

Using the PMMS Software

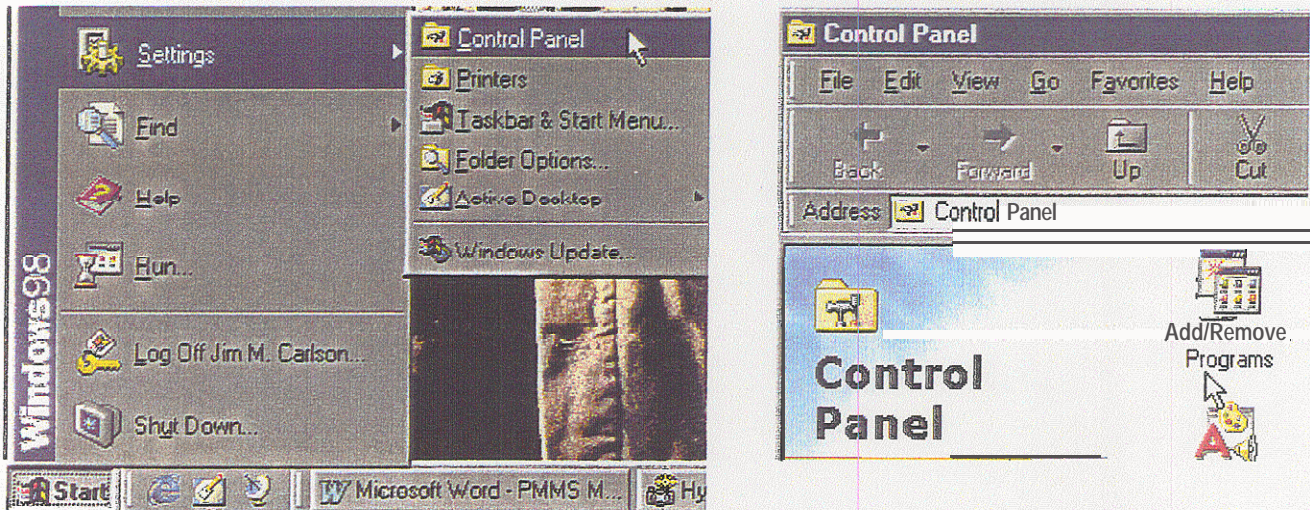
Minimum System Requirements

- IBM/compatible computer with 486 or higher processor
- 6MB RAM
- 3.5" floppy disk drive
- Windows95 (Win95), Windows98 (Win98), or Windows NT (NT 4.0)

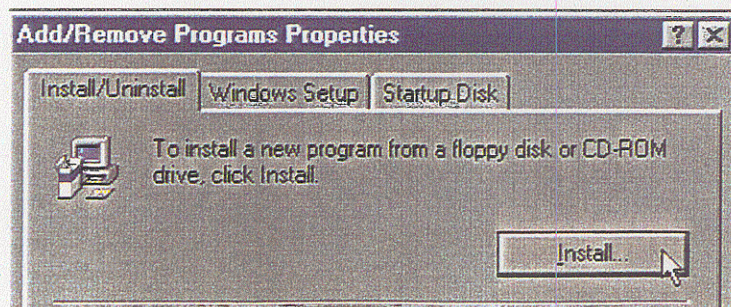
Installing PMMS



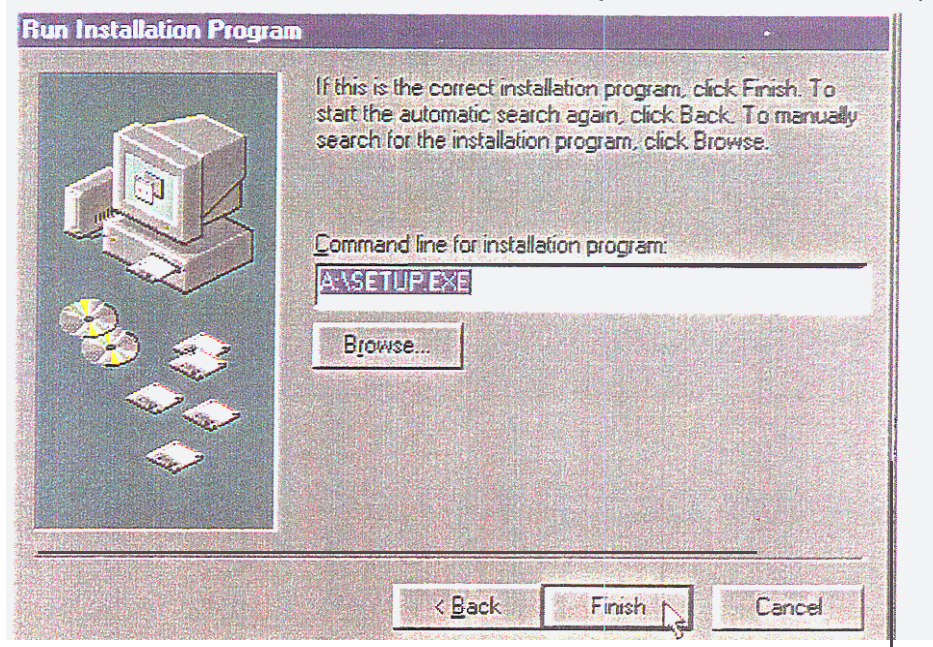
1. Insert the floppy/CD disk in the appropriate drive
2. From Windows desk top click on Start, Settings, and Control Panel



3. Double click the Add/Remove Programs icon.



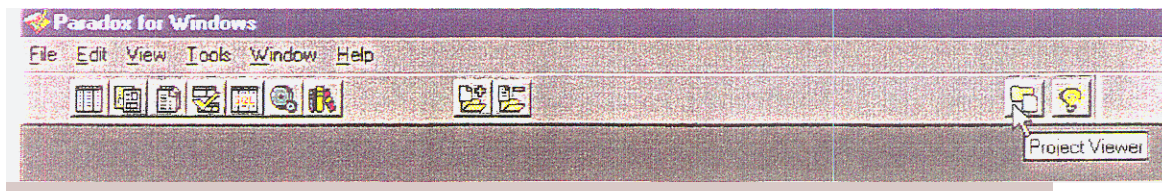
- Windows will automatically detect the installation disk, if not click on the browse button and indicate where the installation disk is located. If the correct directory is displayed, click on the Finish button to continue. Follow the installation wizard and it will lead you through the rest of the set-up.



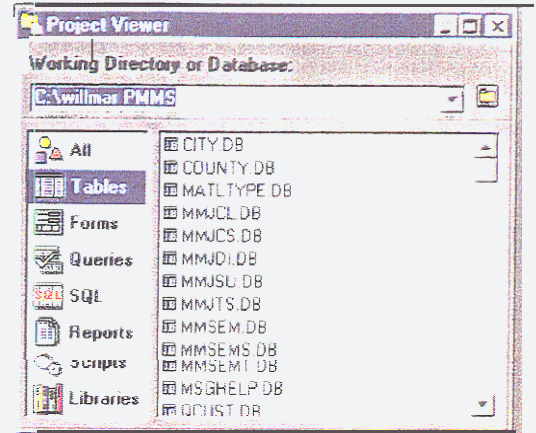
The default is c:\ Programs\Minnesota Department of Transportation, If another destination is preferred change the directory when prompted.

Starting PMMS

- Navigate to the where the program installed the programs and double click on the desired script.
- In Win95/98/NT click on the Start button, move the cursor to Programs, from programs select Paradox menu; and then double click on the Paradox program (see picture below for full sequence).
- Opening the Project Viewer-You can easily access all Paradox's options by left clicking the Project Viewer on the main Paradox screen. If no buttons appear when Paradox opens, select (i.e., click) View: Toolbars, Standard, and click OK.



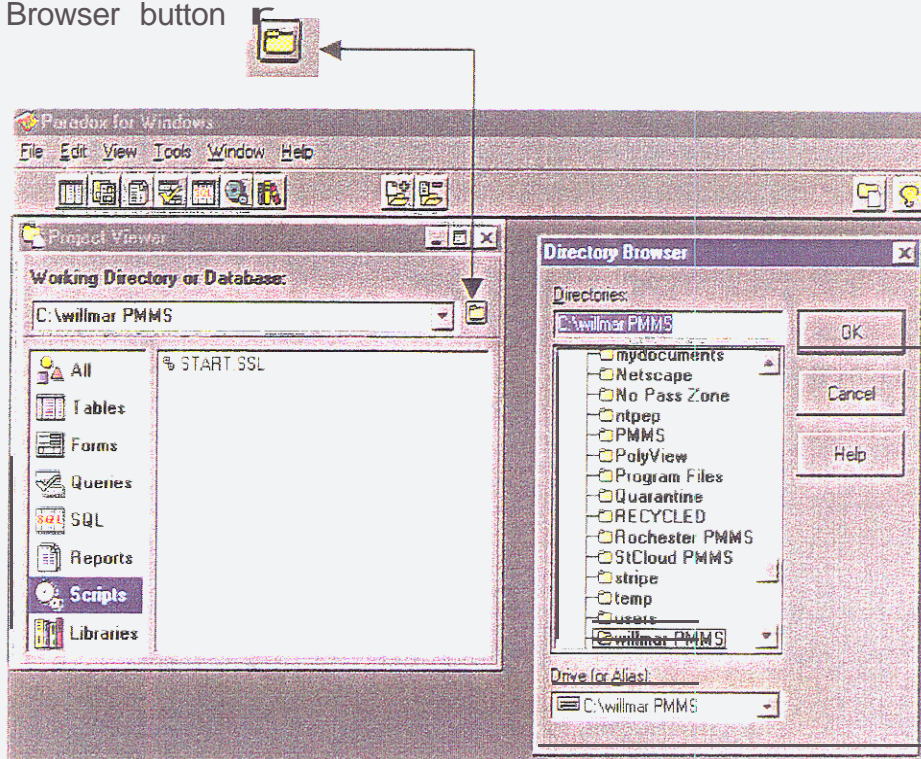
Project Viewer is the user interface that allows you to access Paradox's options they include AR, Tables, Forms, Queries, SQL, Reports, Scripts, and Libraries. PMMS focuses on Tables and Scripts. When you highlight any option, you will see a listing on the right hand side of the screen. This listing includes each specific file that can be accessed for that option. in the example given, you will notice that the right hand side of the screen shows all of the database tables that can be accessed in the Tables submenu.



4 Setting the Working Directory

The first box in the Project Viewer is the Working Directory or Database. input area. As you can see in the box below, the working directory is set for C:\Willmar PMMS. You should set your working directory to the location that you selected when the program was installed or to the default location. If you need to search for your directory, click on the yellow folder (button) on the right side of the Working Directory or Database line

Directory Browser button



The Directory Browser will appear. Locate and click on your directory, and click OK.

- 5 Start the PMMS data input screen by highlighting (i.e., left clicking) on Scripts
- 6 Move your mouse pointer over the START.SSL option and double (left) click
- 7 The main screen starts (see picture below) and you are ready to begin data entry

Main (Maintenance) Input Screen

The main screen will be broken into sections for further discussion

The header section at the top of the screen will be broken into parts for further discussion. The parts include Date, Sheet, District, Record Number, and the five Locate buttons.

As you can see, the Date field is highlighted (i.e., black), which indicates that this is the active field. Date is a required field. A required field is one that must have information entered into it before the program will allow you to move on. In other words, further data entry will not be allowed until a date is entered.

The default setting for Sheet is one. The majority of the time you will need only one sheet. One reason for changing this number would be if two crews were working on the same day, as for example, when two crews are using the same equipment, but are working two different shifts.

The District name and number can be entered by using a submenu (Lookup help) option. Using your mouse, left click in the District box. The box will turn black, indicating that it is the active field. Leave your mouse pointer **over** the box and right click. The following supporting data input screen will pop up



Left click on the number or the name of the area you want to enter and click the OK button

MMJDI	MMJDISTNUM	MMJDISTNAME
5	3A	Brainerd
6	3B	St. Cloud
7	4A	Detroit Lakes
8	4B	Morris
9	6A	Rochester
10	6B	Owatonna
11	7A	Mankato

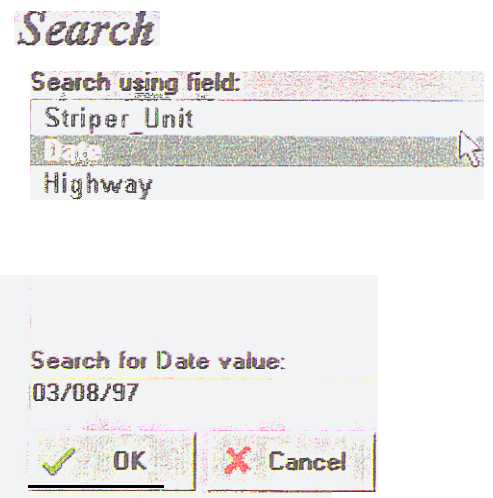
Buttons: OK, Cancel, Help

The Locate and arrow buttons allow you to search through your records. The counter (e.g. the example below shows 1 of 9) above the arrow buttons reveals the number of the currently displayed record, and the total number of records entered to date. To locate a specific record, click on the Locate button. This will bring up the Search screen. The three options you have for searching for a specific record include Stripper Unit, Date, or Highway. Once you have selected a field for your search, and entered a search value, click the OK button. To search individual records use the arrow buttons.



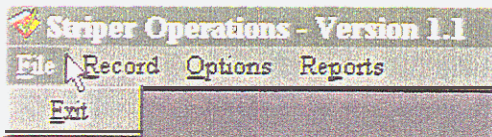
Search one record at a time

Moves to beginning or end



Once the input screen opens the menu bar will change to File, Record, Options, and Reports. Enter the sub-menus by left clicking on the menu option, or use the keystrokes that are identified on the right of the menu option. For example. New

Record can be used by either clicking on the New Record sub-menu item or try hitting the ins (i.e. the insert,) key on your keyboard.



File

Left click on file, and again on Exit to close the input screen

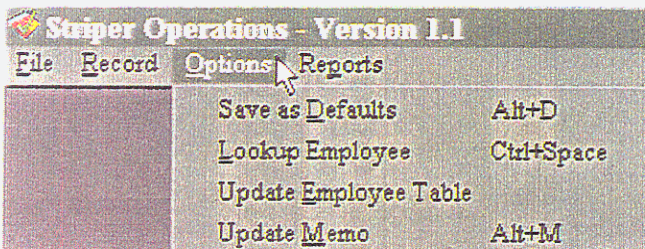
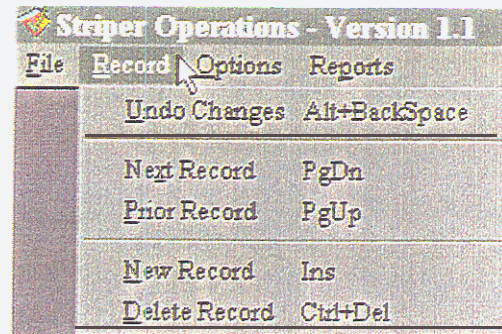
Record

Undo Changes will undo any changes that were made to the input screen since the last save

Next Record and Prior Record are options that can be used to scroll from one record to another

Click on New Record to start a new day's data entry

Use the Delete Record option to remove (delete!) the current record from the file



Options

Save as Defaults allows you to keep the current equipment numbers, Job classifications, employee names, employee numbers, and hours. When you start to enter another day's data the defaults will automatically be entered.

Use the Update Employee Table to add/remove employees to the Striper Employee Table. This is the sub-table (lookup Help table) that can be used to quickly add/change employees.

Click Update Memo option to gain access to the current record's Memo field

Reports

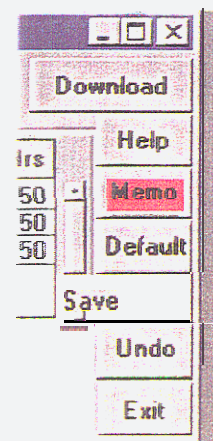
Striper Operations Index is an automated report that will outline the date, district, striper unit, and operator for each day of production.



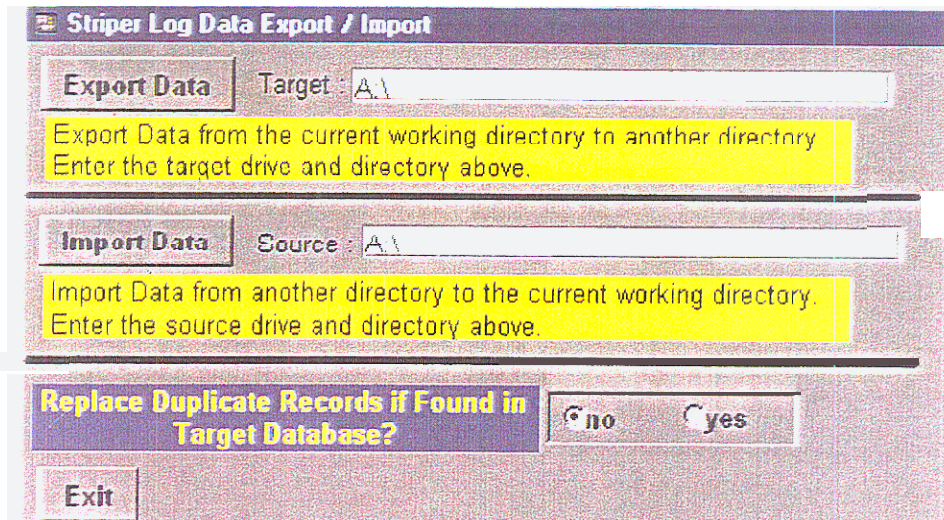
There are seven buttons on the right side of the data input screen: Download, Help, Menu, Default, Save, Undo, and Exit.

Download

The download button is designed to automatically allow you to move your data between sources. This option can also be used to back up your data. The terms used to express this are Export or Import. To activate the



download feature simply move your mouse over the download button and left click
Download Screen



Export (moving your data from the working directory to a target directory)
To move your data from the default directory to a diskette set the target (in most cases it will be a \) and left click the Export Data button,

Import (moving your data from a source to your working directory)
To move the data from the diskette to the current working directory set the source directory (again in most cases it will be a:\) and left click on the button. The import button will automatically detect your working directory and move the data to that directory in other words, the source is where the data is coming from, which will usually be the a:\.

Prior to clicking on either button, determine whether you want the program to replace any duplicate records. Example, If you have edited any previous records you will want to click yes.

Help

Get help on particular parts of the screen

Memo

Opens a memo field so that you can save daily notes. Once a memo has been entered the button will turn red In other words, a red memo button indicates that a memo has been entered for that day

Default

Sets screen defaults for District, Employees, and Equipment. When new data is entered into the system, the program will automatically enter these fields into their proper areas

Save

Click on the Save button to automatically save your data input and move onto the next day's input.

Hint! Every time the **Save** button is pushed a popup program box will advise you that your data is saved. The program will then open a clear screen, and move to Date waiting for you to start another day's entry Every time you click the save button it assumes that a new day of data entry is going to be entered. If you do not want to enter more data click the UNDO button The program will ask you to confirm the Undo. and will then drop you to the last day that data was entered.

Undo

Click on the Undo button to remove mistakes

Exit

Use the Exit button to exit the data entry screen

Equipment (Top Section)

Enter the equipment numbers, and total hours for each day's production

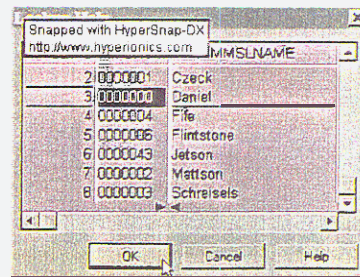
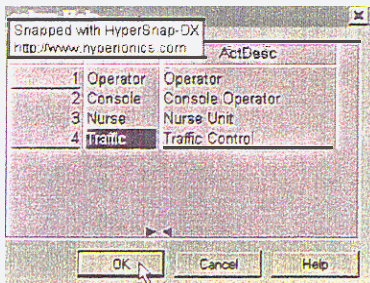
Equipment:	Unit #	Hours
Striper:	82473	
Nurse:	75429	
Traffic:		
Traffic:		
Aux Eqpt:		

Employees

Job, Employee ID, Name, and Hours are used to document each member of the striping crew. The Job column is broken out by duty The Operator is the driver of the striper Console Operators perform all other striper related functions (e.g., monitor paint pressures, turn on and Off paint guns, etc.). Employee identification (ID), Last, and First names, are optional columns and can be used alone to identify specific employees. Regular (Reg) and Overtime (OT) hours will track daily hours.

Job	Empl. ID	Last Name	First Name	Reg Hrs	OT Hrs
Operator	0201677	Norbie	Mark	8.00	
Console	0236391	Schmidt	Mike	8.00	
Training	0358767	Posusta	Kim	8.00	
Nurse	0723952	Seiden	Pam	8.00	

Supporting data entry tables

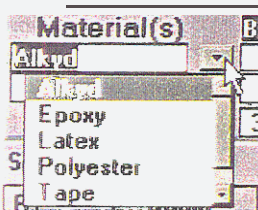


To quickly enter employee information left click in either the Job or Empl ID cells. With the cursor in the highlighted cell, right click to bring up a supporting table. Left click on your selection and click OK.

Material Section (Middle Section)

The materials section will track total quantities of materials used in a day's production. As you can see, there are three lines provided. The first two lines will track the type of material, and the amount of material that has been installed. The third line will track the total quantity of beads applied. The materials section has been further broken down into **Begin**, **Added**, **End**, and **Net**. Enter the total amount of material in the striper tanks at the beginning of the production day. **Added** shows how much material has been added to the tanks during the day. **End** is the amount of material in the tanks at the end of the production day. **Net** shows the total amount of material used, for that day's production. Do not try to enter into the **Net** column, the program is designed to automatically calculate this column. The program adds the **Begin** and **Added** columns together and then subtracts the **End** column to determine the **Net** quantity for the day.

Material(s)	Begin	Added	End	Net	Begin	Added	End	Net
Latex	306	250	136	420	306	0	280	26
	0	0	0	0	0	0	0	0
Beads	3600	4000	3600	4000	Pounds			



To add or remove material(s) to the drop down menu exit the program, highlight Tables on the Project Viewer, and double click the MATLTYPE table.

Note! To edit any table Click on the Edit



Data toolbar button, or hit F9 on your keyboard.

Run Section (Bottom Section)

The term run in this section is used to describe the beginning and ending points of an application. **Segment** indicates the total number of runs entered into the program for a particular day. In the example below you see that it indicates 1 of 4. This indicates that 4 lines were entered that day. **County** and **City** cells allow you to track, by number, the county and city installations. **SP** Number is short for special project, or state project number. This column tracks individual projects or contract project numbers.

Segment		1 of 4		County:	City:	SP Number:					
R S	Hwy	Begin Ref Pnt	End Ref Pnt	Int sect	Int chg	Material	C	Trav Time	Equip Delay	Wthr Delay	Work Types
	0019	070+00.00	055+00.00	2		Latex	W	1.00			A
	0212	075+00.00	071+00.50			Latex	B	0.50			AD
	0212	071+00.50	075+00.00			Latex	W	0.50			A

A: White Edge B: Yellow Edge C: White Skip D: Yellow Ctl. E: 8" White Gore F: 8" Yellow Gore
 G: Messages H: Stop Bars I: Cross Walk J: Misc. K: Painted Durables L: Skipped Durables
 M: Other Work N: Only Intersections/Interchanges

The first column (RS) indicates that either a City or a County was striped in this run. Enter R for County, or S for City. Hwy indicates the number of the road that was striped.

Begin Reference (Ref) Point (Pnt), and End Ref Pnt track where pavement marking installations start (begin) and stop (end), for each individual line. The program automatically converts all reference points to "true reference points" after they are entered. In other words, to enter an ending reference point of seventy-seven point five you should enter the numbers 77.5 in the End Ref Pnt column. The program will automatically change 77.5 to 077+00.500. True reference points are used because they allow for changes in roadway alignment.

Intersection sections (Int sect), interchanges (Int chg) track the total number of each striped during that run.

Material indicates which material was installed. If only one type of material was indicated in the materials section the program will default the material in the material column.

The column "C" indicates each color of material. There are three options available: W for white, Y for yellow, and B for both.

Travel Time (Trav Time) tracks the total amount of non-production time used to travel from one location to another. For example, the striper travels one hour to its first installation location. At the completion of that installation, the striper travels another one-half hour to its next location, and so on.

Equipment Delay (Equip Delay) tracks total hours of equipment down time.

Weather Delay (Wthr Delay) indicates the total number of hours that the crew was held up due to weather delays.

The Work Types column tracks each specific line installed during a run. Each of the possible indicators has been included on the bottom of the screen. See appendix C for a complete description of the Work Types.

The Contract Striper Operations Daily Log

The Contract Striper Operations Daily Log tracks contracted pavement marking installations. The actual input of data is very similar to that of the Striper Operations Daily Log. All of the actual buttons (e.g., Help, Save, Download, etc) are the very same so they will not be discussed in this part. See the previous section for operational descriptions for each button.

Following is an example of the Contract Daily Log.

The Header Section

The top section of the form tracks the Date, SP Number, Contractor, and provides an indicator which reveals which number record is being displayed.

- Date is a key field which means it must be filled in whenever a new days data is entered. A key is a field, or group of fields, in a Paradox table that is used to order records, or ensure referential integrity
- SP Number can be considered special project, or state project number it will track the number that is assigned to the project.

- Contractor tracks who is installing the pavement markings
- Record displays, in the first box, the number of the current record and then indicates the total number of records entered,

The Top Section

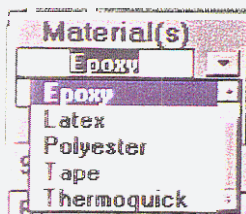
Again, the top section is similar to the Striper Daily icy (Maintenance) input screen. The largest change is that Contract data input screen tracks materials by supplier and lot numbers. The employee section of the table can track either the inspectors or the contractor employees. As you can see both regular and overtime hours are included, but are meant as mandatory fields. In other words, some agencies may want to track how much time is being devoted to installation inspection, or monitoring the contractor

Equipment Numbers	Material	Supplier	Lot No	Inspecl/Supvr	Reg Hrs	O T Hrs
Striper: 92123	Tape	3M	58-58	M. Rother	10.00	
Nurse: 93735	Epoxy I	Poly-Carb	123485	R. Beckus	8.00	10.00
Traffic 1: 12345	Epoxy II					
Traffic 2: 12345	Thermo					
Aux Unit: 12345	Beads	Potters	223344	D. Lowe	8.00	2.00

The Middle (Material) Section

The material section operates the same in both version of the program

Material(s)	Begin	Added	End	Net	Begin	Added	End	Net	
Epoxy	250	250	25	475	250	250	100	400	Gallons
	0	0	0	0	0	0	0	0	
Beads	5000	5000	1250	8750					Pounds



To add or remove material(s) to the drop down menu exit the program, highlight Tables on the Project Viewer and double click the MATLTYPE table,

Note! To edit any table Click on the Edit



Data toolbar button or hit F9 on your keyboard.

Bottom (Run) Section

The run tracking section works exactly the same in both versions. A complete description for documenting a run can be seen above, or in Appendix A. The only difference is in the number of Work Type options. Work Types could be changed to fit individual needs.

Segment		1 of 2		County:	69	City:		District:	4A			
R S	Hwy	Begin Ref Pnt	End Ref Pnt	Int sect	Int chg	Material	C	Trav Time	Equip Delay	Wthr Delay	Work Types	
	0169	054+00.000	025+00.000	5		Epoxy	B	0.50		0.50	AB	
	0169	025+00.000	054+00.000	5		Epoxy	W				A	

A: White Edge B: Yellow Edge C: White Skip D: Yellow Ctl. E: 8" White Gore F: 8" Yellow Gore
 G: Messages H: Stop Bars I: Cross walk M: Other Work N: Only Intersections/Interchanges