
3.00- 3.50	0	0.00	0	0.00	23,560	12.92	90,823	75.69
3.50- 4.00	0	0.00	0	0.00	23,560	12.92	90,823	75.69
4.00- 4.50	2,595	13.11	9,986	8.32	26,155	12.94	100,809	84.01
4.50- 5.00	0	0.00	0	0.00	26,155	12.94	100,809	84.01
5.00- 5.50	0	0.00	0	0.00	26,155	12.94	100,809	84.01
5.50- 6.00	4,440	9.91	13,191	10.99	30,595	12.50	114,000	95.00

CORRELATION REPORT

Facility Map Key = 2 Mar 1999 GROCERYLAND

Sector	----Market Share---			----------Sales----------			
Map Key	Model	Corr.	Dif.	Model	Corr.	Dif.	Miles
1	28.25	25.57	2.68	23,850	21,590	2,260	.37
2	12.31	16.87	-4.56	7,562	10,363	-2,801	.67
3	20.09	22.57	-2.48	14,604	16,408	-1,804	1.04
4	23.74	27.90	-4.16	16,903	19,863	-2,960	2.51
5	4.66	2.54	2.12	6,332	3,454	2,878	2.87
6	11.98	16.06	-4.08	7,085	9,500	-2,414	2.26
7	13.11	13.60	-.50	9,986	10,363	-377	4.06
8	9.91	6.49	3.42	13,191	8,636	4,555	5.59
9	14.38	16.26	-1.88	10,695	12,090	-1,396	2.83
10	2.64	1.20	1.43	3,791	1,727	2,063	2.04
Totals			-8.00			5	
Coefficient			.95			0.91	

CHAIN MARKET SHARE BY SECTOR

Mar 1999 Sector	MARKETPL --M.S.--
1	22.33
2	26.87
3	24.32
4	24.16
5	28.12
6	26.48
7	22.59
8	20.10
9	22.95
10	27.70
Market	24.66

G. Graphics Components

1. Creating a Pie Graph

Figure 6-25: Creating a Pie Graph.

You may use all of the chains by selecting *, or use only a selected few by moving the chains you wish to analyze by following directions in the box to the right.

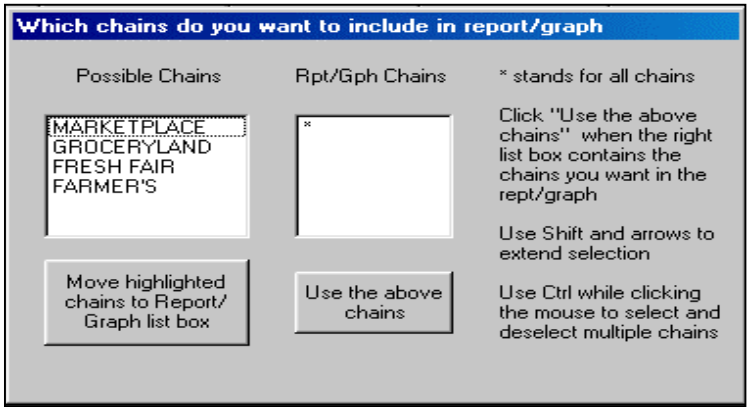


Figure 6-26: Defining Pie Graph Parameters.

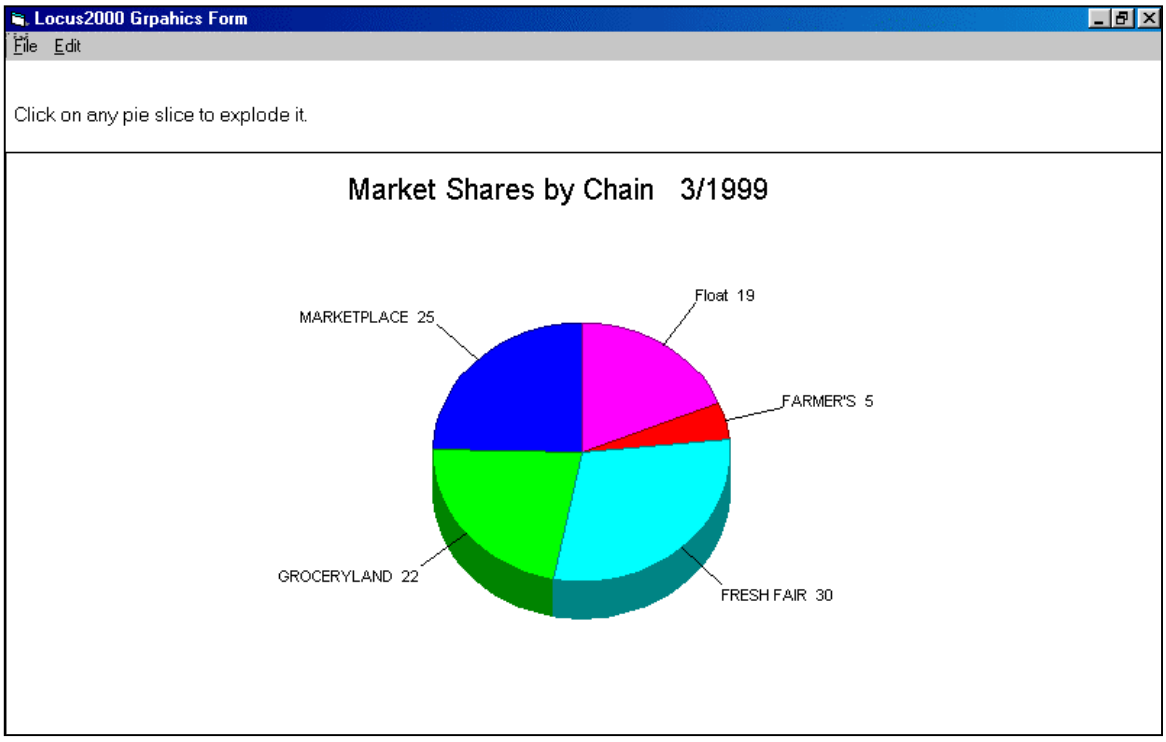


Figure 6-27: Pie Graph Results.

2. Creating a Bar Graph

Figure 6-28: Creating a Bar Graph.

You may use all of the chains by selecting *, or use only a selected few by moving the chains you wish to analyze by following directions in the box shown on the right. There is also an edit function to change the bar chart type or to rotate the chart display.

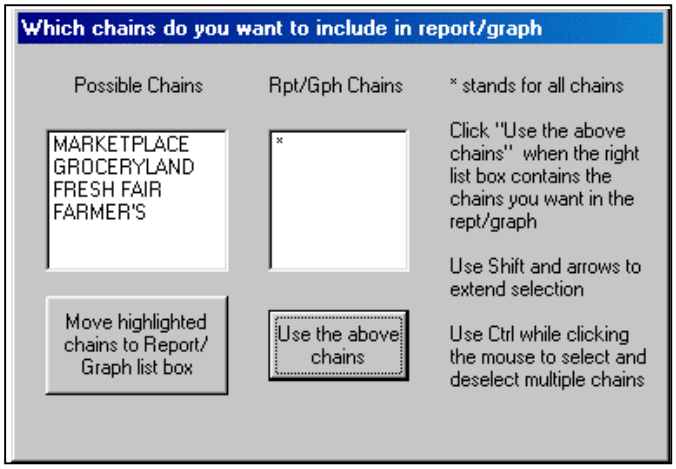


Figure 6-29: Setting Bar Graph Parameters.

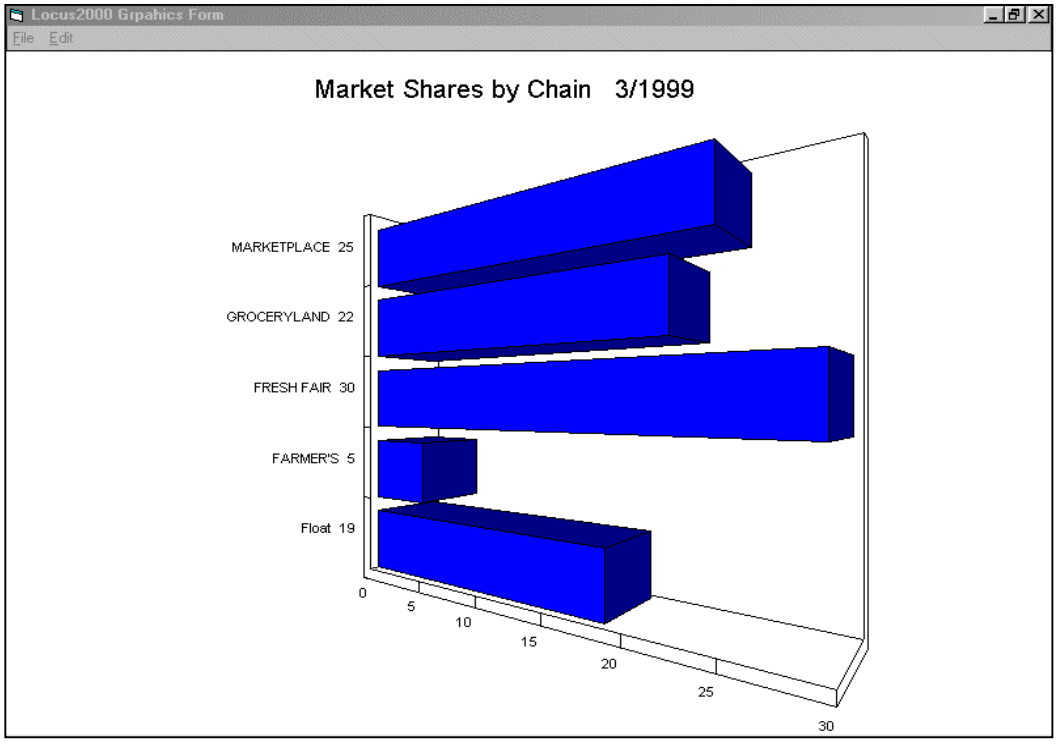


Figure 6-30: Bar Graph Results.

Chapter 7
Entering Correlation Data

Correlation is a statistical process of measuring the degree to which one set of data is related to another. When you use the correlation function within LOCUS™ 2000, you build a comparison set that compares your LOCUS™ 2000 model distribution to your consumer research distribution.

The collection of sector map keys and their corresponding correlation data is referred to as a correlation set. Each facility in your model can have a correlation set, but you can only have correlation data for 500 sectors per set. The correlation information is entered by sector for each facility.

A correlation set should normally include those sectors that are in the primary trade area of the facility. The inclusion of sectors outside of the primary trade area will dilute the overall distribution of the correlation set.

You enter correlation data during the balancing process, usually after data is verified and float is distributed. Correlation data is typically entered into the model after a preliminary balance of the model. As such, it becomes a comparison tool for the analyst to verify whether the preliminary balance is correct or needs more adjustment.

In this chapter, you will learn how to add correlation data, verify the results, and adjust the model if necessary.

A. Recognizing Consumer Research Data

Correlation is based on the following:

Dot Count - A count taken of the number of customers in a sector that shop at a facility.

Market Share - A percentage of a sector trade area potential determined for a facility by customer spotting research.

Sales - An estimated sales volume within a sector for a facility.

B. Adding Correlation

1. Add New Survey Information

To add information into the correlation routine, select the **Correlation** folder and choose **Add New Correlation**. The **Add New Survey Information** box appears.

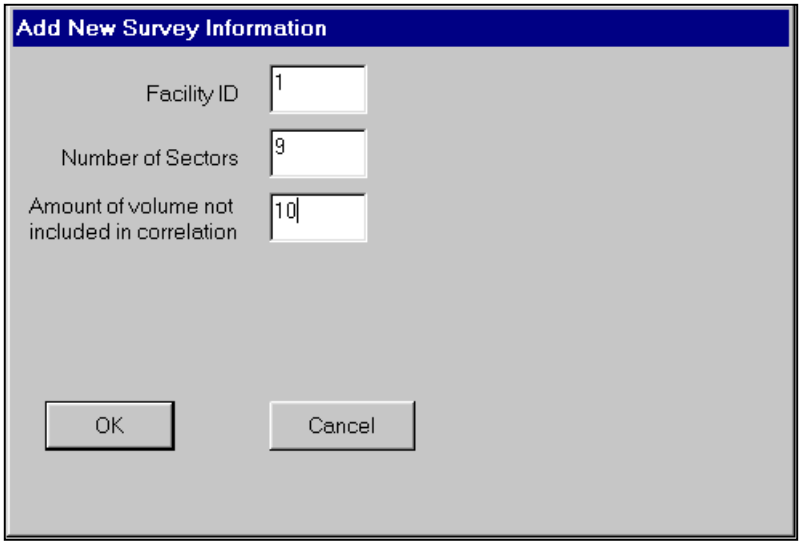


Figure 7-1: Add New Survey Information Box.

2. Enter Facility Information

Enter *Facility ID*, *Number of Sectors* and the amount of facility's business coming from outside the trade area. If the facility has a 90 draw, place the number 10 in the *Volume not included* field. The model then allows you to enter the sectors and dot counts.

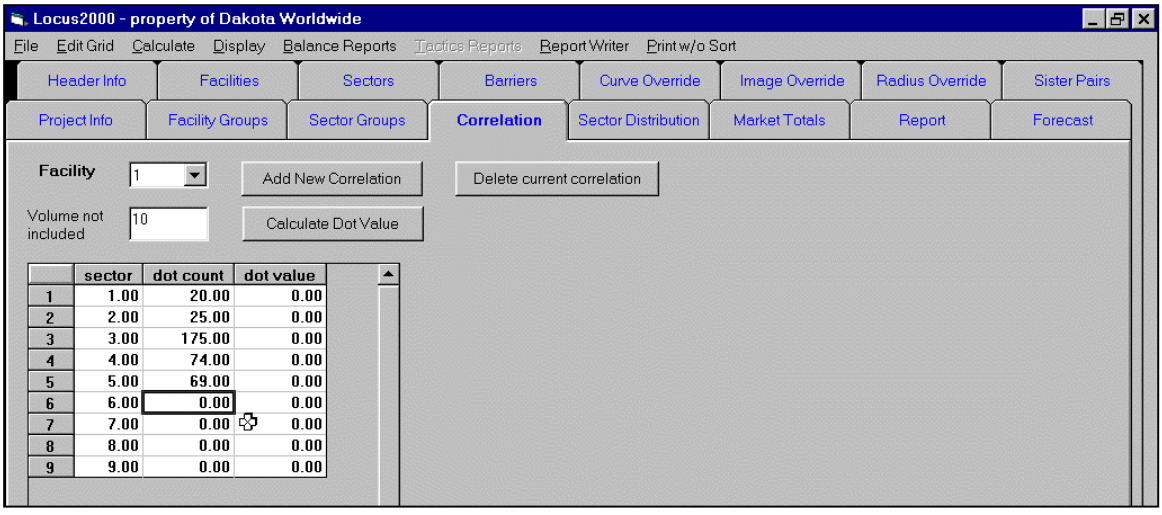


Figure 7-2: Entering Sectors and Dot Counts.

3. Calculate Dot Value

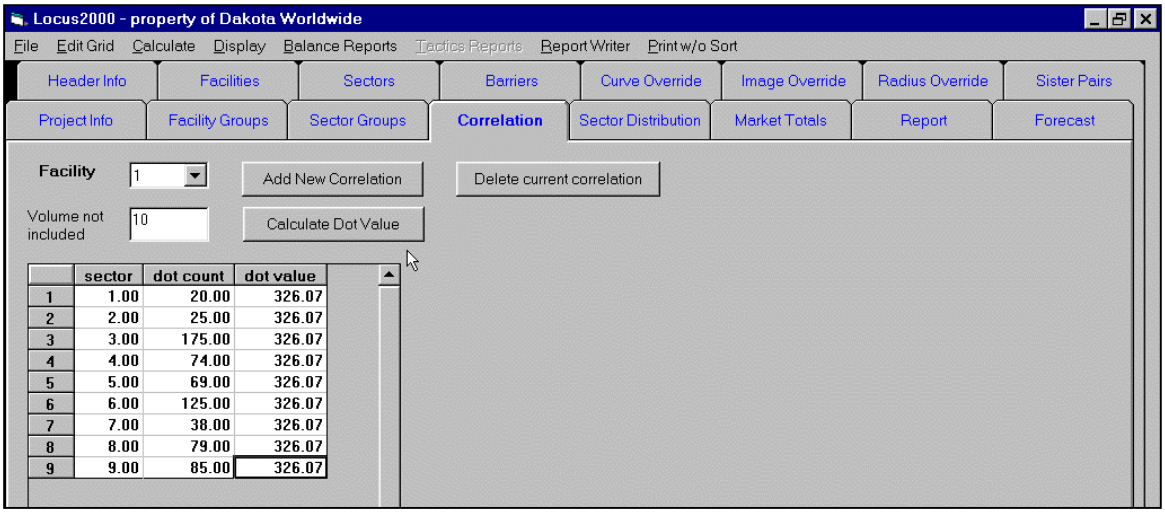


Figure 7-3: Calculating Dot Value.

To check correlation: From the pull-down menu **Balance Reports**, highlight and click on **Correlation report** (Figure 7-4) and a box appears (Figure 7-5). Enter in the facility for which you wish to see the correlation. The report is then shown (Figure 7-6). You may print it by selecting **Print**.

Figure 7-4: Starting a Correlation Report.

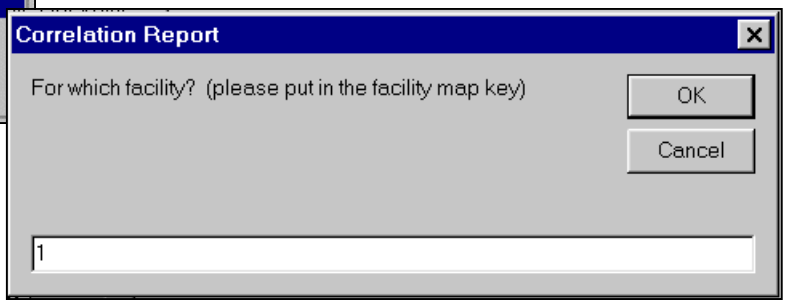


Figure 7-5: Correlation Report Box.

Print | Write to xls File | Write to tab File

CORRELATION REPORT

Facility Map Key = 2 GROCERYLAND

Sector Map Key	Market Share Model	Market Share Corr.	Market Share Dif.	Sales Model	Sales Corr.	Sales Dif.	Miles
1.00	28.25	25.57	2.68	23,850	21,590	2,260	0.37
2.00	12.31	16.87	-4.56	7,562	10,363	-2,801	0.67
3.00	20.09	22.57	-2.48	14,604	16,408	-1,804	1.04
4.00	23.74	27.90	-4.16	16,903	19,863	-2,960	2.51
5.00	4.66	2.54	2.12	6,332	3,454	2,878	2.87
6.00	11.98	16.06	-4.08	7,085	9,500	-2,414	2.26
7.00	13.11	13.60	-0.50	9,986	10,363	-377	4.06
8.00	9.91	6.49	3.42	13,191	8,636	4,555	5.59
9.00	14.38	16.26	-1.88	10,695	12,090	-1,396	2.83
10.00	2.64	1.20	1.43	3,791	1,727	2,063	2.04
Totals			-8.00			5	
Coefficient			0.95			0.91	

Figure 7-6: Sample Correlation Report.

C. Adding a Sector to a Correlation Set

If you have established a correlation set between sectors and a facility, and want to add another sector to the set, go to the **Correlation** folder, click on the last sector row and then right click for the pull-down menu. Select **insert row** to add a row. Type in sector number and dot count, and then select **Calculate Dot Value**. The sector is added and a new correlation report is produced. To view the new correlation, follow the steps previously shown.

D. Updating Correlation

You are able to update your consumer research data by simply adjusting the number of dots, recalculating and then following the above procedure to view results.

Dot Count: enter the dot count for that sector (value of 0 or greater)
Dot Value: calculated by LOCUS™ 2000

E. Calculating Correlation

Use the **Calculate/Correlation** command only if you have added or updated dot values to your correlation set and you want to adjust all the dot values in the correlation set.

F. Verifying the Input Data

Once the consumer research information is entered, the LOCUS™ 2000 program compares it to the market share and dollar volumes in the model to see how well it correlates. You will need to analyze this comparison.

If the comparison reveals a significant difference between the sales distribution of LOCUS™ 2000 and that of the correlation set, you may want to do the following:

- Check your consumer research data to make sure it is accurate.
- Check your LOCUS™ 2000 model data to make sure that it is accurate.
- "Fit" the model by updating floats, draws and so forth, or by adding overrides.

G. Fitting the Model

Fitting is the process of aligning the market share with the customer spotting. You may want to use one or more of the following methods to "fit" the model:

- Update sector float
- Update facility draw or curve
- Update model radius
- Add curve overrides, image overrides or sector reach

See *Chapter 9, Advanced Modeling Techniques,* for definitions of overrides and sector reach, and explanations of how to add them to your model. After correlation is fitted, complete your balancing process.

Chapter 8
Building Tactical Simulations

Once you have a balanced model which is an accurate simulation of your current marketplace, you can use this model to predict What If scenarios. Some of these scenarios might include:

- What will happen if a new facility opens?
- What will happen if a facility closes?
- What if an existing facility remodels, expands or changes?
- What if the population or PCE changes?
- What if the road system changes?

You can answer all of these questions and many more by adding or changing information in your model and then calculating the effects within your marketplace. When you find some What If scenarios that are effective, you can use these tactics to create your market strategy.

In this chapter, you will first learn how to retrieve your file and print a report, so that you can analyze your marketplace to determine what tactics you want to use. You will then learn how to add facilities and barriers that you can use to test your tactical simulations. You will also learn how to modify the tactical changes you have made. Finally, you will learn how to save your tactics file and what questions to ask to analyze your results.

A. Analyzing the Existing Marketplace

Whenever you try to answer a What If question, you must make assumptions as to the effects of the change within the marketplace. If you ask, "What if a new facility opens?" you need to evaluate the new facility's parameters (size, draw, curve, image and so forth) in relation to what is happening in your current marketplace.

For example, if all the facilities around your site have 90 draws and your facility is a similar format and size, then you would assign a similar draw of 90.

The image of your facility should also be assigned based on the images of similar facilities in your marketplace. You must ask, "Is my facility better, the same, or a little less than the competition?" and assign the parameters accordingly (draw, image and curve).

To make accurate projections, you need to understand the relationships that exist in your current marketplace before you decide which parameters to use in your projections. To study these relationships, you may look at the individual file folders of the model or the **File/Print All Input** screen.

The steps you will need to follow are:

1. Access the LOCUS™ 2000 **Balance** program (see *Chapter 3, Basic LOCUS™ 2000 Operations,* for instructions).
2. Open your balanced model.
3. Click on the **Header Info** folder and then click the **Balance (Mode)** button.

The model changes to **Tactics** mode and prompts you for the market year and month. Click **OK**. Next, set the **Market Month** (1 = January, 12 = December). Then enter the appropriate date into the **Market Year** field, such as 2001. Now is a good time to **Save**. Using the pull-down command **File/Save Model As**, assign a tactics file name, such as DAK001.Pl (Figure 8-1 and Figure 8-2).

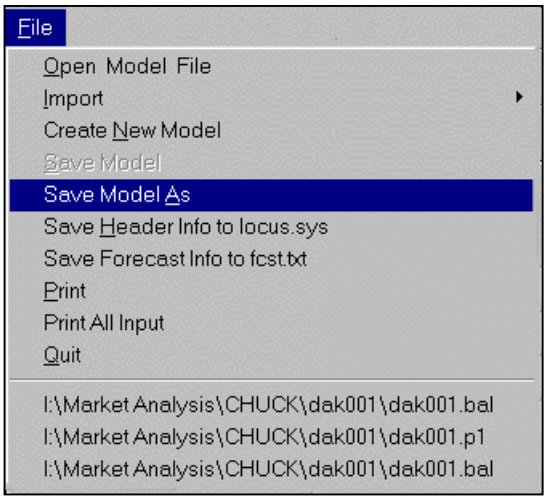


Figure 8-1: Saving the Model.

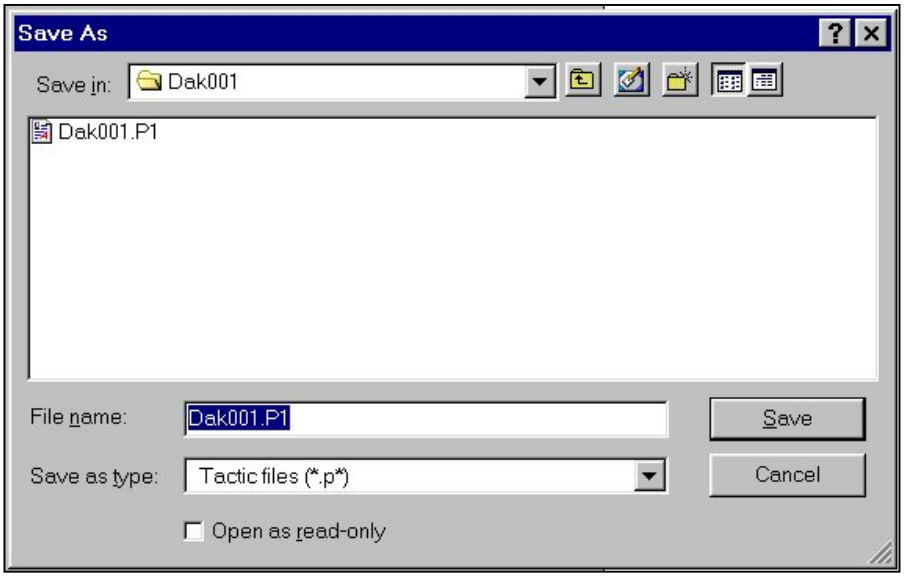
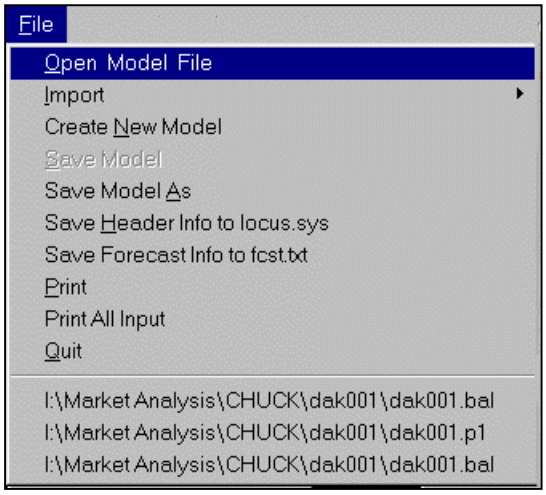


Figure 8-2: Save As Window.

The LOCUS™ 2000 menu in **Tactics** mode lets you select from among the primary commands in the program. Within the **Tactics** module, you can retrieve and save files, add data to a model, update information, list reports, calculate and simulate the market, define groups of information and exit the program. See *Chapter 3, Basic LOCUS™ 2000 Operations,* for explanations of these commands.

1. Retrieving Your File



Select the **File/Open Model File** command from the pull-down menu as shown in Figure 8-3.

The **Tactics** program will display the **Open Model** screen. Enter the name of the file you want to retrieve, including the path if necessary.

Figure 8-3: Opening a Model File.

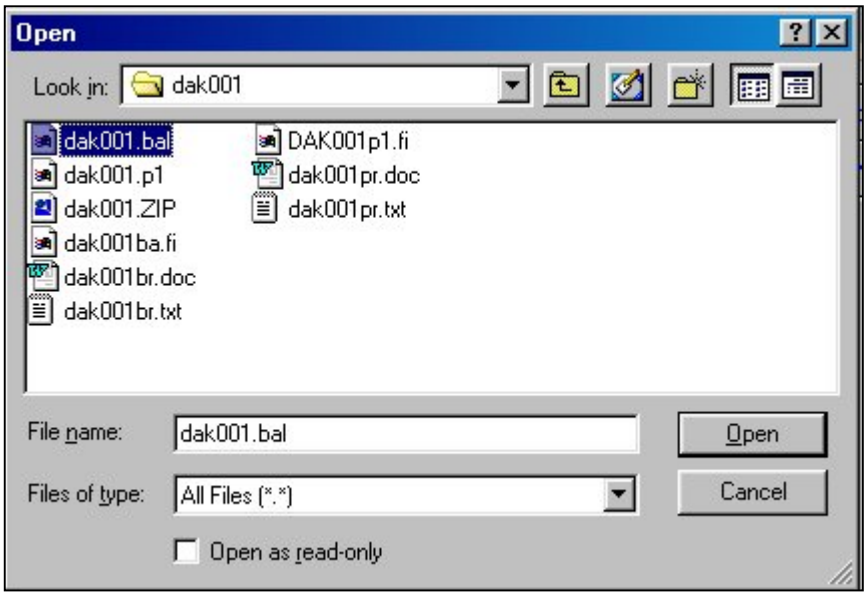


Figure 8-4: Selecting the File to Open.

Also enter any extension characters that you may have used in the file name. For example, to retrieve model *ANYTOWN.BAL* from the LOCUS™ 2000 directory in the "C" drive, enter *C:\LOCUS 2000\ANYTOWN.BAL* and press **Enter**. The program will load the file and display the status line information.

2. Review File Folders or Print a Model Summary

To determine the relationships that exist in your marketplace, either look at each **Tactics** folder separately or print a *Model Summary* as described before (pull-down command **File/Print-All Input**). You will find that in many instances you will be able to observe pertinent data without printing. Observable data is all the input information on the facilities, sectors and barriers in your marketplace. You can now check the report to see how the existing market is structured.

B. Building Your Tactics Model

After analyzing the *Model Summary*, you are ready to begin your tactical simulations.

Use your balanced model as the base for the tactics model. You can build as many tactics models as you want using your balanced model, but you cannot modify your balanced model in **Tactics** mode.

As you are aware, tactical simulation does not just involve adding a new facility to your market. In many cases, you may want to examine how an upgrade, remodel or relocation would affect your market (and your facility in particular).

In LOCUS™ 2000 **Tactics**, you may not change an existing facility from the balanced model to reflect these types of changes. To change a facility's characteristics for tactical simulation, create another facility to represent the "changed facility," and close the existing "balanced model" facility. To accomplish this, follow these steps:

1. Select the **Facilities** folder. Click on the facility you wish to change; right click and highlight **Close Cur Open Ident**. The existing facility is closed and a new, identical facility is created with a [.1] added to its map key number. (*i.e.,* if the existing facility is *Map Key 3*, it would be changed to *Map Key 3.1* for the upgrade). Now you may change the size, image, curve, etc., to reflect the change of circumstance for this unit. If you have overrides on the replaced facility, make sure to add them to this unit if deemed necessary.

   NOTE: **Calculate/Close** and **Calculate/Open** commands are explained later in this chapter.

2. When you are through testing, **Save** the file to a file name different than that of your balanced model.

The following sections discuss adding facilities, adding barriers, and opening and closing stores as methods of incorporating your market changes into a tactical model.

C. Adding Facilities

1. Adding a Facility

To add a facility to your model, select the **Facilities** folder, click on the last facility, right click and highlight **insert row**. For multiple stores, highlight **add x rows**. The number you request is added. You may now enter in all data for the new store.

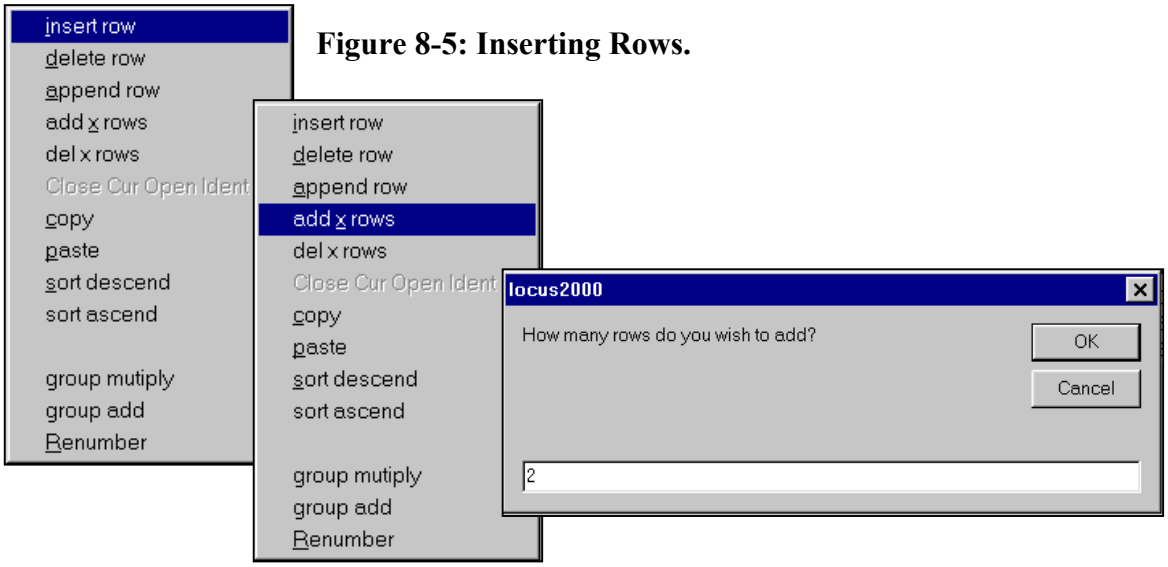
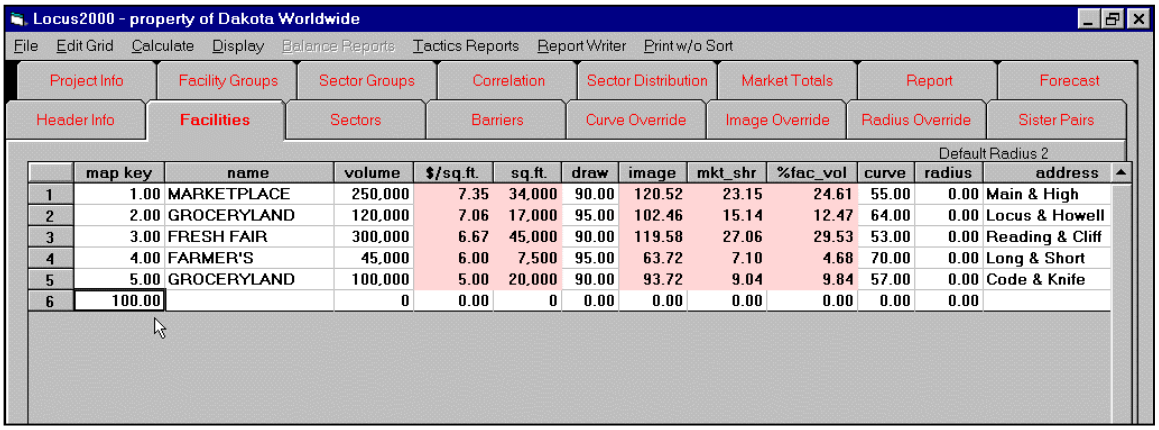


Figure 8-5: Inserting Rows.

2. Market Change

On the other hand, if the new facility is a market change, you may assign it a *Map Key* of *100*. Figure 8-6 below shows how to assign a new *Map Key* to an existing facility.



	map key	name	volume	$/sq.ft.	sq.ft.	draw	image	mkt_shr	%fac_vol	curve	radius	address
1	1.00	MARKETPLACE	250,000	7.35	34,000	90.00	120.52	23.15	24.61	55.00	0.00	Main & High
2	2.00	GROCERYLAND	120,000	7.06	17,000	95.00	102.46	15.14	12.47	64.00	0.00	Locus & Howell
3	3.00	FRESH FAIR	300,000	6.67	45,000	90.00	119.58	27.06	29.53	53.00	0.00	Reading & Cliff
4	4.00	FARMER'S	45,000	6.00	7,500	95.00	63.72	7.10	4.68	70.00	0.00	Long & Short
5	5.00	GROCERYLAND	100,000	5.00	20,000	90.00	93.72	9.04	9.84	57.00	0.00	Code & Knife
6	100.00		0	0.00	0	0.00	0.00	0.00	0.00	0.00	0.00	

Figure 8-6: Assigning a New Map Key to a Facility.

3. Entering Facility Information

Enter the information in the fields displayed, including all factual data.

Name
The name of the facility (maximum of 16 characters).

Map Key
This is the unique numerical reference used to identify the facility within this data set. Enter a value greater than 1 through 99999.99.

NOTE: If you are testing multiple sizes and/or formats, it is recommended to assign different map key numbers for each scenario. For example, suppose you are testing 30,000, 40,000 and 50,000 square foot facilities at a site. Use *Map Key 1000* for the 30,000 square foot facility, *Map Key 1000.1* for the 40,000 square foot facility, and *Map Key 1000.2* for the 50,000 square foot facility. Opening and closing the facilities (explained later in this chapter) will test the tactics.

Sales Area
The interior floor space of the facility, in square feet/square meters, that the customer can access (does not include storage and preparation areas). Enter a value from 1 through 999999.

Total Area
Total square feet/square meters of the facility. Enter a value from 1 through 999999.

NOTE 1: The program requires that you enter either *Sales Area* or *Total Area*, depending on which area you are modeling.

NOTE 2: The sales or total area should reflect the commodity/area being modeled. For example, in a hypermarket, only the grocery portion of the facility would normally be included in a supermarket model.

Image
A ranking number for the new or upgraded facility, assigned by the analyst. Enter a value greater than 0 up to 1000.

Longitude X-Coordinate
The Longitude coordinate pinpoints the physical location of a facility east or west of the prime meridian.

Latitude Y-Coordinate
The Latitude coordinate pinpoints the physical location of a facility north or south of the equator.

Draw
The percentage of the facility's observed volume that is derived from the trade area. Enter a value from 1 through 99.99.

Curve
The measurement of a facility's pulling power or ability to attract customers over distance. Enter a value from 1 through 99.99.

Radius
The radius defines the facility's ability to reach out over distance. A facility may have a different radius from the overall model radius. Enter a value from 0 through 99.99.

Follow the same procedures until you have added all the facilities on your LOCUS™ 2000 Tactics Sheet into your database.

D. Adding Barriers

Barriers are obstacles that restrict travel from one area to another, thereby affecting the way consumers shop. Barriers can be either physical or psychological. Physical barriers are such things as rivers, railroad tracks and other natural or man-made obstacles that consumers cannot cross. Psychological barriers may be ethnic or economic, but they also discourage shoppers from traveling across certain areas.

For most tactics, adding barriers is unnecessary. However, in some instances there may be changes that have occurred since the model was balanced. For example, a new road or bridge would require a physical barrier, while a severe demographic shift might require a psychological barrier. Adding a barrier, or a crosspoint, simulates the changes in your marketplace since it was first modeled.

To add a barrier to your model, follow the procedure outlined in *Chapter 5, Creating the Model*.

E. Removing Model Information

To remove information from your model, follow the procedure outlined in *Chapter 5, Section F.*

F. Opening and Closing Facilities

If you are testing various scenarios with multiple changes for the same site (for example, multiple sizes, formats, draw and so forth), you must use the **Calculate/Open Facil** and **Calculate/Close Facil** pull-down commands. If you are remodeling or changing an existing facility, use the **Calculate/Close Facil** command to close the existing facility and **Calculate/Open Facil** to open the tactical facility you wish to test.

1. Closing a Facility

To close a facility, go to **Facilities** folder, find and click on the store you wish to close. Select **Calculate** from the pull-down menu and highlight **Close Facil** (for *Close Facility*). The facility closes (Figure 8-8).

The **Calculate/Close Facil** command lets you see what will occur in the marketplace if a facility closes, but it does not delete the facility from the database. Any facility you have closed using the **Close Facil** command can be re-opened using the **Calculate/Open Facil** command.

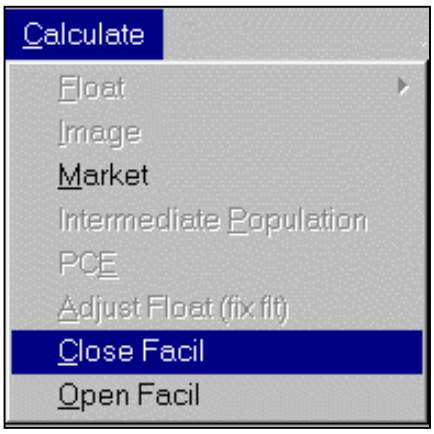
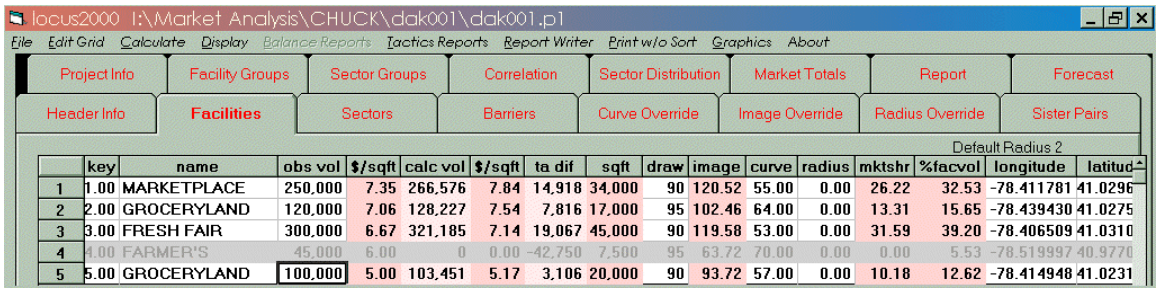


Figure 8-7: Closing a Facility.



	key	name	obs vol	$/sqft	calc vol	$/sqft	ta dif	sqft	draw	image	curve	radius	mktshr	%facvol	longitude	latitud
1	1.00	MARKETPLACE	250,000	7.35	266,576	7.84	14,918	34,000	90	120.52	55.00	0.00	26.22	32.53	-78.411781	41.0296
2	2.00	GROCERYLAND	120,000	7.06	128,227	7.54	7,816	17,000	95	102.46	64.00	0.00	13.31	15.65	-78.439430	41.0275
3	3.00	FRESH FAIR	300,000	6.67	321,185	7.14	19,067	45,000	90	119.58	53.00	0.00	31.59	39.20	-78.406509	41.0310
4	4.00	FARMER'S	45,000	6.00	0	0.00	-42,750	7,500	95	63.72	70.00	0.00	0.00	5.53	-78.519997	40.9770
5	5.00	GROCERYLAND	100,000	5.00	103,451	5.17	3,106	20,000	90	93.72	57.00	0.00	10.18	12.62	-78.414948	41.0231

Figure 8-8: The Facility Closes.

After you have closed the facility, the program will recalculate the model and display the effects of those changes on the marketplace. For example, click on the *Tactics Reports* from the pull-down menu and request a report such as *Projected Marketplace*.

2. Opening a Facility

To open a facility, find the store in the **Facilities** folder you wish to open and highlight it by clicking on it. Then select **Open Facil** (for *Opening Facility*) from the **Calculate** pull-down menu.

The facility opens (Figure 8-10). The program will recalculate the model and let you see the effects of your changes on the marketplace when you select the **Tactics Reports** pull-down menu and request a report such as *Projected Marketplace*.

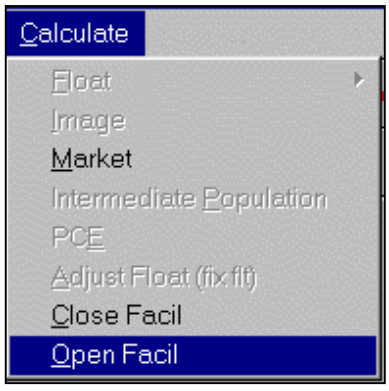
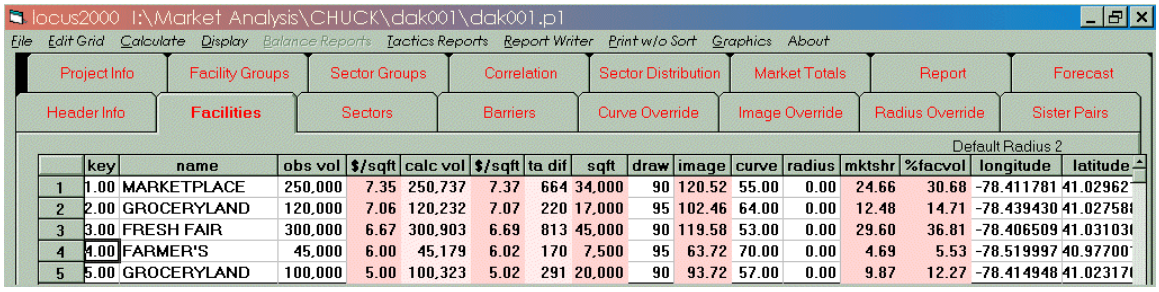


Figure 8-9: Opening a Facility.



	key	name	obs vol	$/sqft	calc vol	$/sqft	ta dif	sqft	draw	image	curve	radius	mktshr	%facvol	longitude	latitude
1	1.00	MARKETPLACE	250,000	7.35	250,737	7.37	664	34,000	90	120.52	55.00	0.00	24.66	30.68	-78.411781	41.02962
2	2.00	GROCERYLAND	120,000	7.06	120,232	7.07	220	17,000	95	102.46	64.00	0.00	12.48	14.71	-78.439430	41.02758
3	3.00	FRESH FAIR	300,000	6.67	300,903	6.69	813	45,000	90	119.58	53.00	0.00	29.60	36.81	-78.406509	41.03103
4	4.00	FARMER'S	45,000	6.00	45,179	6.02	170	7,500	95	63.72	70.00	0.00	4.69	5.53	-78.519997	40.97700
5	5.00	GROCERYLAND	100,000	5.00	100,323	5.02	291	20,000	90	93.72	57.00	0.00	9.87	12.27	-78.414948	41.02317

Figure 8-10: The Facility Opens.

NOTE: Any command that produces an estimated volume will print the word CLOSED in place of the estimated volume for facilities that have been closed.

G. Calculating Market Share

Calculate/Market is a command used in **Tactics** to establish distance relationships and distribute potential (market share). The model automatically does this when you request a report.

To view (or print) the **Tactics** report *Projected Marketplace*, click on **Tactics Report** and highlight **Projected Marketplace**. A report of the stores in operation appears in the **Report** folder. You may print this by selecting **File/Print**.

The three main columns on the *Projected Marketplace* report are:

- *Estimated Volume*, which lists the new volume with the calculated market.
- *Current Volume*, which lists the current volume, which you can compare with the estimated volume. The heading shows the market date associated with this volume.
- *Trade Area Difference*, which shows what each facility in the trade area will gain or lose. The heading shows the field date associated with collection of the original market data.

H. Displaying Paths

The **Display Path** Window is available in **Tactics**, as explained in *Chapter 5*.

I. Modifying Tactical Changes

After you have added a new facility to your model, you might want to project some changes to the data that you entered for this facility. For example, you might want to raise or lower a facility's image, or change a sector's population.

1. Changing or Correcting Data

You may change data to conform to your fieldwork observations by using the appropriate folder and adjusting using the right-click function, as previously discussed in *Chapter 5*.

2. Updating Sector Float

Use the following steps if you have a situation in which you want to convert float. To update the float of one or more sectors, highlight the float percent column in the **Sectors** folder. Right click and use the **group add** pull-down command to reduce the float percent by a number (*i.e.,* 5 points). The float in all sectors will adjust by 5 points. This command allows you to adjust float percentages individually or en masse (by percentage adjustment).

NOTE: To restore float values to the values in the balanced model, use the same procedure and add back the 5 points.

J. Analyzing Your Results

When you have finished adding and changing information in your model, and have calculated the effects, you can use the results to decide which tactics will work best in your market case. Ask yourself these questions:

1. Were the prediction(s) accurate in relation to the changes made?
2. Do the volume gain(s) justify the investment or the efforts involved?
3. Do I have enough information to create a market strategy?

If you are satisfied with the results, you can use these tactics to create your market strategy.

K. Saving the Model

Once you are through building your tactics, you need to save a copy of your work. To save your file, use the **File/Save** pull-down command. The program will display the file name you previously defined.

LOCUS™ 2000 will not allow you to save the file to a *.bal extension. You must change the file extension. Delete the default file extension by pressing **Backspace** and then entering a new file extension. (We recommend that you give the file an extension of *.p1, *.p2, *.p3 and so forth, to indicate your projection tactical versions.)

!!WARNING!! While LOCUS™ 2000 attempts to protect your balanced model, it is possible to copy or rename a balanced model file without using a *.bal extension. We strongly recommend that you do not do this, because you could inadvertently write over a balanced file with tactical changes.

L. Advanced Tactics

You may encounter situations that require additional refining in order to run tactical simulations. You may need to add overrides to your model or update overrides you have added. Advanced tactics are discussed in *Chapter 9, Advanced Modeling Techniques.*

M. Report Writer for Tactics

This command replaces the FI file editor and printing function from previous versions. Click on **Report Writer** and select **Start New FI File** or **Retrieve FI File**.

Figure 8-11: Report Writer Menu.

This is a new addition to LOCUS™. You are in control of what report is requested and in what order it appears. Below is a sample FI for you to observe:

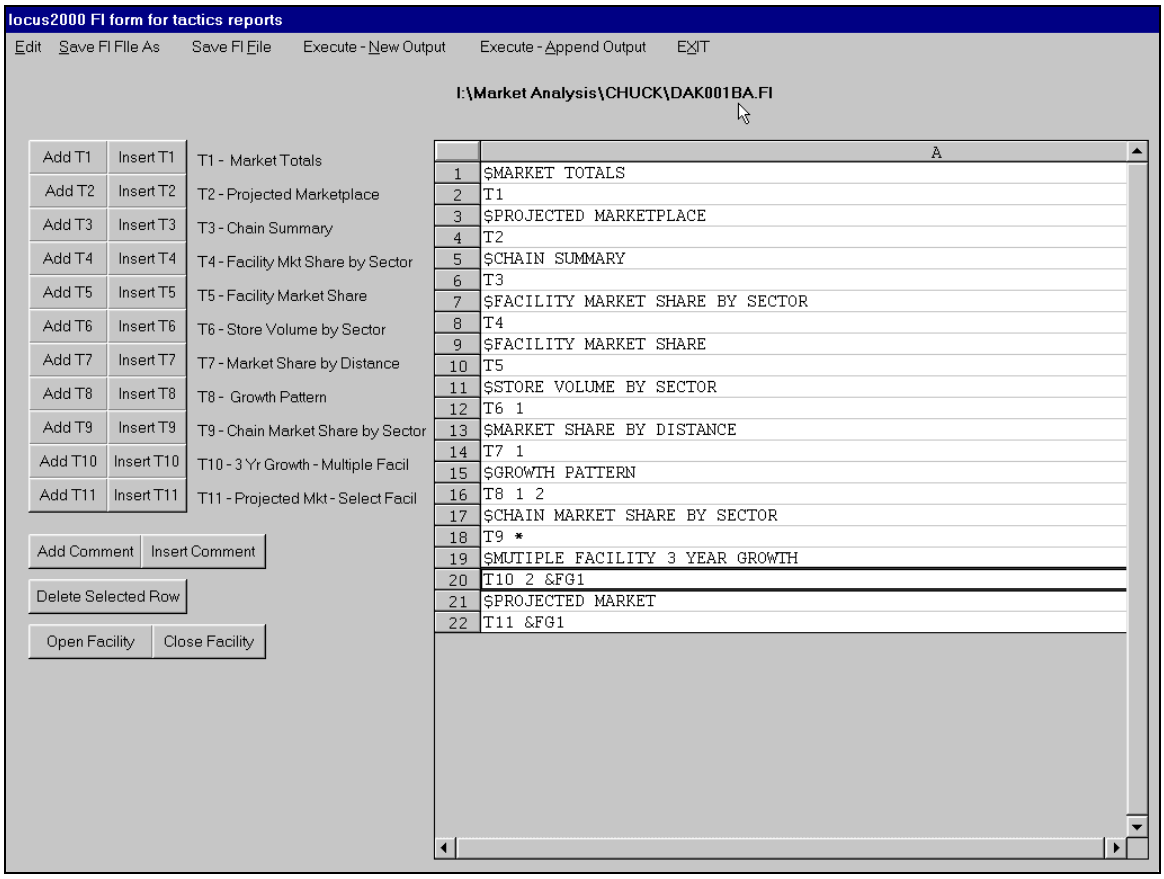


Figure 8-12: FI Form for Tactics Reports.

1. Adding Comments

To add comments, click on **Add Comment**; a "$" is added in the row. Type a description for the report (in our example, "MARKET TOTALS") as a header, then click **Add T1** (Market Totals). If you wish to place the FI command on top of the comment, choose **Insert T1** (Market Totals).

Once you are done with the Report Writer, select **Save FI As** and give the projection FI your model ID code (*i.e.*, *DAK001P1.FI*) and the FI is saved.

2. Execute New Output

The next step is to **Execute New Output**. This creates a text file with all your requested computer runs on it. Name the file as *DAK001PR.TXT*, so as to distinguish it as the projection run versus the balanced run, which would be labeled as *DAK001BR.TXT*. You may use any naming convention, except that it must be a *.txt file. These files import into Microsoft Word.

Formatting LOCUS™ 2000 runs in Microsoft Word

Set margins

File/Page Setup/Margins

Top:	.70"
Bottom:	.30"
Left:	.75"
Right:	.25"

Set font

Edit/Select All, then **Format/Font**

Font Name:	Letter Gothic12BT
Font Size:	10 point

Center the report

Edit/Select All, then click on **Center** alignment button

Space report headings

Enter 1 line before the report heading, enter 2 lines after the heading

N. Sample Reports

The following are sample LOCUS™ 2000 **Tactics** computer report runs:

MARKET TOTALS

Trade Area	Mar 1999	Mar 2001	% Change
Population	30,595	30,685	.29
Potential	912,309	914,971	.29
Facility Volume	741,750	743,907	.29
Float Amount	170,559	171,064	.30
Float Percent	18.70	18.70	

PROJECTED MARKETPLACE

Facility Map Key	Name	Forecast ---Mar 2001 --- Volume	/SqFt	Current ----Mar 1999 ---- Volume	/SqFt	T.A. Diff.	Fcst Total Area	Draw	Image
1.00	MARKETPLACE	196,725	5.79	250,000	7.35	-47,948	34,000	90.00	121
2.00	GROCERYLAND	--closed--	----	120,000	7.06	-114,000		95.00	102
2.10	GROCERYLAND	187,840	7.51	0	0.00	178,448	25,000	95.00	112
3.00	FRESH FAIR	231,508	5.14	300,000	6.67	-61,643	45,000	90.00	120
4.00	FARMER'S	57,010	7.60	45,000	6.00	11,409	7,500	95.00	64
5.00	GROCERYLAND	--closed--	----	100,000	5.00	-90,000		90.00	94
5.10	GROCERYLAND	139,879	5.60	0	0.00	125,891	25,000	90.00	103
Totals						2,157			
Averages		162,592	5.96	163,000	6.60		27,300		102

CHAIN SUMMARY

Chain Name	# of Facs	Chain Total Volume	Average	Size	Average	Vol/ SqFt	Avg Image	Market Share
MARKETPLACE	1	196,725	196,725	34,000	34,000	5.79	121	19.35
GROCERYLAND	2	327,719	163,859	50,000	25,000	6.55	108	33.26
FRESH FAIR	1	231,508	231,508	45,000	45,000	5.14	120	22.77
FARMER'S	1	57,010	57,010	7,500	7,500	7.60	64	5.92
Totals	5	812,961		136,500				81.30
Averages			162,592		27,300	5.96		

FACILITY MARKET SHARES BY SECTOR

Mar 1999 Facility Sector	1.00 MARKETPL --M.S.--	2.10 GROCERYL --M.S.--	3.00 FRESH FA --M.S.--	4.00 FARMER'S --M.S.--	5.10 GROCERYL --M.S.--
1	13.70	45.11	13.57	.00	10.16
2	23.49	17.72	23.44	.00	17.85
3	16.96	33.94	16.95	.01	14.64
4	14.96	38.06	15.95	1.39	12.07
5	25.19	7.21	33.13	.01	14.24
6	21.76	18.86	27.27	.08	12.01
7	16.15	18.35	19.91	16.90	10.95
8	13.62	12.37	17.50	29.86	8.86
9	17.59	27.32	19.14	.33	15.71
10	25.66	3.94	30.81	.00	19.77
Market	19.35	19.50	22.77	5.92	13.76

PROJECTED MARKET SHARE

Facility Map Key	Name	-----Mar 2001 ----- M.S.	Volume
1.00	MARKETPLACE	19.35	177,052
2.10	GROCERYLAND	19.50	178,448
3.00	FRESH FAIR	22.77	208,357
4.00	FARMER'S	5.92	54,159
5.10	GROCERYLAND	13.76	125,891
Totals		81.30	743,907

NOTE: The *Projected Market Share* report shows facility volume derived from the trade area only.

STORE VOLUME BY SECTOR

Facility Map Key = 5.1 Mar 2001 Draw=90

Sector Map Key	Sector Share	Expected Volume	Population	Potential	Float
1	10.16	8,585	2,658	84,524	17.46
2	17.85	10,980	2,188	61,505	17.49
3	14.64	10,659	2,243	72,785	17.50
4	12.07	8,602	2,378	71,292	17.57
5	14.24	19,377	4,676	136,118	20.23
6	12.01	7,115	2,028	59,238	20.02
7	10.95	8,354	2,598	76,277	17.73
8	8.86	11,852	4,463	133,801	17.79
9	15.71	11,700	2,473	74,462	19.91
10	19.77	28,666	4,980	144,968	19.83
Total/Avg	13.76	125,891	30,685	914,971	18.70

MARKET SHARE BY DISTANCE

Facility Map Key = 5.1 Mar 2001 Draw=90

Distance	Pop.	M.S.	Volume	%Sales	Cumulative Pop.	Cumulative M.S.	Cumulative Volume	Cumulative %Sales
0.00- 0.50	4,980	19.77	28,666	20.49	4,980	19.77	28,666	20.49
0.50- 1.00	2,188	17.85	10,980	7.85	7,168	19.20	39,647	28.34
1.00- 1.50	4,676	14.24	19,377	13.85	11,844	17.23	59,023	42.20
1.50- 2.00	2,243	14.64	10,659	7.62	14,087	16.78	69,683	49.82
2.00- 2.50	2,658	10.16	8,585	6.14	16,745	15.66	78,267	55.95
2.50- 3.00	0	0.00	0	0.00	16,745	15.66	78,267	55.95
3.00- 3.50	2,028	12.01	7,115	5.09	18,773	15.27	85,382	61.04
3.50- 4.00	2,473	15.71	11,700	8.36	21,246	15.32	97,082	69.40
4.00- 4.50	2,378	12.07	8,602	6.15	23,624	14.99	105,684	75.55
4.50- 5.00	0	0.00	0	0.00	23,624	14.99	105,684	75.55
5.00- 5.50	0	0.00	0	0.00	23,624	14.99	105,684	75.55
5.50- 6.00	0	0.00	0	0.00	23,624	14.99	105,684	75.55
6.00- 6.50	2,598	10.95	8,354	5.97	26,222	14.60	114,039	81.53
6.50- 7.00	0	0.00	0	0.00	26,222	14.60	114,039	81.53
7.00- 7.50	0	0.00	0	0.00	26,222	14.60	114,039	81.53
7.50- 8.00	0	0.00	0	0.00	26,222	14.60	114,039	81.53
8.00- 8.50	4,463	8.86	11,852	8.47	30,685	13.76	125,891	90.00

THREE-YEAR GROWTH PATTERN

Facility Map Key = 5.1 Mar 2001

Sales Forecast

	Sales	/SqFt
1st Year	139,879	5.60
2nd Year	143,544	5.74
3rd Year	147,185	5.89

CHAIN MARKET SHARE BY SECTOR

Mar 2001 Sector	GROCERYL --M.S.--
1	55.27
2	35.57
3	48.58
4	50.13
5	21.45
6	30.87
7	29.31
8	21.22
9	43.04
10	23.71
Market	33.26

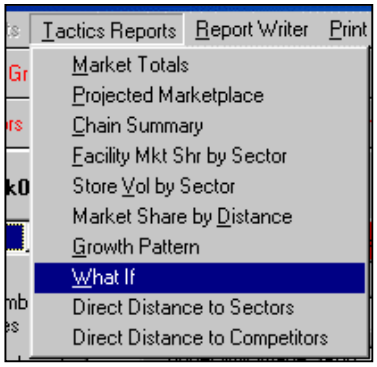
THREE-YEAR GROWTH PATTERN

Facility Map Keys	Name	Forecast ---Mar 2001--- Volume	/SqFt	Forecast ---Mar 2002--- Volume	/SqFt	Forecast ---Mar 2003--- Volume	/SqFt	Draw	Image
2.10	GROCERYLAND	187,840	7.51	191,689	7.67	195,480	7.82	95.00	112
5.10	GROCERYLAND	139,879	5.60	143,544	5.74	147,185	5.89	90.00	103
	Averages	163,859	6.55	167,617	6.70	171,333	6.85		108

PROJECTED MARKET

Facility Map Key	Name	Forecast ---Mar 2001 --- Volume	/SqFt	Current ----Mar 1999 ---- Volume	/SqFt	T.A. Diff.	Fcst Total Area	Draw	Image
2.10	GROCERYLAND	187,840	7.51	0	0.00	178,448	25,000	95.00	112
5.10	GROCERYLAND	139,879	5.60	0	0.00	125,891	25,000	90.00	103
Totals						304,339			

O. What Ifs



What Ifs can be run to determine volume changes for the projected site by the following process.

Click on the **Tactics Report** pull-down menu and highlight **What If** as shown (Figure 8-13). The **What If** parameters box will appear (Figure 8-14).

Figure 8-13: Starting the What If Tactics Report.

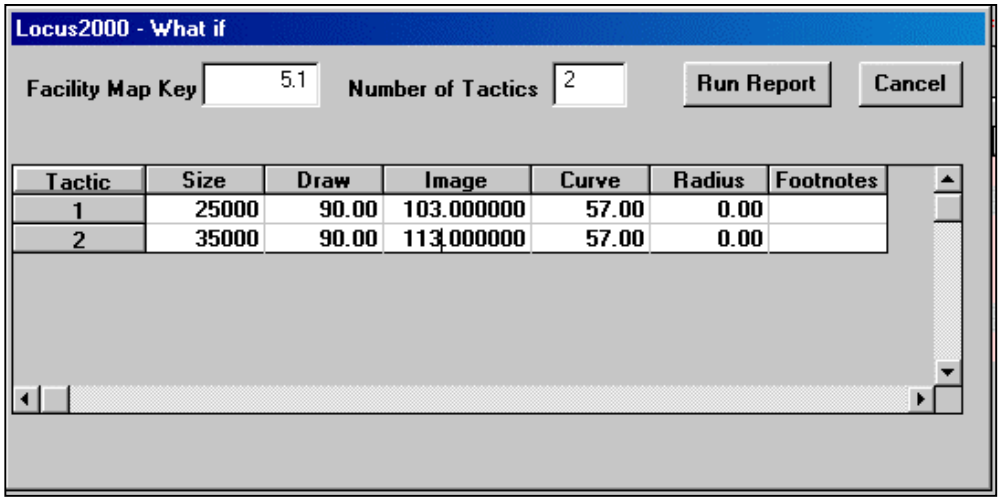
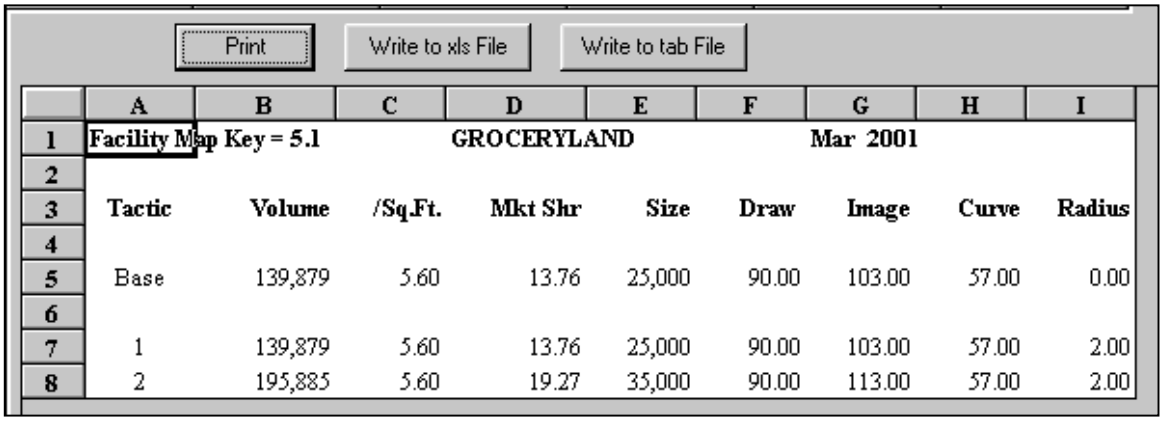


Figure 8-14: What If Parameters Box.

Fill in the site desired and number of tactics, then click on the **Tactic** column. The number of tactics you selected is shown. Simply fill in the desired size, draw, image and radius, and click on **Run Report**. The results are shown in Figure 8-15.



	A	B	C	D	E	F	G	H	I
1	Facility Map Key = 5.1			GROCERYLAND			Mar 2001		
2									
3	Tactic	Volume	/Sq.Ft.	Mkt Shr	Size	Draw	Image	Curve	Radius
4									
5	Base	139,879	5.60	13.76	25,000	90.00	103.00	57.00	0.00
6									
7	1	139,879	5.60	13.76	25,000	90.00	103.00	57.00	2.00
8	2	195,885	5.60	19.27	35,000	90.00	113.00	57.00	2.00

Figure 8-15: What If Report Results.

Chapter 9
Advanced Modeling Techniques

There are certain techniques in LOCUS™ 2000 which you may use while balancing your model or doing tactical simulations. These techniques are used when the model, using the basic parameters, does not simulate the marketplace closely enough, and you need to adjust the market shares, or "fit" the model. You may want to use these advanced techniques when you need to:

- Control an unusual facility/sector combination.
- Adjust the consumer research information you put into your model.
- Produce a sister facility effect.

This chapter explains how to use advanced modeling techniques and indicates whether they are used in LOCUS™ 2000 **Balance**, LOCUS™ 2000 **Tactics** or both modules of the system.

A. Using Overrides (Balance and Tactics)

Overrides are special functions which enable you to designate a separate curve, image or radius value for specific facility/sector combinations.

You might add overrides during the balancing or tactics process if you need to control an unusual situation. For example, a facility might have a unique location that does not warrant adding a barrier, where you could add curve or radius overrides to adjust the facility's market share and image. LOCUS™ 2000 allows you to add overrides.

1. Adding Overrides

On the LOCUS™ 2000 **Balance** or **Tactics** folder menu, select the **Curve Override, Image Override** or **Radius Override** folder**.**

2. Curve Overrides

A curve override allows you to designate a different curve value for a specific facility/sector combination than the curve value assigned to the facility in the basic model. This will adjust the market share between the specified facility and sector. It will not change the curve value used between the facility and other sectors in the model.

To add a curve override to your model, select the **Curve Override** folder, as shown in Figure 9-1.

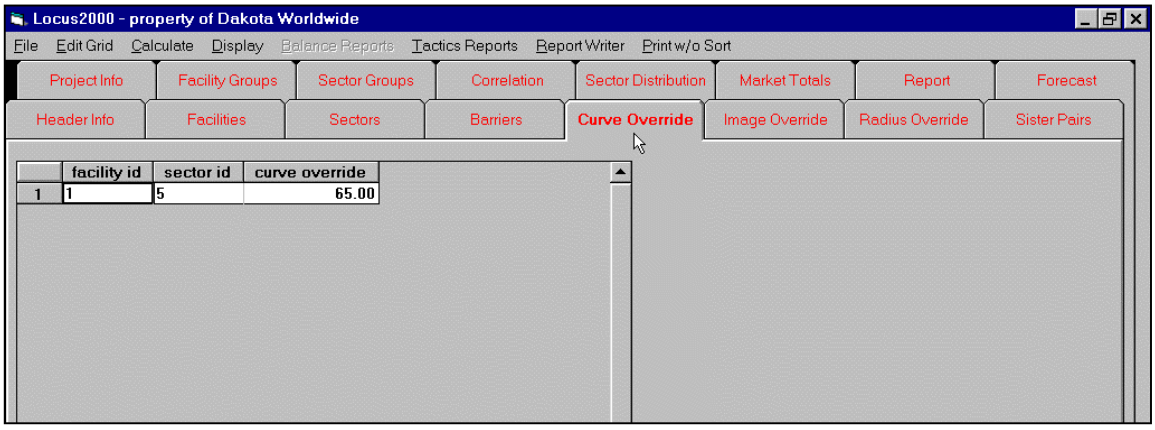


Figure 9-1: Curve Override Folder.

Right click for the drop-down menu, select **insert row** or **add rows**, and the appropriate number of rows will appear. Type the *Map Key(s)* of the facilities and sectors you wish to add overrides to and the desired *curve override* value (1 to 99.99).

3. Image Overrides

An image override enables you to designate a specific image to be used for a facility/sector combination. During the balancing process, this image override will not change as a result of the **Caculate/Image** command.

To add an image override to your model, select the **Image Override** folder. Right click for the drop down menu, select **insert row** or **add rows**, and the appropriate number of rows will appear. Type the *Map Key(s)* of the facilities and sectors you wish to add overrides to and the desired *image override* value (1 to 1000).

4. Radius Overrides

The radius controls the length of the curve, which influences the facility's pulling power. If you change the facility's radius, it will affect the market shares captured from the sector. Limits for the radius are 0.1 to 99.99.

To add a radius override, select the **Radius Override** folder, as show in Figure 9-2. Right click and the drop down menu appears. Select **insert row** or **add rows** and the appropriate number of rows will appear. Type the *Map Key(s)* of the facilities and sectors you wish to add overrides to and the desired *radius override* value (0.1 to 99.99).

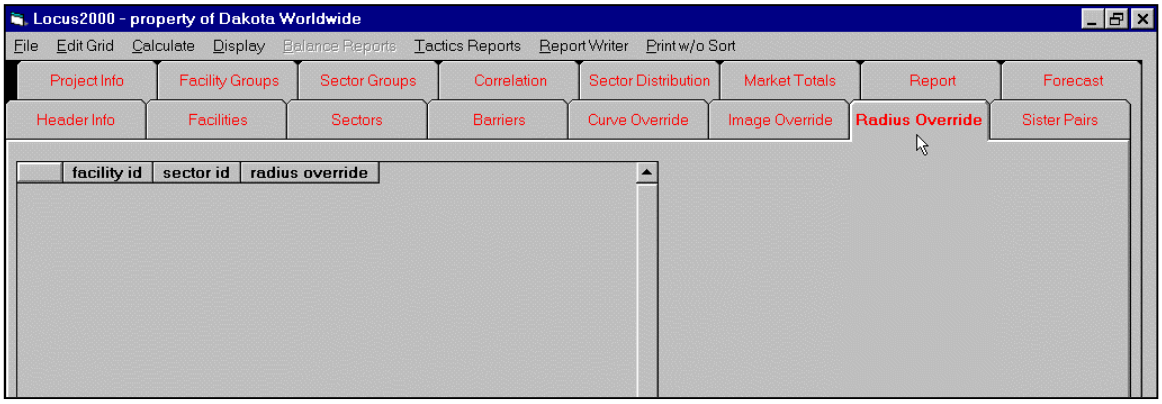


Figure 9-2: Radius Override Folder.

5. Updating Overrides

You may want to change an override that you added to your model while you were balancing your model or doing tactical simulations. Any overrides you have added to your model can be updated by using the aforementioned process.

B. Converting Float (Tactics)

You can adjust the float in the **Sectors** folder by *individual sector*, *group of sectors* or *all sectors*. Click on *Float* column, right click and highlight **group add**. To reduce the float 5 points, enter in "-5" and the float for all sectors will be adjusted by 5 points.

C. Defining Groups (Balance and Tactics)

Within the **Facility Group** and **Sector Group** folders, you may combine facilities and sectors for reports. To do this, select the appropriate folder, add up to 9 rows, and list stores or sectors you wish to combine for reports.

> **Facility** - You may group facilities in up to nine groups. A facility may belong to one or more groups or no group.
>
> **Sector** - You may group sectors in up to nine groups, and a sector can belong to more than one group or no group.

D. Sister Pairs

The sister pair or "sister store" effect builds a trade area buffer between two facilities. Generally, a sister pair is identified as between facilities from the same chain. It is entered in the **Sister Pairs** folder as shown in Figure 9-3. Each facility in a sister pair has an associated strength. In comparison, the best performing facility of the pair should have the higher strength value.

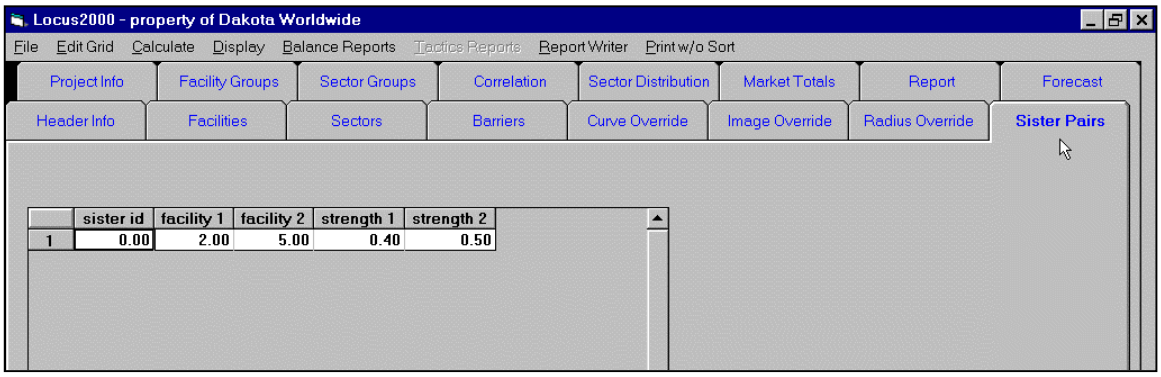


Figure 9-3: Sister Pairs Folder.

To review the effects on each facility's trade area, use the pull-down command **Display/Crossover** and the following window is displayed.

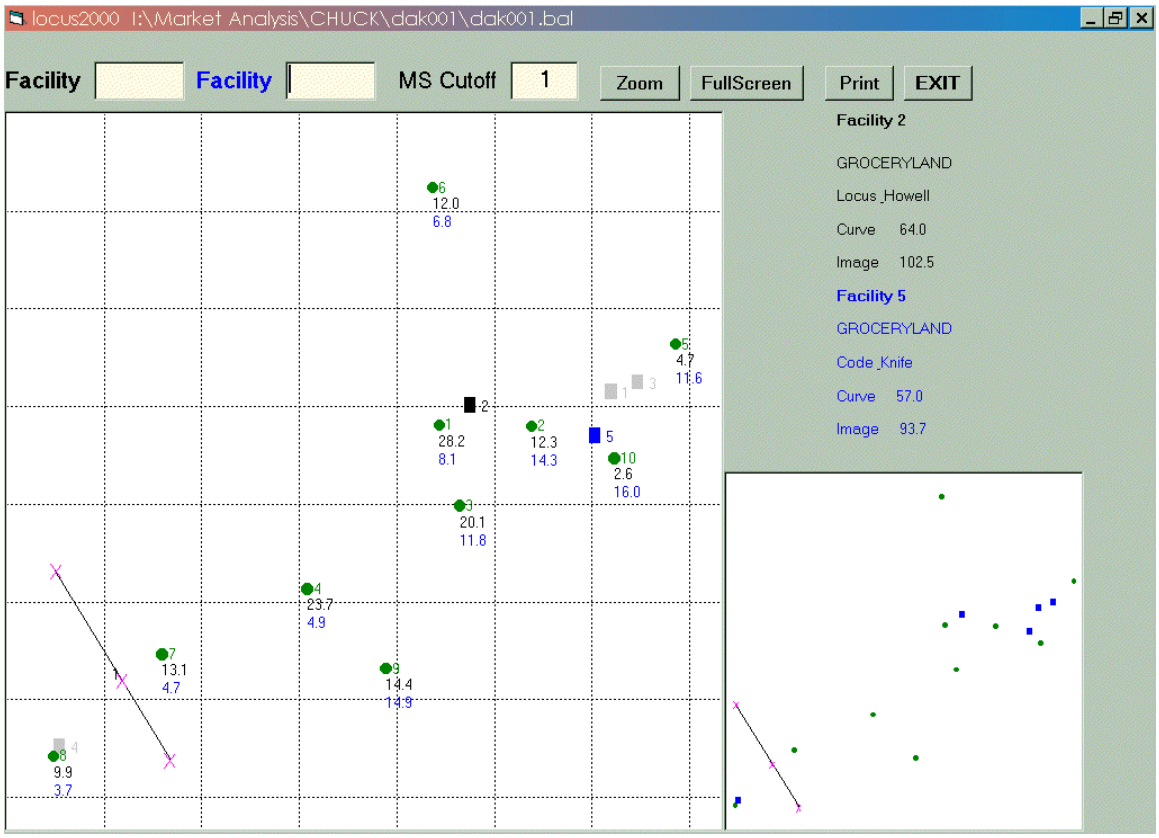


Figure 9-4: Display Crossover Window.

E. Basis of Sales

The *Basis of Sales* report lists the components of a facility's projected sales. The steps to the *Basis of Sales* report results are illustrated in Figures 9-5, 9-6 and 9-7.

Figure 9-5: Running a Basis of Sales Report.

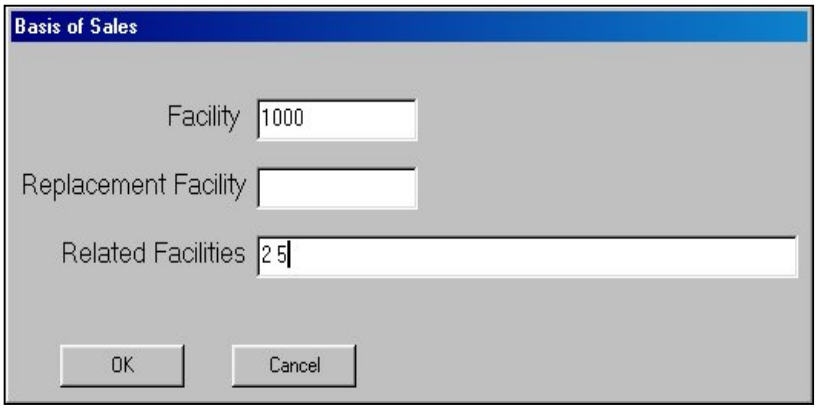


Figure 9-6: Basis of Sales Input Box.

Figure 9-7: Basis of Sales Report Results.

Print | Write to xls File | Write to tab File

	A	B	C	D
1		BASIS OF SALES		
2				
3		GROCERYLAND	--------Mar 2001--------	
4		Map Key 1000	Sales	Percent
5				
6		Related Stores	53,966	27.65
7		Competition	121,472	62.24
8		Population	223	0.11
9		Inflation	0	0.00
10		Float	0	0.00
11		Outside Trade Area	19,518	10.00
12				
13		Total	195,179	100.00
14				
15				
16	Related Stores		------Sales Transfer------	
17	Map Key	Name	Mar 2001	Percent
18				
19	2	GROCERYLAND	-34,211	-29.99
20	5	GROCERYLAND	-19,754	-21.92
21				
22	Total		-53,966	-26.42

F. District Modeling

The concept of District Modeling is relative to the downsizing of an existing large or metropolitan model to a size more relevant to a single site. LOCUS™ 2000 makes for an easy conversion as the display path window and the sector or facility file folder can be accessed at the same time. Therefore, the sectors and facilities not needed may be deleted in the sector or facility file folder. This is shown in the following example.

Make sure to save the model to a new filename to prevent writing over the original model.

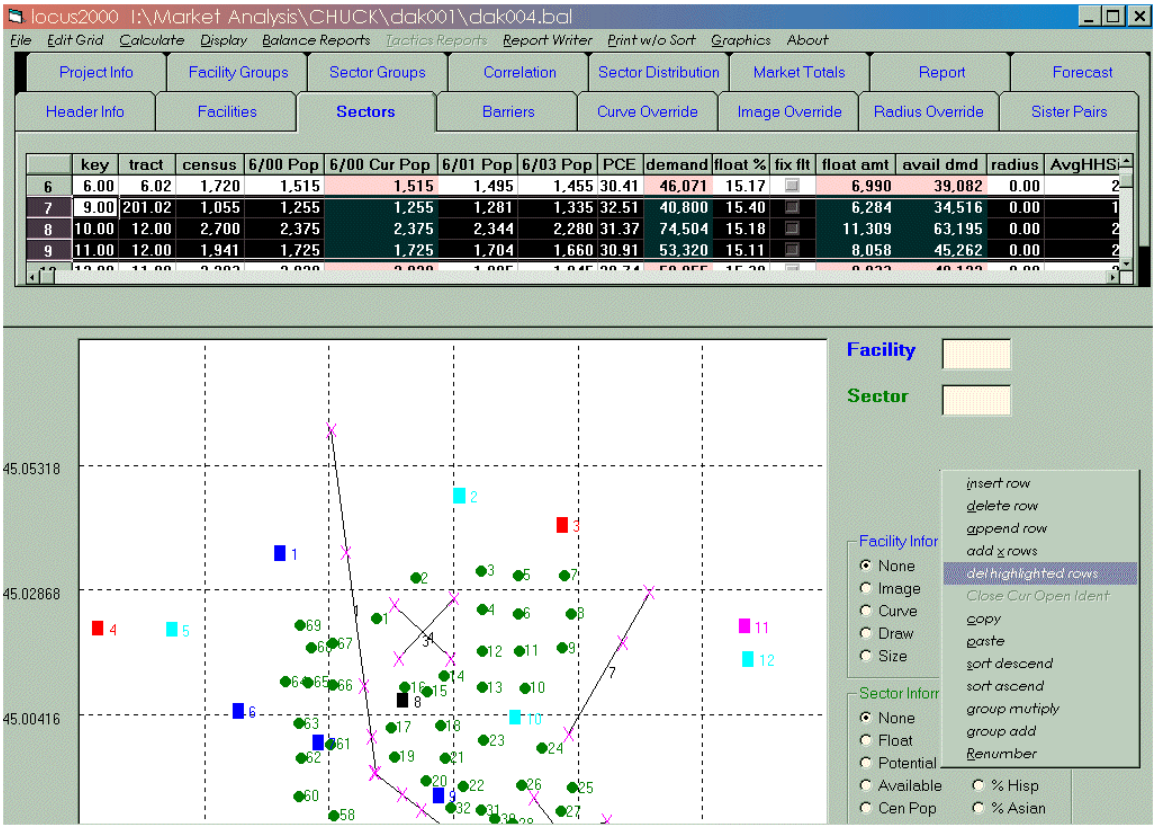


Figure 9-8: Deleting Unnecessary Sectors.

G. Image Performance Alignment

Over the years analysts have applied various techniques to establish which store in their gravity model should have the highest Image. Many have used a combination of highest volume and highest dollar per square foot as the leading indicators for ranking the stores. In addition, the Draw of the store was important as analysts realized low Draw units were not to be given the same consideration as high Draw stores.

A basic Image formula was developed that divided an individual store's $/SF by the average $/SF of all the stores. This gave each store a percent above or percent below the average. Example: Food Country Map Key 1 produces at $7.83 per square foot and when divided by $5.90 (the dollars per square foot of all stores) times 100 equals an Image of 132.75. However, recently it was realized that the 132.75 is not in relationship to an average store being 100 it is in relationship to the average store being 108.2925 as shown in cell (F13) which is the total of all stores 758.05 divided by seven.

	A	B	C	D	E	F	G
1							
2							
3							Obs $/SF
4	Key	Store	Size	Volume	$/SF		Image
5	1	Food Country	29,735	232,900	7.83	132.75	122.59
6	2	Food Country	36,900	247,200	6.70	113.55	104.85
7	3	Groceryland	33,400	200,000	5.99	101.49	93.72
8	4	Groceryland	21,399	165,000	7.71	130.69	120.68
9	5	Marketbasket	53,300	400,000	7.50	127.20	117.46
10	6	Food Country	50,000	274,800	5.50	93.15	86.02
11	7	SuperStore	80,000	279,500	3.49	59.22	54.68
12			304,734	1,799,400	5.90	758.05	700.00
13				257,057		108.2925	

Figure 9-9: Basic Image Formula.

In order to show the Image equivalent of an average store being 100 the analyst must divide the store's percentage number by the average of all stores thus in the instance of Food Country Map Key 1 the relative Image is 122.59.

Some analysts have also given an Image to the total Observed Volume by dividing the Observed Volume of a store by the average Observed Volume of all stores.

In this instance Food County Map Key 1 achieves an Observed Volume Image of 90.60 which is its average volume of $232,900 per week divided by the models average of $257,057 times 100.

	A	B	C	D	E	F
1						
2						
3						Obs V %
4	Key	Store	Size	Draw	Volume	Image
5	1	Food Country	29,735	98	232,900	90.60
6	2	Food Country	36,900	95	247,200	96.17
7	3	Groceryland	33,400	98	200,000	77.80
8	4	Groceryland	21,399	98	165,000	64.19
9	5	Marketbasket	53,300	90	400,000	155.61
10	6	Food Country	50,000	90	274,800	106.90
11	7	SuperStore	80,000	90	279,500	108.73
12			304,734		1,799,400	700
13					257,057	
14						

Figure 9-10: Total Observed Volume.

With the release of LOCUS 2000's spread sheet format the store's percent of Market Share (Trade Area Volume) has grown in importance and analysts began to give this performance ranking more weight than the performance per square foot or volume of the store. This can be given an Image formula by using the Trade Area Volume (Observed Volume times draw) and divided by the average for all stores.

	A	B	C	D	E	F	G
1							
2							
3							TA V %
4	Key	Store	Size	Draw	Volume	TA Vol	Image
5	1	Food Country	29,735	98	232,900	228,242	95.12
6	2	Food Country	36,900	95	247,200	234,840	97.87
7	3	Groceryland	33,400	98	200,000	196,000	81.68
8	4	Groceryland	21,399	98	165,000	161,700	67.39
9	5	Marketbasket	53,300	90	400,000	360,000	150.03
10	6	Food Country	50,000	90	274,800	247,320	103.07
11	7	SuperStore	80,000	90	279,500	251,550	104.83
12			304,734		1,799,400	1,679,652	700
13					257,057	239,950	
14							

Figure 9-11: Trade Area Volume.

Food County Map Key 1 achieves a TA (Trade Area) Image of 95.12 which is its average TA Volume of $228,242 per week divided by the model's average of $239,950 times 100.

Recently, another look at overall store performance has been added that establishes a store's trade area $/SF Image. This is calculated by multiplying the store's observed volume times its draw and dividing by its size. This gives you a factor number to be

divided by the average factor number for all the stores producing its Trade Area Volume Image. This is similar to the formula for producing the Observed Volume Image. The factor number for Food Country Map Key 1 is 139.31 and the average factor number is 109.7 as shown in cell (H13). When the math is applied the store receives an Image of 126.99.

Key	Store	Size	Draw	Volume	TA Vol	$/SF		TA $/SF Image
1	Food Country	29,735	98	232,900	228,242	7.68	139.31	126.99
2	Food Country	36,900	95	247,200	234,840	6.36	115.50	105.29
3	Groceryland	33,400	98	200,000	196,000	5.87	106.50	97.08
4	Groceryland	21,399	98	165,000	161,700	7.56	137.14	125.01
5	Marketbasket	53,300	90	400,000	360,000	6.75	122.58	111.74
6	Food Country	50,000	90	274,800	247,320	4.95	89.77	81.83
7	SuperStore	80,000	90	279,500	251,550	3.14	57.07	52.02
		304,734		1,799,400	1,679,652	5.51	767.87	700
				257,057	239,950		109.7	

Figure 9-12: Trade Area Volume Image.

For years Analysts have been rating a stores performance by various subjective criteria. Currently such areas as operations, exterior conditions, interior conditions, meat department, produce department, deli department, bakery department and pharmacy department are rated. The rating system used today is: (0) if it is not offered, (1) if poor, (2) if below average, (3) if average, (4) if above average and (5) if excellent.

Even though these areas were rated, we as Analysts had not established an Image for this nor had we incorporated these findings mathematically into our Image ranking process. However, this is possible by totaling the ratings of each store and dividing by the average. This gives an Image for each store relative to store ratings.

Example: Food Country Map Key 1 receives an Image of 75.45 when its rating of 18 is divided by the average ratings of all stores 23.86 (the total in cell (K12) divided by 7) times 100.

		Supermarket Ratings								Total	Rating
Key	Store	Ops	Ext	Int	M	P	D	B	RX	Pts	Image
1	Food Country	3	3	2	3	3	2	2	0	18	75.45
2	Food Country	3	3	3	3	3	3	3	0	21	88.02
3	Groceryland	4	3	5	3	4	4	3	4	30	125.75
4	Groceryland	3	3	3	3	3	2	3	0	20	83.83
5	Marketbasket	4	3	3	3	4	4	3	0	24	100.60
6	Food Country	4	3	3	3	4	3	3	0	23	96.41
7	SuperStore	3	4	4	4	4	4	4	4	31	129.94
										167	700
										23.86	

Figure 9-13: Store Image relative to Ratings.

Because this data is now conveniently available with the use of LOCUS 2000, a new rating system using all five of the available performance-based Images can be formulated. This Image Performance Alignment is possibly the best first look or beginning point from which to balance your model.

In summary the Observed Volume, Observed Volume $/SF, Trade Area Volume, Trade Area Volume $/SF and Department Ratings are all important in determining what store deserves the top Image as well as where the other stores in the model should be positioned. The following is an example of this new Image ranking system.

Image Performance Alignment

AVG Image	Rank	Model Image	Rank	Key	Store	Size	Draw	Obs V $ Volume	Obs V $ Image	Obs V $ $/SF	Obs $/SF Image	TA V $ TA Vol	TA V $ Image	TA V $ $/SF	TA $/SF Image	5 - Supermarket Ratings - Total Dps	Ext	Int	M	P	D	B	RX	Pts	Rating Image
127.09	1	124.85	1	5	Marketbasket	53,300	90	400,000	155.61	7.50	127.20	117.46	360,000	150.03	6.75	122.58	111.74	4	3	3	3	4	4	3	0	24	100.60
102.15	2	108.60	2	1	Food Country,	29,735	98	232,900	90.60	7.83	132.75	122.59	228,242	95.12	7.68	139.31	126.99	3	3	2	3	3	2	2	0	18	75.45
98.44	3	104.30	3	2	Food Country,	36,900	95	247,200	96.17	6.70	113.55	104.85	234,840	97.87	6.36	115.50	105.29	3	3	3	3	3	3	3	0	21	88.02
95.21	4	101.48	5	3	Groceryland	33,400	98	200,000	77.80	5.99	101.49	93.72	196,000	81.68	5.87	106.50	97.08	4	3	5	3	4	4	3	4	30	125.75
94.85	5	84.04	6	6	Food Country,	50,000	90	274,800	106.90	5.50	93.15	86.02	247,320	103.07	4.95	89.77	81.83	4	3	3	3	4	3	3	0	23	96.41
92.22	6	101.89	4	4	Groceryland	21,399	98	165,000	64.19	7.71	130.69	120.68	161,700	67.39	7.56	137.14	125.01	3	3	3	3	3	2	3	0	20	83.83
90.04	7	74.84	7	7	SuperStore	80,000	90	279,500	108.73	3.49	59.22	54.68	251,550	104.83	3.14	57.07	52.02	3	4	4	4	4	4	4	4	31	129.94
700		700				304,734		1,799,400	700	5.90	758.05	700.00	1,679,652	700	5.51	767.87	700									167	700
								257,057			108.29		239,950			109.7										23.86	

Figure 9-14: Final Trade Area Volume Image.

Image Performance Alignment is a new starting point for balancing models. It has been proven to be especially useful in balancing large, cumbersome models. When refined with the additional criteria analysts unearth during their fieldwork, a superior balanced model is attained.

Figure 9-15: Image Performance Alignment Menu Location.

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Glossary

Actual Volume — See *Draw*.

Balance — The process of examining your model and making necessary adjustments to make it accurately represent your marketplace.

Barrier — An obstacle that restricts travel from one area to another. See also *Standard Barrier* and *Weighted Barrier.*

Correlation — A statistical term which is used to measure the degree to which one set of numbers is related to another.

Crosspoint — Specific points on a barrier from which distances are calculated. A crosspoint is likened to a bridge across a river; you can only cross wherever a crosspoint is defined.

Curve — The measurement of a facility's pulling power, or its ability to attract customers over distance.

Database — A set of data fundamental to a system, organized for rapid search and retrieval by a computer.

Dot Count — A count of the number of customers in a sector that shop at a specified facility.

Draw — The percent of a facility's total business that is derived from the trade area.

End Point — Either of two points that mark the ends of a barrier.

Even Float — An equal float percentage assigned to every sector. The sum of the float for all sectors equals the total float calculated for the trade area.

Expansion — To print a graphic representation of an enlarged portion of the trade area.

Expenditure — See *Per Capita Expenditure (PCE).*

Factual Data — Information that is verifiable, such as facility location and size; sector location, size and population; and barriers.

Fcst.txt File — File which holds forecast information. To save a new forecast, make desired changes in the forecast grid in the **Forecast** folder, then click on the **File** pull down menu and choose **Save Forecast Info to fcst.txt**. (Note: The first four lines in the **Forecast** folder cannot be permanently changed.)

Fit — The process of matching each facility's supply with the surrounding demand; one way is to align the market share with the customer spotting.

Float — The percent of the potential within an area that is not captured by the facilities identified. It is also called leakage.

Image — A ranking number for each facility as determined by the model in **Balance** mode. It represents the acceptability of the facility to the people within the trade area.

Latitude, Longitude — The x and y axes that pinpoint the physical location of a facility, sector or barrier on the grid.

Leakage — See *Float*.

LOCUS — Location Under Simulation.

Locus.sys File — First file read by LOCUS™ 2000 at startup; contains all the default values for the **Header Info** and **Project Info** folders. To change the defaults, make desired changes in the **Header Info** and **Project Info** folders, click on the **File** pull down menu, and choose **Save Header Info to Locus.sys**.

Log Float — A float percentage based on the amount of pulling power exerted on a sector by all facilities in the trade area. Sectors feeling the greatest amount of pull from the facilities in the trade area have the least amount of float assigned.

Map Key — The unique numerical reference used to identify the facility, sector or barrier within this data set.

Map Scale — The miles per inch or kilometer per centimeters ratio used when measuring the map, and when modeling the study area.

Market Share — The percent of business dollars obtained from the total available in a given area.

Model — A computerized system used to mathematically simulate a retail market.

Model Radius The default radius assigned to the model when you are setting up your database. See also *Radius*.

Modified Float A float percentage based on the distance between a sector and the facility nearest to that sector. The greater the distance between a sector and its closest facility, the greater the float assigned to that sector.

Node The point within a sector that optimizes the origin of the shopping trip for the population.

Override A value that you assign to a specific facility/sector combination that enables you to balance the model.

Parameters Independent variables that are given constant values for specified applications.

Path A visual representation of the distance between a facility and a sector.

Per Capita Expenditure (PCE) The expenditure per person for food as of the date of the field work. In **Tactics** mode, this figure adjusts to reflect inflation.

Potential The total amount of money available to the facilities. The formula is population times PCE.

Projection An estimate of future possibilities based on a current trend.

Pulling Power The attraction a store exerts upon the population.

Radius The extent of the influence of a facility's curve.

Reach The perceived distance that a sector's population will travel to go to a facility.

Reference Data Optional information that does not affect the model, such as project number, analyst name, client name and comments.

Sales Area The interior floor space of the facility, in square feet or square meters, that the customer can access.

Sector A segment of the study area, defined by population.

Side Point A reference point that the user identifies on one side of the barrier. The program will assign Weight 1 to this side of the barrier.

Simulation The process of assuming under test conditions phenomena likely to occur in actual performance.

Sister Pair	A set of two stores so similar that a consumer has little reason to travel past one to shop at the other. LOCUS™ 2000 creates a psychological barrier between the stores, which in effect increases the distance between a consumer and the farthest sister pair.
Site	The space of ground occupied or to be occupied by a facility.
Standard Barrier	A barrier with no weights and between one and ten crosspoints.
Study Area	The area covered by this model of which a study is made. The study area consists of a trade area or areas made up of sectors.
Subjective Data	Information supplied by the analyst that must fall within a predefined range. This information (curve, image, radius and PCE) affects the model.
Tactics	Methods that you will use to create your market strategy. You arrive at these methods by running simulations of your model and analyzing the results.
Total Area	The total square feet or square meters of the facility.
Trade Area	The area that contains the population that could contribute to the sales of a facility or facilities located at a proposed site or sites.
Transcript	A list of comments you have made about this model.
Type	A classification you assign to an outlet based on standard facility characteristics.
Volume	The total sales attributed to the area of the facility being modeled.
Weighted Barrier	A barrier that has a "weight" specified for each side which influences the distance calculation between a sector and facility.

Conversion Charts

LOCUS™ 2000 BALANCE REPORTS	"OLD" LOCUS™ COMMAND
Trade Area Totals	LI MO TO
Stores in Operation	LI FA BR*
Sector Summary	LI SE VA*
Facility Market Share by Sector	LI FA TA MA*
Store Volume by Sector	LI FA VO (Store #)
Chain Summary	LI CH TO
Market Shares by Distance	LI FA VO (Store #)
Correlation Report	LI CO AN (Store #)
Competitor Information	Used LOCUS™ Utilities
Competitor Scorecard	Not Available
Trade Area Data by Sector	Used LOCUS™ Utilities
List Facility Sales	LI FA SA*

LOCUS™ 2000 TACTICS REPORTS	"OLD" LOCUS™ COMMAND
Market Totals	LI MO TO
Projected Marketplace	LI FA SA*
Chain Summary	LO CH TO*
Facility Market Share by Sector	LI FA TA MA*
Store Volume by Sector	LI FA VO (Store #)
Market Shares by Distance	LI FA AN
Growth Pattern	LO FA FO NE (Store #)
What If	LI FA What_If
Direct Distance to Sectors	Not Available
Direct Distance to Competitors	Not Available
Basis of Sales	LO FA BA SA
Quarters	LI FA FO

	LOCUS™ 2000 REPORT WRITER BALANCE REPORTS	"OLD" LOCUS™ COMMAND
B1	Trade Area Totals	LO MO TO
B2	Stores In Operation	LI FA BR*
B3	Sector Summary	LI SE VA*
B4	Facility Market Share by Sector	LI FA TA MA*
B5	Store Volume Report by Sector	LI FA VO
B6	Chain Summary	LI CH TO
B7	Market Share by Distance	LO FA AN
B8	Correlation Report	LI CO AN
B9	Chain Market Share By Sector	Not Available

	LOCUS™ 2000 REPORT WRITER TACTICS REPORTS	"OLD" LOCUS™ COMMAND
T1	Market Totals	LO MO TO
T2	Projected Marketplace	LI FA SA*
T3	Chain Summary	LO CH TO*
T4	Facility Market Share by Sector	LI FA TA MA*
T5	Facility Market Share	LI FA MA
T6	Store Volume by Sector	LI FA TA SA
T7	Market Share by Distance	LI FA AN
T8	Growth Pattern	LO FA FO
T9	Chain Market Share by Sector	Not Available
T10	Three Year Growth Pattern	LO FA FO
T11	Projected Marketplace Selected Facility	LI FA SA
T12	Basis of Sales	LI FA BA
T13	Quarters	LI FA FO