# CHAPTER 4
# TUTORIAL

This chapter reviews the process of loading Quattro Pro for Windows and the Benefit-Cost Program, and works through a sample **LEVEL ONE** (see definition below) data entry exercise and benefit-cost analysis. This tutorial is provided primarily for the less experienced computer user.

To examine an example of a complete benefit-cost analysis, open the **BC_EXAMP.WB1** file which has all of the data entries already completed. To use the tutorial to enter data in a blank benefit-cost model, follow the instructions which start on page 4-3.

## LEVEL ONE and LEVEL TWO Benefit-Cost Analyses

A **LEVEL ONE (Minimum Data) Benefit-Cost Analysis**, relies heavily on default values and requires the minimum of user-specified data entries. A **LEVEL TWO (Detailed) Benefit-Cost Analysis**, relies less on default values and incorporates much more building-specific data.

**LEVEL ONE (Minimum Data) B-C Analysis**

By entering the information on the **LEVEL ONE Data** pages and the **Flood Hazard Data**, the program will perform a Benefit-Cost Analysis of the proposed mitigation project. Additional numerical values which the model requires for its calculations are already included in the program as "default values."

For general guidance on how to perform a benefit-cost analysis, see **Chapter 5, Benefit-Cost Program: Guidance**.

For a detailed explanation of the data entries for a **LEVEL ONE** analysis, see **Chapter 6, Benefit-Cost Program: Level One Analysis**.

For a detailed explanation of flood data entries, see **Chapter 7, Benefit-Cost Program: Flood Hazard Risk**.

**This tutorial is for a LEVEL ONE (Minimum Data) analysis which relies heavily on default values built into the program.**

**A LEVEL ONE (Minimum Data) analysis may be appropriate for small, low-cost projects, or as an initial screening of larger projects to assess whether more detailed analysis is warranted.**

**A LEVEL ONE analysis is appropriate only if flood damages are due predominantly to water depth and not to high velocity flow, debris impacts, erosion, or soil failure.**

**LEVEL TWO (Detailed) B-C Analysis**

Users are encouraged to perform a **LEVEL TWO (Detailed)** analysis whenever possible. A **LEVEL TWO** analysis will provide the most accurate results by incorporating much more building-specific data and judgments than a **LEVEL ONE** analysis. See **Chapter 8, Benefit-Cost Program: Level Two Analysis** for a detailed discussion of **LEVEL TWO** data entry.

**A LEVEL TWO (Detailed) analysis is appropriate for large, high-cost projects, projects which are politically sensitive, or projects where initial screening indicates that benefit-cost ratios are close to one.**

**A LEVEL TWO analysis MUST be conducted whenever flood damages are significantly affected by high velocity flows, debris impacts, erosion or soil failures.**

The following tutorial is for the **LEVEL ONE (Minimum Data)** Benefit-Cost Analysis.

# Starting the Tutorial

**Step One**

Start Quattro Pro for Windows (QPW). See page 3-1.

**Step Two**

Open the desired Benefit-Cost Program file. See instructions (**Opening Files**) on page 3-2. For the tutorial, open the **BC_BLANK.WB1** file.

**Step Three**

The **Sign-On** screen appears after the Benefit-Cost Program is loaded. Adjust the **Zoom List** factor which controls the size of the screen display, if necessary. See instructions on page 3-3.

**Step Four**

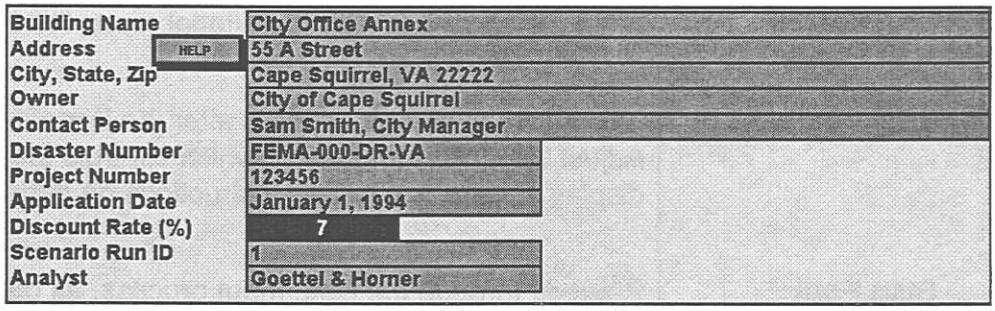
Proceed through the Data Input process, as outlined below in the tutorial example. This example leads you through the **LEVEL ONE (Minimum Data)** benefit-cost analysis data input process. Click on the **NEXT SCREEN** button at the bottom of the **Sign-On** Screen to begin the data entry process.


Clicking this button on the **Sign-On** screen moves you to the **LEVEL ONE DATA** screen, where the data entry process begins.

**For definitions and detailed explanations of the data entries, see Chapter 6, Benefit-Cost Program: Level One Analysis and Chapter 7, Benefit-Cost Program: Flood Hazard Risk.**

# LEVEL ONE DATA

## PROJECT INFORMATION




**Building Name**

**PINK Blocks (Information Only).** With your mouse, move the cursor to the first pink-colored block, **Building Name**, and click on the cell. **IMPORTANT:** the cursor must be **in the first space inside the pink box**, not to the left of it. Type the name of the building, i.e., **City Office Annex**. Press the **Enter** key. As you make data entries, remember that **PINK** blocks are for information only; they serve to identify the project under evaluation, but do not affect numerical benefit-cost results. Entries in the **RED** block and the **GREEN** blocks do affect numerical results.

**Address**

Then, with the mouse or the arrow keys, move the cursor to the street **Address** and enter it in the following way:

**'55 A Street**

**OOPS!**

If you forget to start your entry with an apostrophe ( ' ) an error message will be displayed.

**Help**

The address (and all combinations of numbers and letters which begin with a number) **MUST** be entered with a single apostrophe ( ' ) preceding the address, e.g., **'55 A Street**. If not entered this way, a "Syntax error" message will appear: click on the **OK** of the error message and add the apostrophe (see page 3-13). Then, press **Enter.** Move to the next entry.

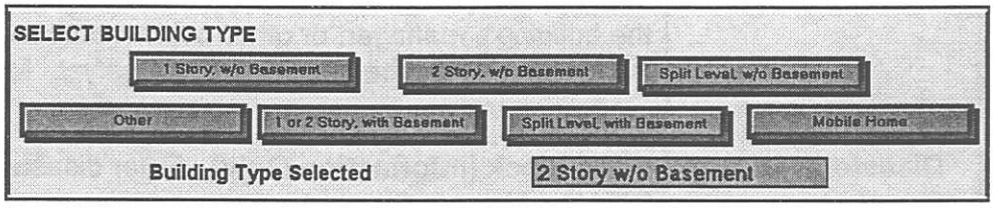
**City, State, Zip Code**

**PINK Block (Information Only).** Enter the city, state and zip code for the building: **Cape Squirrel, VA 22222**. Move to the next entry.

| | |
|---|---|
| **Owner** | **PINK Block (Information Only).** Enter the name of the building's owner. This may be an agency, a private party, etc. Enter: **City of Cape Squirrel**. Move to the next entry. |
| **Contact Person** | **PINK Block (Information Only).** Enter **Sam Smith, City Manager**, for the building's manager, or other contact person who could provide information about the building to the analyst. Move to the next entry. |
| **Disaster Number** | **PINK Block (Information Only).** Enter disaster number **FEMA-000-DR-VA**. Move to the next entry. |
| **Project Number** | **PINK Block (Information Only).** Enter project number **123456**. Move to the next entry. |
| **Application Date** | **PINK Block (Information Only).** Enter **January 1, 1994**. Move to the next entry. |
| **Discount Rate** | **RED Block (OMB Policy).** The discount rate of 7% is already entered. See page 6-4 for a discussion of the discount rate. Move to the next entry. |
| **Scenario Run ID** | **PINK Block (Information Only).** Enter the scenario run number **1**. Move to the next entry. |
| **Analyst** | **PINK Block (Information Only).** Enter your name. Move to the next entry. |

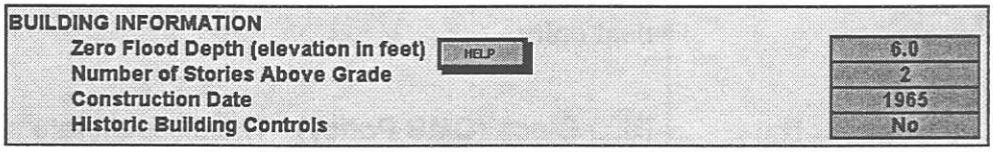
# BUILDING DATA

## BUILDING TYPE




You must use the mouse to click on the appropriate button; the arrow keys will not operate these buttons. For this example, click on the button labeled: **2 story w/o basement**. This choice will automatically appear in the purple cell labeled "Building Type Selected."

## BUILDING INFORMATION




**Zero Flood Depth Elevation**

**GREEN Block (Data Input).** Enter **6** as the **Zero Flood Depth Elevation** (top of the lowest finished floor) for this building. Move to the next entry.

**Number of Stories**

**PINK Block (Information Only).** Enter **2** as the **Number of Stories Above Grade**. Move to the next entry.

**Construction Date**

**PINK Block (Information Only).** Enter **1965** as the **Construction Date**. Move to the next entry.

**Historic Building Controls**

**PINK Block (Information Only).** Enter **No** in the **Historic Building Controls** box. Move to the next entry.