CONTRACT ESTIMATE PROGRAM

VERSION 4.38

OFFICE OF STATE AID ROAD CONSTRUCTION

MDOT

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

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1999

CONTRACT ESTIMATE PROGRAM
VERSION 4.38

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Menus and Screens

WHAT'S NEW

For starters, more than half of the program code is completely new and almost all of the rest has had some sort of modification. All of this rewriting has allowed the "NEW" Estimate Program to do more things and do them easier. Here are the NEW things you can do; Your Engineer's Estimate, Your Section 900, Your Section 902, View a CAD-001 and Exchange project data with State Aid. While the New Estimate Program is not fully network functional (for simultaneous multiple access), it can print across the network using "captured" ports.

WHAT'S DIFFERENT

There are major differences in the way CCR's, supplemental agreements, fuel adjustment, dates, printing and back ups are handled.

For CCR's, you just enter the amount (+ or -) from line "D"on the CCR form into the CCR block and then edit the quantities of the affected items (if any), just like you use to do.

For supplemental agreements, you pick any new items added then modify any other affected items, again just like you used to do.

Calculating fuel adjustment is no longer a separate step. It has been incorporated in the "PROCESS\REPROCESS" selections on the process menu. Additionally, "pre-finals" for adjusting final quantities are no longer necessary as the both the "progress" and the "final" fuel adjustment procedures run when the final estimate is processed.

To accommodate the rapidly approaching millennium, all dates now have four digit centuries (05/01/1996).

Printing is now very flexible. To print a document, select PRINT/VIEW, select the project to print, select the document to print, select the printer type and port (if necessary) and press print...all in one step. That's right there is no separate printer configuration procedure.

The new back up procedure backs up only the data for the selected project, not for all projects as the "OLD" program did. This change may require you to make changes in the way you handle project data back ups.

1. INSTALLATION

Before installing the "NEW" Contract Estimate rogram, there are some things you need to do. You should note whether or not a previous version of the Contract Estimate Program is installed, and if so, its drive and directory; the drive and directory of the FoxPro runtime library files (distributed with the 1996 BRIDGE INVENTORY DATA MANAGEMENT PROGRAM). As a precaution, you should back-up your files before proceeding.

To install the "NEW" Contract Estimate Program:

1. **DO** **NOT** attempt to install the "**NEW**" program to the "**OLD**" program directory.

2. Exit or "Shell" out of any menu-type program that you are running (including Widows) so that you are at a DOS prompt (**C:\>**).

3. Insert the Contract Estimate Program v 4.10 diskette into the appropriate floppy drive.

4. At the DOS prompt type **[Drive1]:install [Drive1] [Drive2:\Path]** where **[Drive1]** is the floppy drive letter and **[Drive2:\Path]** is the drive letter and path where the   "NEW" program is to be installed to and press ENTER (<-).
   (**C:\>a:install a: c:\est_96**)

NOTES: A. If **[Drive2:\Path]** is omitted, the installation program will use the default of **C:\EST_96**.
   B. If **[Drive2:\Path]** does not exist, the program will create it for you.

The Contract Estimate Program is started by typing the following command at the DOS prompt:

C:\EST_96>c:\fpd26rt\foxr est +x

Where **C:\EST_96** is the drive and directory of the Contract Estimate Program and **C:\FPD26RT** is the drive and directory of the FoxPro runtime library files. **NOTE**: The +**X** is included only if: 1.) You have copied the FoxPro extended memory file from the supplemental disk to the directory containing the FoxPro runtime library files AND 2.) You want to utilize extended memory. The startup command can (and probably should) be incorporated in a batch (.BAT) file.

If you experience problems trying to get the "NEW" Contract Estimate Program to run, call Jim Maher at 359-7150.

2. GETTING STARTED

If you have active projects and you want to move them the "NEW" Contract Estimate Program, you must first run **COPY_96**. To run **COPY_96** type the following command:

C:\EST_96>c:\fpd26rt\foxr copy_96

Where **C:\EST_96** is the drive and directory of the "NEW" Contract Estimate Program and **C:\FPD26RT** is the drive and directory of the FoxPro runtime library files. **COPY_96** copies the data from the "OLD" program to the "NEW" program, in the proper format. **NOTES**: 1.) If you have an active LSBP project that uses the "SPLIT-SITE" estimates, you **MUST** complete that project using the "OLD" program. 2.) Active projects with CCR's **MUST** be updated to the new method of handling CCR's. To Update CCR's:

    A. Gather the CCR's for a project.
    B. Start the "NEW" program and select option 2, "Process Contract Estimate Menu".
    C. Select option 3, "REPROCESS CONTRACT ESTIMATE" and select the project to update.
    D. Enter a "Y" in the "Update the CHANGE ORDER file" box.
    E. Select each CCR and enter the total from line "F" on that CCR form then edit the affected item's quantity in the pay item file.
    F. Select "CANCEL" when finished updating project's CCR's.
    G. Allow the program to continue and finish.
    H. Back up the project.

As stated in INSTALLATION, the Contract Estimate Program is started by typing **C:\FPD26RT\FOXR EST +X** and pressing enter. The Contract Estimate Program will also run from many menu programs including DOSSHELL (included with MS-DOS 5.0 and up) and WINDOWS (3.x, 95 and NT). WINDOWS users can set up the Contract Estimate Program so that it can be selected and run by "double-clicking" on its icon. An icon (EST_96.ICO) is provided for your use and is located in the main estimate directory. See Setting up the **CONTRACT ESTIMATE PROGRAM in WINDOWS**, in the Appendix A, for more information.

When the Contract Estimate Program is started, the FoxPro 2.6 DOS sign-on screen is displayed briefly followed by the MAIN MENU, shown in figure 1.
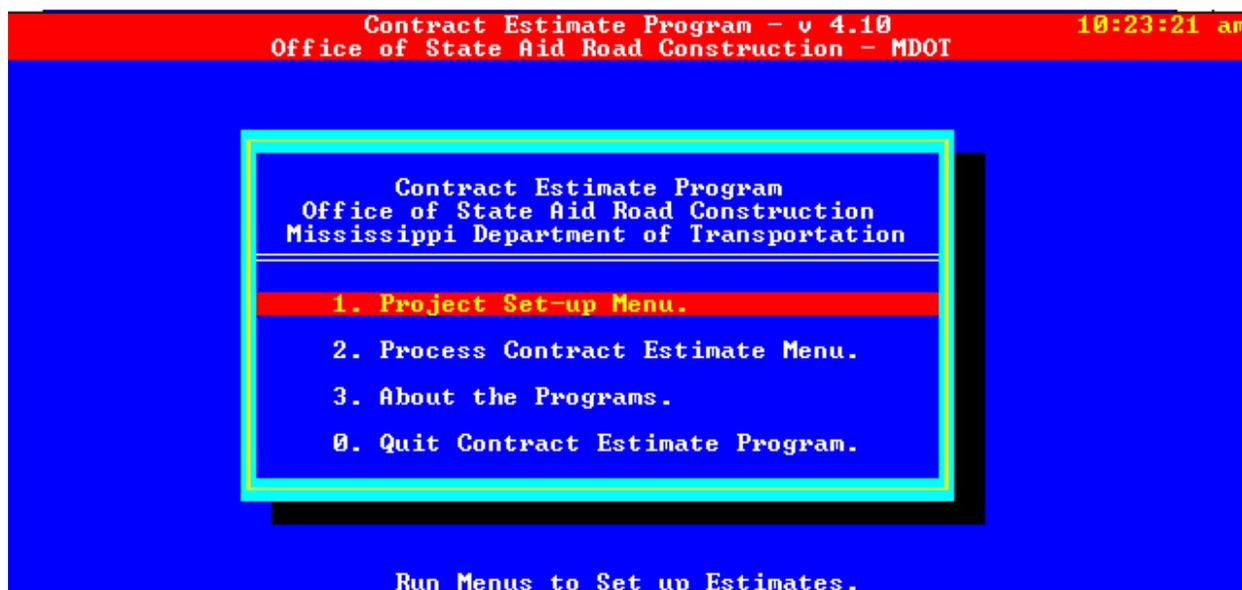
2. GETTING STARTED

Figure 3

The Contract Estimate Program makes extensive use of menus to assist your navigation and utilization of the system. The menu items can be selected in three (3) ways: 1. Position the menu bar on the option you wish to select using the up and down cursor control (↑↓) keys, then press Enter (<-) to select it, 2. Press the number or letter of the menu option or 3. Double click on the item using a mouse or other pointing device. If a menu has more options than are shown (generally menus that are not numbered or lettered), the option list will scroll up and down. The page up (Pg Up) and page down (Pg Dn) keys, as well as the scroll tab (♦) on the right hand border can be used to move quickly through the options of these menus. If you wish to leave a menu without selecting an option, where the option to exit is not available, press the left or right cursor control (<))>) keys, the Escape (Esc) key or click outside of the menu.

The Contract Estimate Program also has extensive editing capabilities. For most edited items, the item to be edited will appear as yellow text on a red background. If a block of these type items appears at the same time, you can edit any of the items displayed, moving from item to item and back as necessary. Most data entry allow you to to select "OK" or "EDIT" when all of the data has been entered, however a few data entry screens display a message, such as "PRESS ANY KEY TO CONTINUE.". Once a message such as that is displayed, any changes made are saved and you cannot move back to edit those items. If the items appear singly or all on one line, you can edit only that item or line. Moving from that item or line will save any changes and move you to the next item or line. Tabular editing screens will have "Press Ctrl+End when finished." displayed on the bottom line. You can move to any row or column and edit any item, except items in those columns which are "locked". Items in "locked" columns cannot be edited. When you finish editing on a tabular editing screen, press Control-End (Ctrl+End) or click on the box in the top left-hand corner to end and save your changes.

2. GETTING STARTED

The first item of business after installation (and data migration) is to re-index the data files. This step is necessary to reset the indexes for the current data files. All of the data files can be indexed from either the **Project Set-up Menu** or the **Process Contract Estimate Menu** (menu option 6, REINDEX FILES on either menu). You can check your migrated data by selecting option 7, BACKUP / RESTORE DATA, from the PROJECT SET-UP MENU, then selecting BACK UP. (This displays all projects, press escape (**Esc**) to exit without backing up a project.) For more information on the menus, see section 5, PROJECT SET-UP MENU and section 6, PROCESS CONTRACT ESTIMATE MENU.

You are now ready to begin to set up and process estimates using the CONTRACT ESTIMATE PROGRAM.

3. CHECKLISTS

This section is intended to assist you with the task of setting up and processing estimates.

A. Setting up the ENGINEER'S ESTIMATE, SECTION 900 and SECTION 902.

Items to have on hand before you start:
        Plan cover sheet and Section 900/902 information

MENU	ACTION
MAIN MENU	1. Project Set-up Menu
PROJECT SET-UP MENU	1. PROJECT HEADER MENU
PROJECT HEADER MENU	1. CREATE / EDIT Select NOT LISTED from the project menu.
PROJECT HEADER TYPE MENU	1. ENGINEER'S ESTIMATE Enter Project Number. Enter County Name. Enter E for English units or M for Metric units. Select OK to continue or EDIT to edit data. (Engineer's Estimate data Screen) Enter all data required on the screen, note that the field below the project number is an additional road name field. Select OK to continue or EDIT to edit data.
PROJECT HEADER MENU	1. CREATE / EDIT Select Project from the project menu.
PROJECT HEADER TYPE MENU	2. SECTION 900 (or 3. SECTION 902 - they are the same). Enter the number of working days. Enter the name of the Board President. Enter the prices for the Plans and Proposals (words and numbers).

3. CHECKLISTS - A. Setting up the ENGINEER'S ESTIMATE, SECTION 900 and SECTION 902.

MENU	ACTION

PROJECT HEADER TYPE MENU   2.   SECTION 900 (continued)
Do not enter the date or time of the letting at this time.
Select OK to continue or EDIT to edit data.

PROJECT HEADER MENU   0.   EXIT

Proceed to section B. Setting up the Project's Pay Item File (page 7).

Once the Project's Pay Item File is complete, then:

PROJECT SET-UP MENU   5.   PRINT / VIEW MENU
Select the project from the menu. Select ENGINEER'S ESTIMATE from the PRINT JOB menu. Select the Printer and Port (if necessary). Repeat the steps to print the Section 900 and Section 902.

STOP!   **Check each for errors (remember that the date and time of the letting were left blank on purpose).**

PROJECT SET-UP MENU   7.   BACKUP / RESTORE DATA
Select BACK UP, then select the project, then select the disk drive to backup to. Insert the backup disk and enter the date as prompted. **NOTE:** The year of the date has 4 digits (i.e. 1996).

PROJECT SET-UP MENU   3.   UPLOAD / DOWNLOAD DATA
Select DOWNLOAD, then select the project, insert the download disk next and then select the disk drive to download the data to. Label the disk with the project number and county. Send this disk in with your assembly, after the project is let, State Aid will return it with the estimate mat setup and ready to upload

3. CHECKLISTS

B. Setting up the Project's Pay Item File.

Items to have on hand before you start:
Quantities and Unit Prices.

<u>MENU</u>   <u>ACTION</u>

PROJECT SET-UP MENU   2. PROJECT PAY ITEM MENU

PROJECT PAY ITEM MENU   1. SELECT PAY ITEMS

SELECT PROJECT   Select Project

PROJECT PAY ITEM MENU   Select pay items from the menu of pay items, leave the menu when finished picking pay items.
Enter for each pay item:

AMT_CONT	Contracted Amount.
PRICE	Unit price.
PART_NON	P (participating)/N (non- part.) (Default P)
TY_ITEM1	Item type (ROADWAY, BRIDGE, etc.), use a " to ditto previous type (Default ").
TY_SUB1	Item sub-type (BRIDGE 1, ROAD "A", etc.), use a " to ditto previous sub-type (Default ").
TY_SUB2	Bridge alternates (ALTERNATE 1, ALTERNATE 2, etc.), use a " to ditto previous alternate (Default "). **NOTE:** If the next Bridge item is not an alternate, remove the ".)

3. CHECKLISTS - <u>B. Setting up the Project's Pay item File.</u>

<u>MENU</u>   <u>ACTION</u>

PROJECT PAY ITEM MENU   (Continued)

	TY_SUB2IX	Roadway alternates (1, 2, etc.) Enter the only number of the roadway (base & surfacing) alternate use a " to ditto previous alternate (Default "). **NOTE:** If the next roadway item is not an alternate, remove the ".)
	ALT_OUT	Enter an **X** for ALL alternate items NOT to be used in calculating the Engineer's Estimate.
	TY_DESCR	Item type (i.e. bridge) description. (ex. STA 10+12.5 3@31' PRECAST SPANS) (Default "). NOTE: If the next item (type) does not require a description, remove the ".)
	ROAD_SITE	Road/Project sections. This is useful if a project has discreet sections or segments with differing requirements (i.e. working days or unit prices) (Default "). **NOTES:** 1.) Consult with State Aid to determine If a project needs to use this. 2.) If the next item (type) does not require a description, remove the ".)

3. CHECKLISTS - B. Setting up the Project's Pay Item File.

| MENU | ACTION |

PROJECT PAY ITEM MENU

(Continued)
SPC_PROV   Special Provision, Y for 901- items, N for all others (Default N).

Press Control-End (Ctrl+End) when finished.

NOTE: Fill in all data as applicable for Non-participating items.

PROJECT PAY ITEM MENU   2. ADD INDIVIDUAL PAY ITEMS
If you were unable to locate a pay item on the pay item menu, you can add it to the project here. Select the project from the menu then fill in all applicable items with special care given to the fuel adjustment code (FUEL CODE). Once a pay item is added to the project's pay items, that pay item can also be added to the master pay item file.

PROJECT PAY ITEM MENU   3. EDIT EXISTING PAY ITEMS

EDIT PAY ITEMS MENU   2. EDIT PROJECT'S PAY ITEM DESCRIPTIONS
Select the project from the menu. Edit the pay items' descriptions. Each description has 3-35 character fields which can be edited.
Press Control-End (Ctrl+End) when finished.

EDIT PAY ITEMS MENU   0. EXIT

PROJECT PAY ITEM MENU   4. VIEW PAY ITEMS ON PROJECT
Select the project from the menu. View the project's pay item file to check for errors. The listing is in the correct order.

PROJECT PAY ITEM MENU   3. EDIT EXISTING PAY ITEMS

3. CHECKLISTS - **B. Setting up the Project's Pay Item File.**

<u>MENU</u>   <u>ACTION</u>

EDIT PAY ITEMS MENU   1.   EDIT INDIVIDUAL PAY ITEMS
                                                          Use this menu option if it is necessary to
                                                          edit any of a pay item's attributes. Select the
                                                          project then the select the pay item to edit.
                                                          Re-view the pay item file to confirm all
                                                          changes.

PROJECT PAY ITEM MENU   0.   EXIT

At this point, return to the section you were in prior to setting up the pay item file.

3. CHECKLISTS

C. Setting up the ESTIMATE MAT.

i. Setting up the ESTIMATE MAT from the Upload disk. If you did not send a download disk to State Aid with the project assembly, skip to **ii. Setting up the ESTIMATE MAT from scratch**.

Items to have on hand before you start:
Upload disk, Base fuel prices (SECTION 900, NOTICE TO BIDDERS NO. 6, in the 'Green Book'), Contract working days and the Estimate mat from State Aid.

MENU	ACTION
MAIN MENU	1. PROJECT SET-UP MENU
PROJECT SET-UP MENU	3. UPLOAD / DOWNLOAD DATA Insert the Upload disk, select UPLOAD, select the project and select the disk drive to upload from. The estimate mat data is uploaded into your system.
PROJECT SET-UP MENU	5. PRINT / VIEW MENU Select the project from the menu. Select FULL ESTIMATE MAT from the PRINT JOB menu. Select the Printer and Port (if necessary).
PROJECT SET-UP MENU	0. EXIT

Skip to **iii. Changing the project status to PROCESS (page 13)**.

ii. Setting up the ESTIMATE MAT from scratch.

Items to have on hand before you start:
Quantities, Base fuel prices (SECTION 900, NOTICE TO BIDDERS NO. 6, in the 'Green Book'), Contract working days and the Estimate mat from State Aid.

MENU	ACTION
MAIN MENU	1. Project Set-up Menu
PROJECT SET-UP MENU	1. PROJECT HEADER MENU

3. CHECKLISTS - C. Setting up the ESTIMATE MAT.

ii. Setting up the ESTIMATE MAT from scratch (continued).

MENU	ACTION
PROJECT HEADER MENU	1. CREATE / EDIT
	Select the project or NOT LISTED, if the project is not listed, from the project menu.
PROJECT HEADER TYPE MENU	4. ESTIMATE MAT
	If NOT LISTED was selected, Enter Project Number, County Name and enter E for English units or M for Metric units. Select OK to continue or EDIT to edit the data.
	Enter Project Detail Code.
	Enter Vendor # or pick from Vendor menu.
	Accept Vendor # & Information.
	Enter the rest of the Information.
	Select OK to continue, EDIT to edit data.
	Enter Part. Acct., Function & Object codes.
	Enter Non-Part. Acct., Function & Object codes.
	Enter Retainage % and Function code.
	Enter C.D. amount, if necessary.
	Enter Liq. Dam. Function code.

NOTE: All Acct., Function and Object codes will be coded as X's for SAP, LSBP, DECD and County projects.

Select OK to continue, EDIT to edit data.
Enter Contract Working Days.
Select OK to continue, EDIT to edit data.

NOTE: Repeat the above steps to Edit an Estimate Header

PROJECT HEADER MENU	0. EXIT
PROJECT SET-UP MENU	5. PRINT / VIEW MENU
	Select the project from the menu. Select CAD-001 from the PRINT JOB menu. Select the Printer and Port (if necessary).

3. CHECKLISTS - C. Setting up the ESTIMATE MAT.

ii. Setting up the ESTIMATE MAT from scratch (continued).

MENU	ACTION

Proceed to section <u>B. Setting up the Project's Pay Item File (page 7)</u>.

Once the Project's Pay Item File is complete, then:

PROJECT SET-UP MENU	5.	PRINT / VIEW MENU Select the project from the menu. Select CAD-002 from the PRINT JOB menu. Select the Printer and Port (if necessary).

STOP! **Check the CAD-001 and CAD-002 for errors before proceeding.**

PROJECT SET-UP MENU	0.	EXIT

iii. Changing the project status to PROCESS.

MENU	ACTION

MAIN MENU	2.	Process Contract Estimate Menu
PROCESS CONTRACT ESTIMATE MENU	1.	ENTER INITIAL FUEL DATA Enter the base contract prices for petroleum based fuels and materials, from SECTION 900 - NOTICE TO BIDDERS NO. 6, in the 'Green Book'. Enter the material type for petroleum based pay items as required. If you cannot find out what types of materials are to be used, use any of the types listed, it can be changed later.
PROCESS CONTRACT ESTIMATE MENU	9.	LIST ITEMS WITH REFERENCE NUMBERS This lists the pay items with project reference numbers. These reference numbers are used to identify pay items, if something needs to be changed in the future.

3. CHECKLISTS - <u>C. Setting up the ESTIMATE MAT.</u>

<u>iii. Changing the project status to PROCESS (continued)</u>.

<div align="center">

<u>MENU</u>   <u>ACTION</u>

</div>

PROCESS CONTRACT ESTIMATE   7. BACKUP / RESTORE DATA
MENU   Select BACK UP, then select the project, then
                                 select the disk drive to backup to. Insert the
                                 backup disk and enter the date as prompted.
                                 NOTE: The year of the date has 4 digits (i.e.
                                 1996).

This completes the estimate set up, the next section details how to process an estimate.

3. CHECKLISTS

D. PROCESS.

Items to have on hand before starting:

Quantities placed **THIS PERIOD ONLY**, the fuel and materials price update sent from State Aid, the estimate dates (from-to) and the **TOTAL WORKING DAYS USED** (total for project).

MENU		ACTION
MAIN MENU	2.	Process Contract Estimate Menu
PROCESS CONTRACT ESTIMATE	2.	PROCESS CONTRACT ESTIMATE

PROCESS CONTRACT ESTIMATE 2. PROCESS CONTRACT ESTIMATE
Select the project from the menu.
If you have not already, backup the project's files now, before you start processing the estimate.
Enter and/or confirm estimate data, remember that the working days used are the TOTAL working days used. CCR's, supplemental agreements, advancements, deductions and corrections are also entered at this time.
Enter the pay item quantities for the monthly estimate, negative quantities are allowed.
Mobilization and Maintenance of traffic are calculated by the program, so any input in those items is ignored. **Press Control-End (Ctrl+End) when finished**.
Enter the % mix for asphalt materials as required (3.21%=0.0321). The % mix **MUST** known before the contractor can place the material and a copy of the mix design will be on file in your office. If no asphalt materials have been placed, you can use the example of 0.0321.
Select NO if no items need to be changed for fuel adjustment, else select YES and enter the necessary information. Fuel Adjustment is then calculated.

3. CHECKLISTS - D. PROCESS

<u>MENU</u>   <u>ACTION</u>

PROCESS CONTRACT ESTIMATE MENU	5.	PRINT / VIEW Select project from menu. Select FULL ESTIMATE W/ATTACHMENTS from the PRINT JOB menu. Select the Printer and Port (if necessary). Individual estimate component documents can also be printed separately.

This completes the steps necessary to process an estimate. The next section lists those items which **<u>MUST</u>** be sent to State Aid as part of the estimate package.

3. CHECKLISTS

E. <u>SUBMITTAL</u>.

The following items are to be included as part of each progress estimate submitted to State Aid:

7 copies	CAD-001 (SA) (3 copies with original signatures)
7 sets	CAD-002-SA
1 copy	Fuel Adjustment Form(s), if any adjustments were made this period.
1 copy	Form P-1a
1 copy	Project Diary
1 copy	TCP Report (for each week of the estimate period)
1 copy	Checklist

In addition to those items listed above, the following items **MUST** be included as indicated.

Federal-Aid projects add: 1 copy of Form CAD-440

County Force projects add: 1 copy of Form MR-1

<u>NOTE:</u> If an estimate package is received at State Aid without <u>ALL</u> of the required items, it may be returned as "<u>INCOMPLETE</u>".

4. MAIN MENU
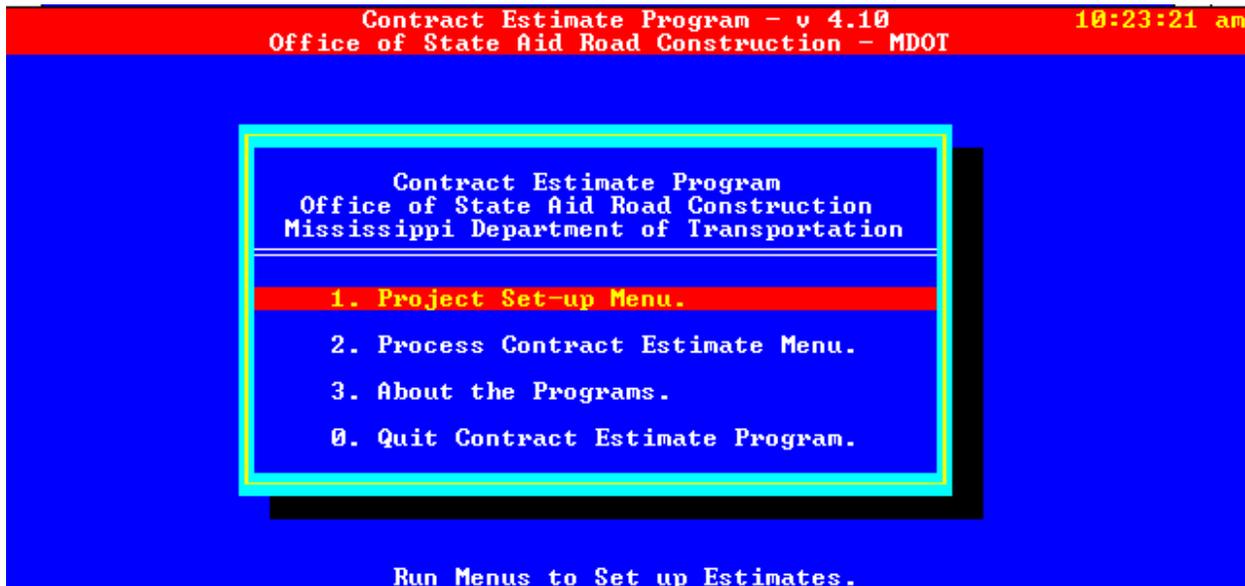
Figure 4

The MAIN MENU, shown in Figure 1, displays the characteristic configuration for menus in this program. Figure 1 also shows the other characteristic screen feature, the title bar. The title bar is shown on virtually all screens and displays the current version number.

The MAIN MENU has four (4) options: 1. Project Set-up Menu, 2. Process Contract Estimate Menu, 3. About the Programs and 0. Quit the Contract Estimate Program. Options 1 and 2 access other menu systems. Option 3, About the Programs lists program credits and the current program version number. Option 0, Quit Contract Estimate Program, ends the program and returns to the system or menu. There is no separate printer configuration option, as the printer configuration can be changed from the print menus.

5. PROJECT SET-UP MENU
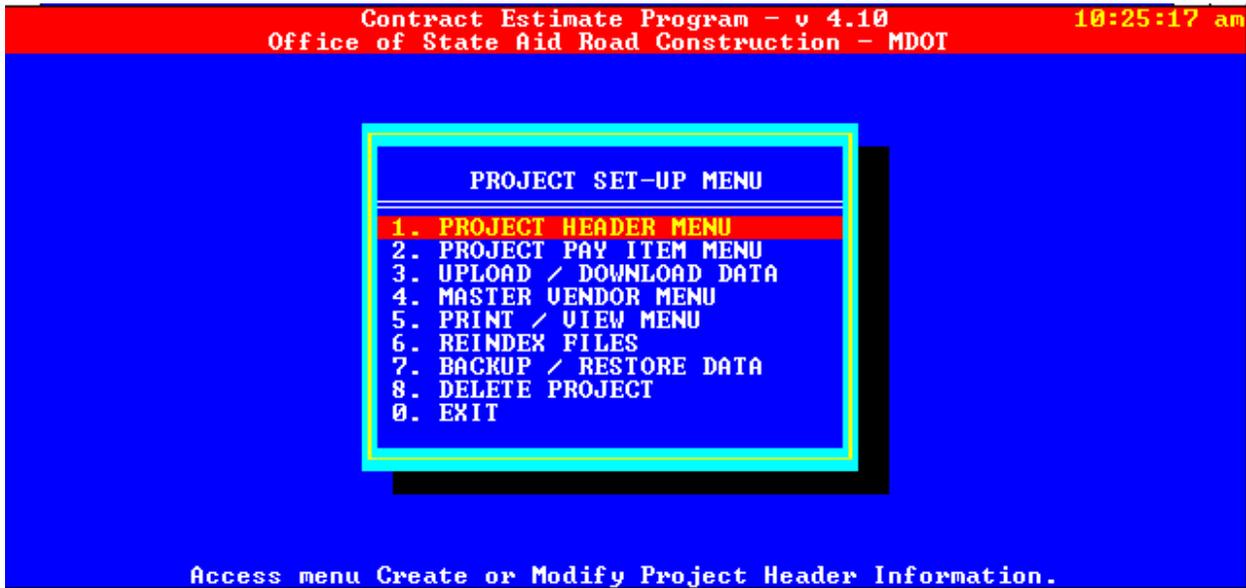
Figure 5

The PROJECT SET-UP MENU (figure 2) allows you to access several sub-menus. These sub-menus are the PROJECT HEADER MENU, the PROJECT PAY ITEM MENU, the MASTER VENDOR MENU and the PRINT / VIEW MENU. The PROJECT SET-UP MENU also has options to exchange data with State Aid (UPLOAD / DOWNLOAD DATA), reindex files, backup and restore data and delete entire projects.
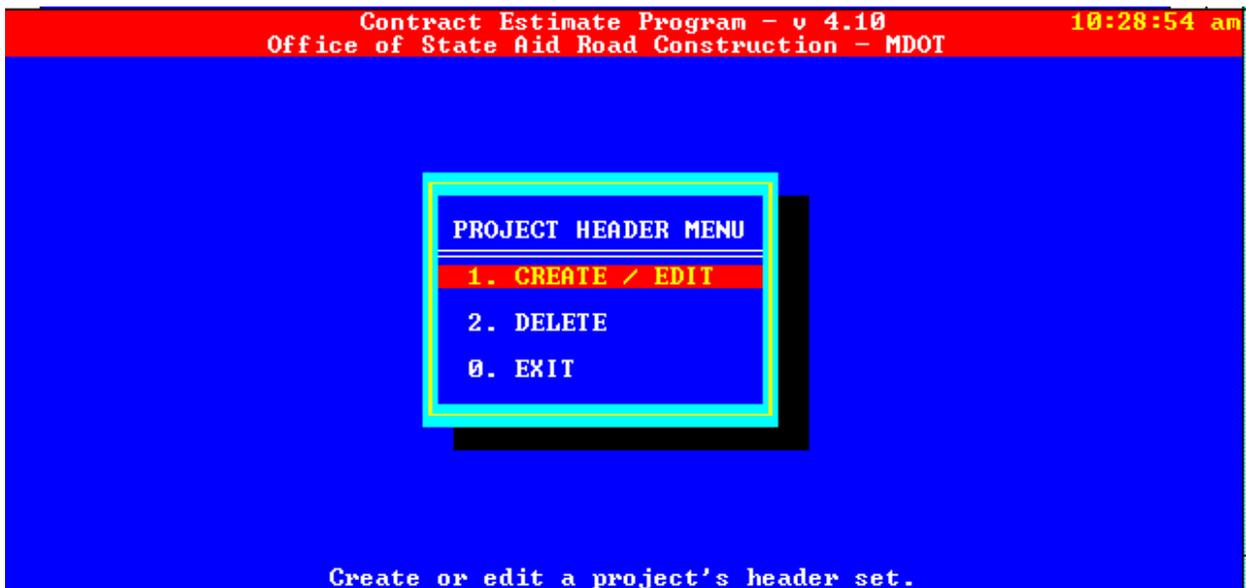
PROJECT SET-UP MENU - PROJECT HEADER MENU

Figure 6

5. PROJECT SET-UP MENU - PROJECT HEADER MENU

Option 1, PROJECT HEADER MENU, accesses the PROJECT HEADER MENU, shown in figure 3. Selecting option 1, CREATE / EDIT, allows you to start a new project by first Selecting NOT
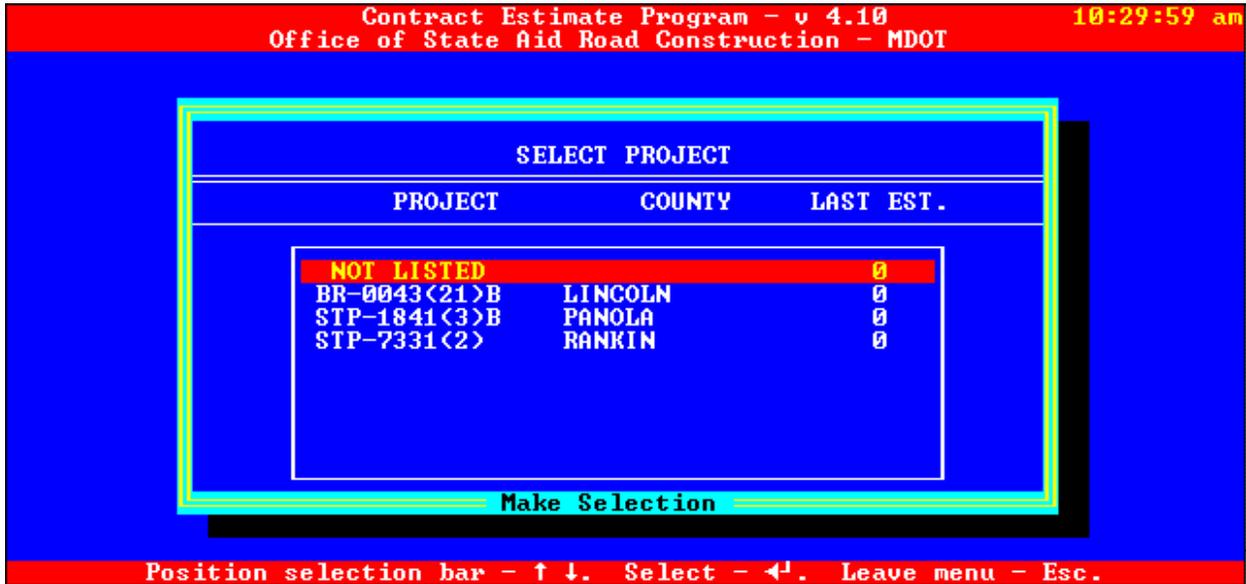
Figure 7

LISTED from the project menu (figure 4). After selecting the project, the PROJECT HEADER TYPE MENU (figure 5) is activated. The PROJECT HEADER TYPE

Figure 8

5. PROJECT SET-UP MENU - PROJECT HEADER MENU

TYPE MENU selections allow for the creation or editing of the Engineer's Estimate, Section 900, Section 902 as well as the estimate mat.

If NOT LISTED is selected, you will get the new project information screen (figure 6). From the data entered on this screen, the program determines if the project number is valid, the project's detail code and initializes several data records. The code entered for the units; E for English, M for Metric; tells the program which pay items to allow to be selected and how certain processes operate on the data. **NOTE:** non-State Aid (County) projects can be entered.

Figure 9

If you selected ENGINEER'S ESTIMATE from the PROJECT HEADER TYPE MENU you get the data screen shown in figure 7. Enter the name of the road; the project type; the lengths of roadway, bridge, project and exceptions; the width of the existing roadway (include units and it can include "and varies") and the type and width of the proposed surfacing. **NOTES:** The field between the project number and date is an additional road name field. The project type (TYPE:) fields scroll to allow more data than can be shown.

If you selected SECTION 900 or SECTION 902 from the PROJECT HEADER TYPE MENU, you get the SECTION 900/902 INFORMATION screen shown in figure 8. Enter the number of working days, date and time of letting, the place (city) where the letting is to take place, the name of the President of the Board of Supervisors and the prices for the plans and proposals. Prior to having the district Engineer set the bid date, leave the date and time of the letting blank.

5. PROJECT SET-UP MENU - PROJECT HEADER MENU

Figure 7

Figure 8

If you selected ESTIMATE MAT from the PROJECT HEADER TYPE MENU, you will enter or edit the data by on a replica of a CAD-001, first by entering the vendor number, or by choosing the contractor from a pop-up list. It is possible to add or edit vendor information at this point. Information appearing in green is default or vendor information. Information not required for a particular type of project is omitted.

5. PROJECT SET-UP MENU - PROJECT HEADER MENU

On the second screen, you enter the account (Acct), function (Fun) and object (Obj) codes. The program uses the participating codes as defaults for the remaining codes, as applicable. The contract working days are entered on the third screen.

To delete hopelessly fouled-up project headers, option 2, DELETE, can be utilized. It should be noted that this will only delete the project header data and will not affect an accompanying project pay item file, if one exists.

NOTE: Until the project's pay item file is set up, the Engineer's Estimate, Section 900, Section 902 and the Estimate Mat CANNOT be printed.

PROJECT SET-UP MENU - PROJECT PAY ITEM MENU

Next on the PROJECT SET-UP MENU is option 2, PROJECT PAY ITEM MENU (figure 9). The
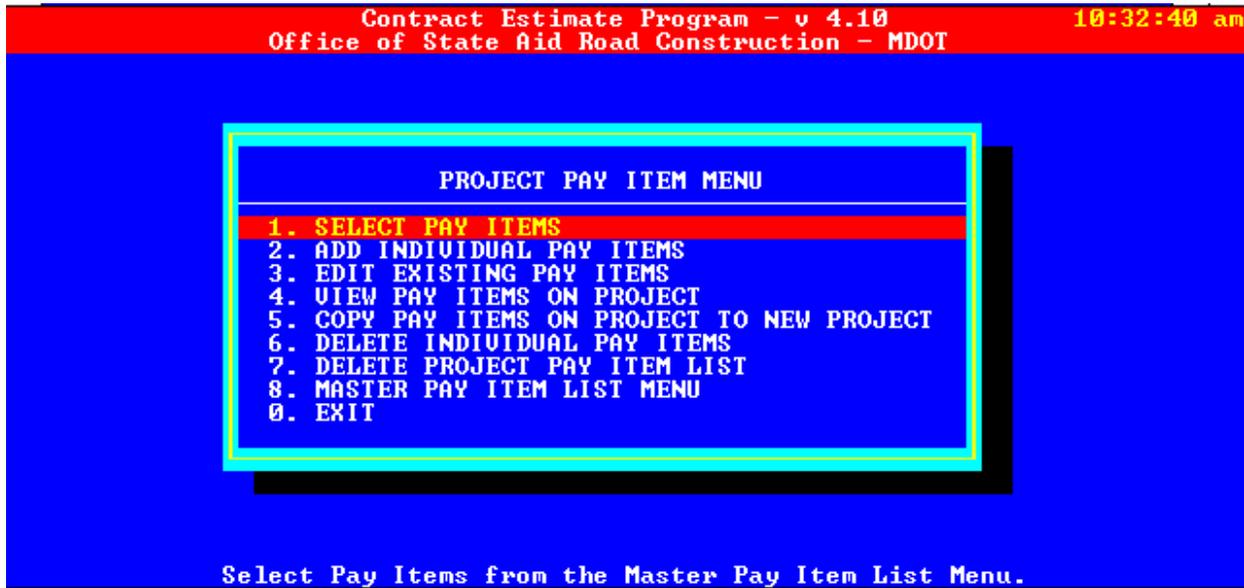

Figure 9

PROJECT PAY ITEM MENU allows you to create, add, edit, change, delete and print pay information for a project. Option 1, SELECT PAY ITEMS allows you to select the pay items from the master pay item list (figure 10). **NOTE:** Only those items with the unit type selected when the project was set up will be listed. Additionally, by typing the pay item number (quickly!), the menu bar will automatically move to that pay item. Each pay item can be picked as many times and in whatever order as is necessary, without leaving the menu. As each item is selected, its pay item number is displayed in a column on the left hand side of the screen. This column scrolls to display the last 23 pay items selected. Once all of the pay items are selected, you leave the menu and then enter the quantity (AMT_CONT), unit price (PRICE), participating/non-participating code (PART_NON) (P=participating, N=non-participating), item **5. PROJECT SET-UP MENU - PROJECT PAY ITEM MENU**

Figure 10

type (TY_ITEM1), item sub-type (TY_SUB1), bridge alternate (TY_SUB2), roadway alternate (TY_SUB2IX), alternate items not used to calculate the Engineer's Estimate (ALT_OUT), bridge description (TY_DESCR), special segment designator (ROAD_SITE) and the special provision code (SPC_PROV) (Y=item is a special provision, N=item is not a special provision). **NOTES:** 1. On item type, item sub-type, bridge alternate, bridge description and special segment designator, a double quote (") mark is used as a 'ditto' mark to copy the entry immediately above it in the table. 2. On bridge alternates and bridge descriptions, remove the 'ditto' (") on the first following item to which it does not apply. 3. Special provision items are items that begin 901-, the 901- is added to the pay item number during processing. This screen scrolls to access all pay items selected and is exited by pressing Control-End (Ctrl+End). Option 2, ADD INDIVIDUAL PAY ITEMS, lets you add a pay item for your project. Using option 2, you **MUST** enter **ALL** of the information for the pay item, including the pay item number, description, fuel adjustment code, units and unit type. You can then add that pay item information to the master pay item list. EDIT EXISTING PAY ITEMS, option 3, allows you to edit the information on pay items which have been selected for a project. Option 3 opens the EDIT PAY ITEMS MENU sub-menu (figure 11). Option 1 of the sub-menu, EDIT INDIVIDUAL PAY ITEMS, allows you to edit all of a pay item's information, from the description to the quantity of that pay item on the contract. EDIT PROJECT'S PAY ITEM DESCRIPTIONS, sub-menu option 2, allows you to edit the pay item descriptions for all of the pay items selected, for that project, in a tabular format. This option **MUST** be selected after using PROJECT PAY ITEM MENU option 1, SELECT PAY ITEMS. Using EDIT PROJECT'S PAY ITEM QUANTITIES, sub-menu option 3, you can edit the quantities, unit prices and item types, in the same tabular format used in PROJECT PAY ITEM MENU option 1, SELECT PAY ITEMS. This sub-menu option is very convenient if you use PROJECT PAY ITEM MENU option 5, COPY PAY ITEMS ON PROJECT TO NEW PROJECT. Sub-menu option 0, returns you to the PROJECT PAY ITEM

5. PROJECT SET-UP MENU - PROJECT PAY ITEM MENU

MENU. Option 4, VIEW PAY ITEMS ON PROJECT, displays a project's selected pay items on the
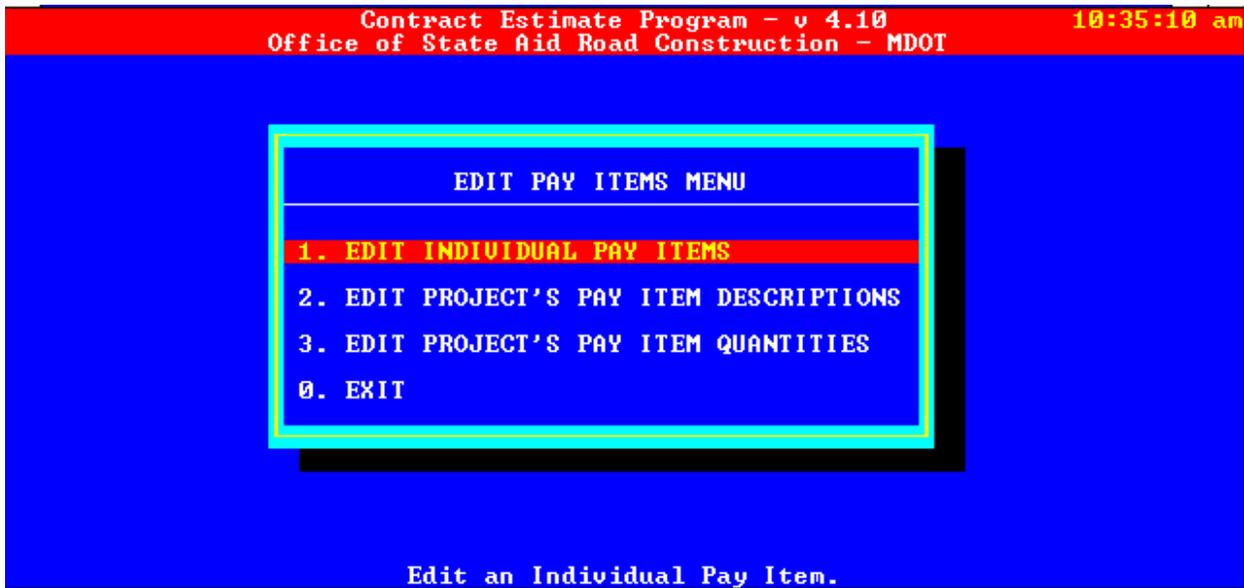
24

Figure 11

screen, in CAD-002 order, in the tabular format. COPY PAY ITEMS ON PROJECT TO NEW PROJECT, option 5, allows you to copy the pay item file of an existing project to a new one. This option, combined with the editing options, can make quick work of creating project pay item files for similar projects. PROJECT PAY ITEM menu option 6, DELETE INDIVIDUAL PAY ITEMS, allows you to delete one or more pay items from a project's pay item file. DELETE PROJECT PAY ITEM LIST, option 7, deletes the entire project pay item file. Unless you intend to delete the project's pay item file it may be best not to use this option. MASTER PAY ITEM LIST MENU, option 8, allows you to add to, edit, copy, delete from and print the master pay item list file. Option 0, EXIT, returns you to the PROJECT SET-UP MENU.

PROJECT SET-UP MENU - UPLOAD / DOWNLOAD DATA

This option allows you to exchange project data with State Aid. Select DOWNLOAD or UPLOAD to exchange data, as shown in figure 12, or CANCEL to cancel the operation. In order to download data for State Aid, you must have completed the Engineer's Estimate, Section 900 and Section 902. Data is downloaded by selecting DOWNLOAD, then the project to be downloaded, then the selecting the floppy to download to. Label the disk containing the downloaded data with the project number and county name and include it with the assembly. State aid will process the data and return the disk, containing the estimate mat, with the contract documents, ready to upload into your system. Uploading follows the same steps as downloading (except start by selecting UPLOAD).

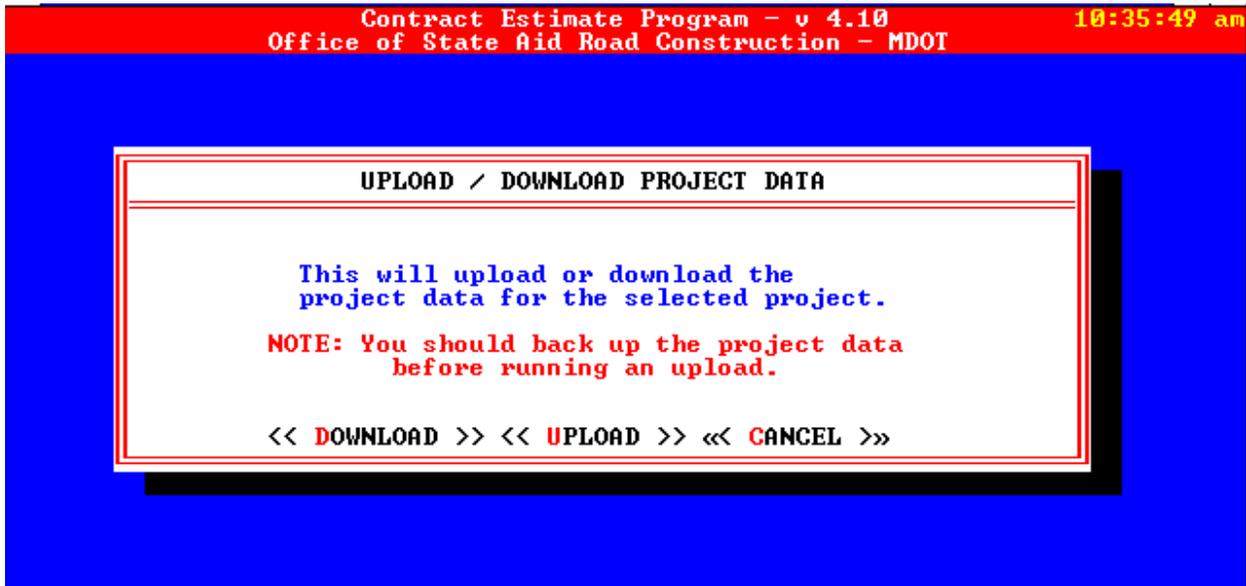## 5. PROJECT SET-UP MENU - UPLOAD / DOWNLOAD DATA

Figure 12
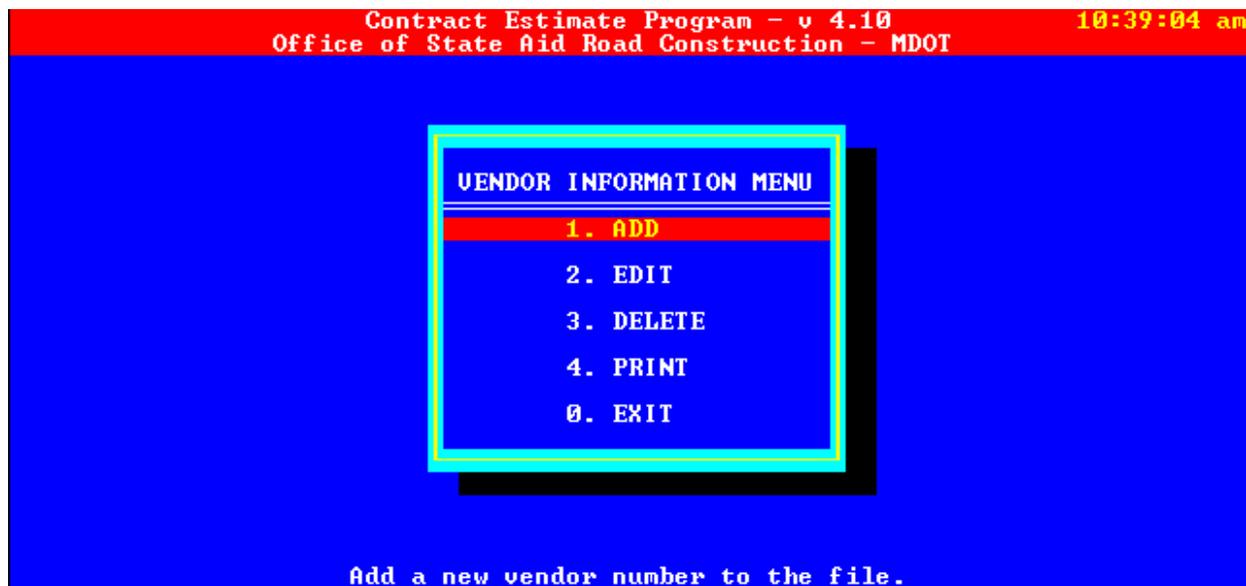
PROJECT SET-UP MENU - MASTER VENDOR MENU

Figure 13

PROJECT SET-UP MENU option 4, MASTER VENDOR MENU, opens the VENDOR INFORMATION MENU (figure 13). From the VENDOR INFORMATION MENU, you can add information for new vendors (option 1, ADD), edit information on vendors already on file (option

5. PROJECT SET-UP MENU - MASTER VENDOR MENU

2, EDIT), delete vendor information from the file (option 3, DELETE) or print the entire vendor information file for your reference (option 4, PRINT). Recall that vendor information can be edited or even added from the PROJECT HEADER MENU's option 1, CREATE / EDIT, sub-menu (PROJECT HEADER TYPE) option 4, ESTIMATE MAT. Option 0, RETURN TO MAIN MENU, returns you to the PROJECT SET-UP MENU.

PROJECT SET-UP MENU - PRINT / VIEW MENU

Selecting PROJECT SET-UP MENU option 5, PRINT / VIEW MENU, opens the print/view screen (figure 14). To print a document, select PRINT / VIEW, select the project to print the document
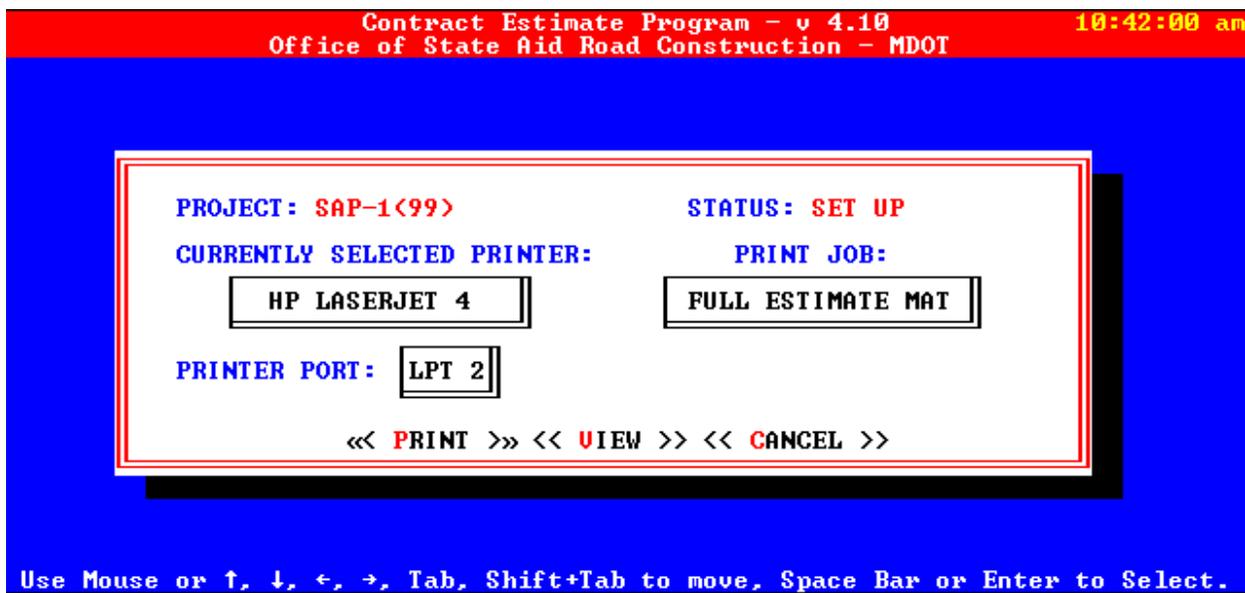
Figure 14

from, select the document to print, select the printer and port (if necessary) and select print. If you making your selections with a mouse or other pointing device; click on a box that you want to change, then **while still holding the left button down**, drag the highlight up or down, when the selection you want is highlighted, release the button. If you are making your selections using the keyboard, the PRINT JOB box will be highlighted. Use the arrow keys to move the highlight to the box you want to change (**NOTE:** Use the up and down (↑ ↓) arrows as **the left and right arrows work in reverse**!) and press either Enter (◄-) or the space bar to open the box. Use the up and down arrows to move the highlight to the selection you want, then press either Enter (◄-) or the space bar make your selection. At any time, provided the boxes are closed, you can press P to print or V to view (**NOTE:** Currently only the CAD-001 and progress fuel adjustment forms have view forms available) or press C to cancel and return to the menu. Additionally you have the option to print up to nine (9) copies (Epson LQ users can also select draft or letter quality).

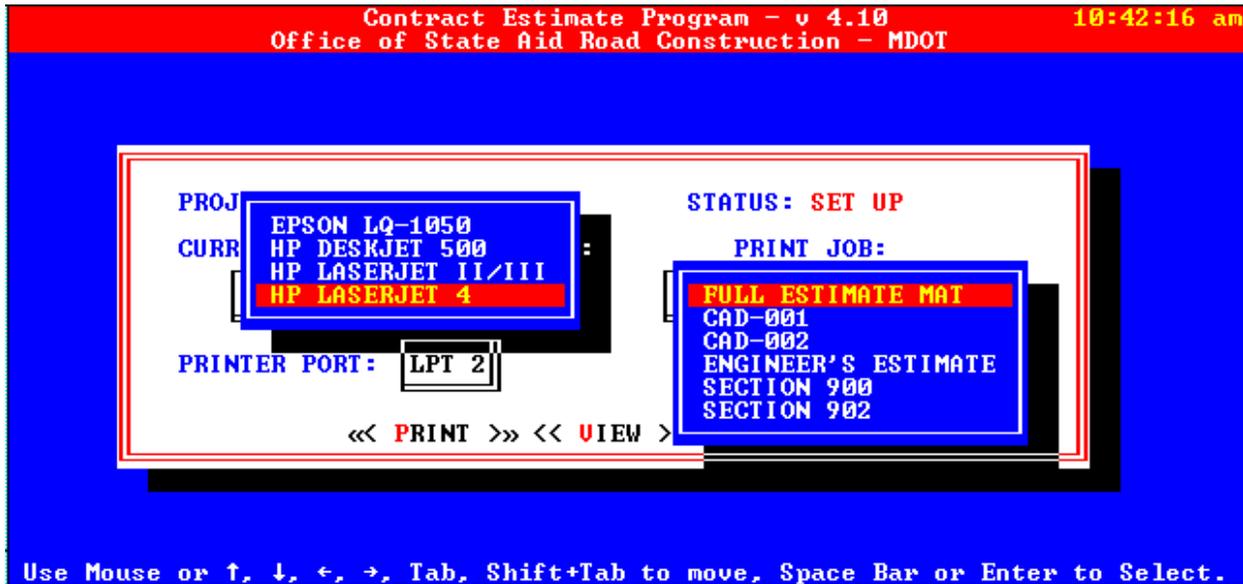## 5. PROJECT SET-UP MENU - PRINT / VIEW MENU

Figure 15

Figure 15 shows the PRINT JOB and CURRENTLY SELECTED PRINTER boxes open for a SET UP status project, figure 16 shows the PRINT JOB and PRINTER PORT boxes open for a PROCESS status project (**NOTE:** Only one box can be opened at a time, these figures are for illustration only).
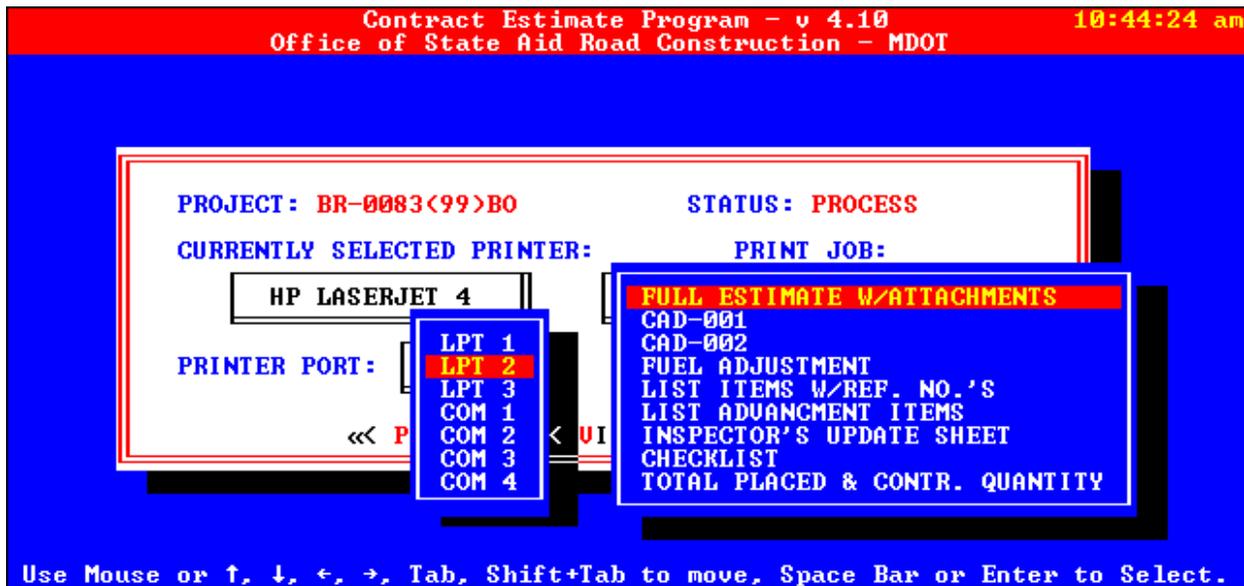

Figure 16

5. PROJECT SET-UP MENU - REINDEX FILES

PROJECT SET-UP MENU option 6, REINDEX FILES, reindexes all index files for all projects, regardless of status.

PROJECT SET-UP MENU - BACKUP / RESTORE DATA
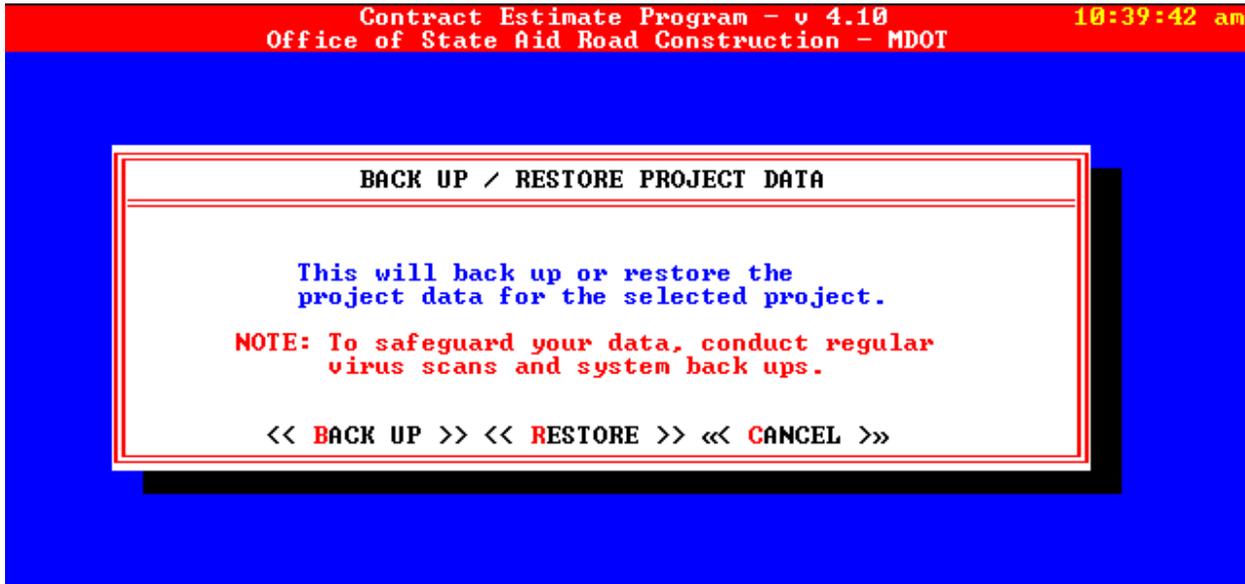
Figure 17

Selecting option 7, BACKUP / RESTORE from the PROJECT SET-UP MENU displays the screen shown in figure 17. To backup a project; select BACK UP, select the project to backup (**NOTE:** All projects are displayed on the select project menu), then select the floppy drive to backup to (remember to insert the diskette) and the program makes a backup for that specific project for that date. Restoring a project's data works the same way, starting with selecting RESTORE, then select the project (**NOTE:** If the project to be restored is NOT on the project menu, select NOT LISTED and enter the project number), select the floppy drive to restore from then enter the date (4 digit year) that the project was backed up. The program will look for the project and date you specified and if it finds it, it will restore that project's data.

PROJECT SET-UP MENU - DELETE PROJECT

Selecting DELETE PROJECT from the PROJECT SET-UP MENU allows you to delete an entire project and all of related files and forms. Once a project is deleted, it is gone and can only be recovered from a backup.

This concludes the discussion of the ESTIMATE MAIN MENU and its component sub-menus.

6. PROCESS CONTRACT ESTIMATE
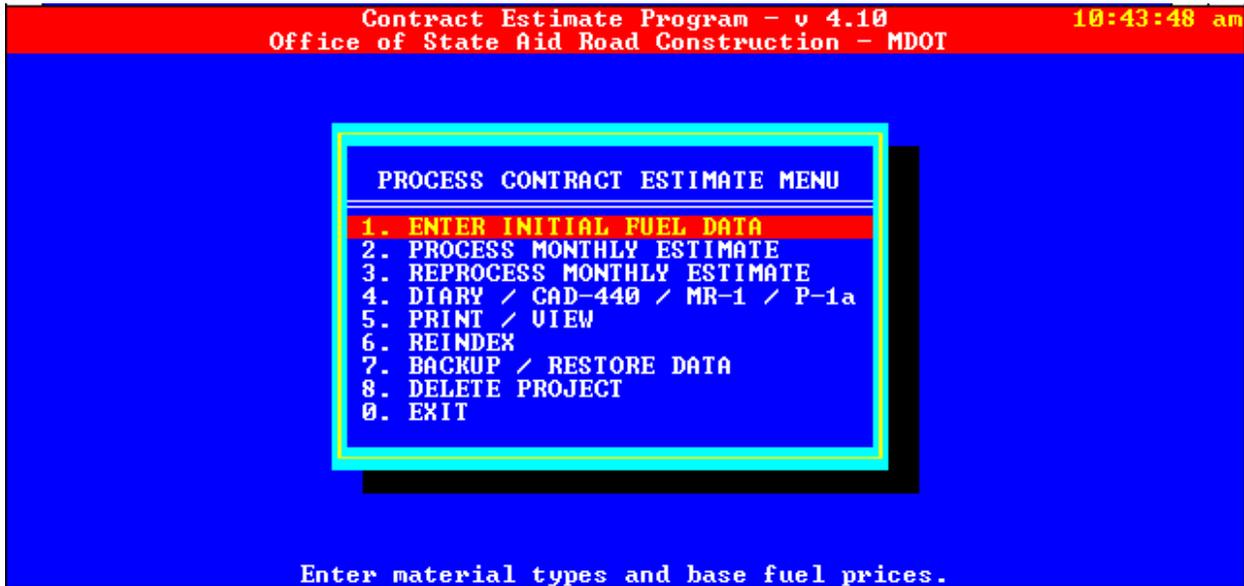
Figure 18

Option 2 of the MAIN MENU is Process Contract Estimate menu. Selecting that option opens the PROCESS CONTRACT ESTIMATE MENU (figure 18) and moves you to the 'process side' of the program.

PROCESS CONTRACT ESTIMATE - ENTER INITIAL FUEL DATA

To enter initial fuel data for a project, you will need the contract documents 'green book' open to SECTION 900 - NOTICE TO BIDDERS NO.6 to get the base fuel and petroleum based materials prices. You will also be asked for the types of petroleum based materials that are on contract, if any. If you do not know what types are to be used (usually asphalt), use one of the types given. You are given the opportunity to change the types used before calculating fuel adjustment and the type **MUST** be known before the contractor may place those materials. You will initially be asked if you wish to continue, if so press Y and press enter. Enter the project detail code, then when asked, enter the total contract working days to be allowed and the total contract dollar amount (less engineering and contingencies). The program will then ask for the base fuel and petroleum based materials prices, which are entered from the SECTION 900 - NOTICE TO BIDDERS NO.6. The program searches through the input data for petroleum based materials and asks for the type of material for that item. You will then be informed to print a reference number listing (LIST ITEMS WITH REFERENCE NUMBERS). This gives you another chance to catch any errors before you start processing estimates.

6. PROCESS CONTRACT ESTIMATE MENU - PROCESS MONTHLY ESTIMATE

Option 2 of the PROCESS CONTRACT ESTIMATE MENU is PROCESS MONTHLY ESTIMATE. You start the processing of an estimate by selecting this option. You will need all pertinent information on what work has been done during this estimate period, current fuel prices (supplied by State Aid) and the amount of liquidated damages, if necessary. If you have already backed up the project, select NO to the question "HAVE YOU BACKED YOUR FILES UP?", otherwise select YES. If you are backing-up, follow the procedure outlines in BACKUP / RESTORE DATA on page 29. Enter or update the information as required, including information on C.C.R.'s, supplemental agreements, advancements, deductions and corrections. **NOTES:** 1. ALL C.C.R.'s, supplemental agreements, advancements, deductions and corrections **MUST** be approved by State Aid **PRIOR** to being entered into the estimate. 2. For more on C.C.R.'s, supplemental agreements, advancements and deductions, see **C.C.R.'s, Supplemental Agreements, Advancements, Deductions and Corrections**, in the appendix. When asked to calculate or override the retainage, select C to calculate the retainage. The previous totals-to-date will then be rolled over to the previous totals. Next, enter the quantities used for **THAT ESTIMATE PERIOD ONLY!** Do not enter total-to-date quantities, the program calculates those for you. Enter the quantities in the THIS_PER column. The pay items are identified using the additional columns as follows: P = P for participating, N for non-participating (**NOTE:** This column is hidden on the left, click on the left arrow at the bottom to see it); TY_SUB1 = item sub-type; T = the first letter of the item type (S = supplemental agreement, R = roadway, E = erosion control, B = bridge, etc.); ITEM_NO is the pay item number; UOM is the unit of measure and ITEM_DPS1 is the first 19 characters of the pay item description. Additionally, the pay items are arranged in the order that they appear on the CAD-002. As with all tabular editing screens, it scrolls up and down and is exited by pressing Control-End (Ctrl+End). Fuel adjustment is run next. If there is no fuel adjustment for this estimate period, the message 'NO QUANTITIES TO BE ADJUSTED THIS PERIOD' will appear on the screen, in that case the fuel adjustment form(s) will not be sent to State Aid. **NOTE:** If **ADJUSTED QUANTITIES** need to have fuel adjustment calculated (on the final), enter the quantity adjustments when you enter the estimate quantities. When you are asked "ARE THERE ANY ITEMS THAT NEED TO CALCULATED AT A DIFFERENT PRICE OR % MIX THAN WHAT HAS BEEN ENTERED? (Y/N)", enter Y for yes. You will then be able to select each pay item that needs to be adjusted at a different quantity, price and/ or % mix. Enter the amount to be adjusted, the fuel and material (if applicable) prices for the month of the adjustment and, if applicable, the % mix in decimal form (3.21%=0.0321). Each item can have multiple quantity-price-% mix adjustments made, if necessary. When the fuel adjustment is printed, additional fuel adjustment forms for each different quantity-price-% mix adjustment will be printed. After the fuel adjustment has been calculated, Mobilization and Maintenance of Traffic are computed.

PROCESS CONTRACT ESTIMATE MENU- REPROCESS MONTHLY ESTIMATE

The REPROCESS MONTHLY ESTIMATE (option 3) selection works exactly like the PROCESS MONTHLY ESTIMATE option with two exceptions. The exceptions are that: 1. You are not asked to if you have backed the project up and 2. The totals are not "rolled over".

6. PROCESS CONTRACT ESTIMATE MENU

Option 4, DIARY / CAD-440 / MR-1 / P-1a, is not yet active. This option will be activated when the procedures to operate it are available.

Options 5, 6, 7 and 8 are the same for both the Project Set-up Menu and Process Contract Estimate Menu, and are described in section 5, starting on page 27.

PROCESS CONTRACT ESTIMATE - Process Print Job Descriptions

PRINT FULL ESTIMATE W/ATTACHMENTS: Prints the CAD-001, CAD-002, fuel adjustment forms (if any) and the checklist.

CAD-001: Prints the CAD-001. You verify and, if necessary, change any of the information displayed. Should you choose to do so, the changes you make can be saved. You should, however, be careful making corrections, as any errors you make will not be picked up by the program. The CAD-001 is to be printed in letter quality type, if applicable.

CAD-002: Prints the CAD-002. The program draws the required data from the databases and prints the CAD-002 in the required order and format. The CAD-002 is to be printed in letter quality type, if applicable.

FUEL ADJUSTMENT: Prints all available fuel adjustment forms, including the final fuel adjustments (for projects that have been finaled). The fuel adjustment forms are to be printed in letter quality type, if applicable.

LIST ITEMS W/REF. NO'S.: Prints a list of the project's pay items, in CAD-002 order with reference numbers. This listing is important if advancements are to be added.

LIST ADVANCEMENT ITEMS: Prints those items for which advancements have been recorded with their program reference numbers. Remember that all advancements **MUST** be approved by State Aid before entering them into the program.

INSPECTOR'S UPDATE SHEET: Prints forms for estimate data collection. The forms are identical to the checklist, but have all monthly quantities blank.

CHECKLIST: Prints forms detailing the data input into the monthly estimate. These forms are very helpful in finding and correcting errors.

TOTAL PLACED & CONTR. QUANTITY: Prints a listing of all of a project's pay items, in CAD-002 order, showing the contract quantity and total placed to date.

This concludes the discussion of the PROCESS CONTRACT ESTIMATE MENU.

APPENDIX A

Setting up the Contract Estimate Program in WINDOWS

Before beginning, you need to create a batch file to start the program (NOTE: While not entirely necessary, it makes the job considerably easier). Using any text editor, create a file called EST_96.BAT in the "NEW" Contract Estimate Program directory. Type the line **[Drive:\Path]\FOXR EST +X** Where **[Drive:\Path]** is the drive and directory of the FoxPro RUNTIME files. The **+X** allows you to take advantage of extended memory (see INSTALLATION for more information). Then save the file.

To set up the CONTRACT ESTIMATE PROGRAM in Microsoft WINDOWS 3.x or WINDOWS NT with the 3.x interface.

      A.   Install the Contract Estimate Program as directed in INSTALLATION.

      B.   Start WINDOWS.

      C.   Select (or create) the Program Group where you want to locate the Contract Estimate Program.

      D.   Select 'File' from the upper left hand corner of the Program Manager then select 'New' from the menu. Click 'OK' for Program Item.

      E.   Enter 'Contract Estimate Program' for the window title. NOTE: You might have to play with the spacing on the title line to get it looking just right.

      F.   Enter 'PATH\EST_96.BAT' for the Command Line, where PATH is the path i.e. C:\EST_96.

      G.   Enter the path for the Working Directory (see path above).

      H.   Leave the Shortcut Key 'NONE'.

      I.   Leave the Run Minimized box unmarked.

      J.   Click on 'Change Icon' then on 'OK' for no icon available.

      K.   Change the File Name to 'PATH\EST_96.ICO' (see path above) and click 'OK' a total of three (3) times.

      L.   Double click the Estimate icon to start the program.

To set up the CONTRACT ESTIMATE PROGRAM in Microsoft WINDOWS 95 or WINDOWS NT with the 95 interface.

A.   Install the Contract Estimate Program as directed in INSTALLATION.

B.   Start WINDOWS.

C.   Open (double click) Explorer

D.   Locate the EST_96.BAT file and highlight it.

E.   Select **File** then **Create Shortcut** from the menu at the top of the Explorer window.

F.   Drag the new file **Shortcut to EST_96** from Explorer onto the desk top.

G.   Right click (press the right mouse button) on the **Shortcut to EST_96** to open the properties menu.

H.   Select **Rename** and change the name to "Contract Estimate Program" (or whatever you want).

I.   Right click on the **Shortcut to EST_96** to open the properties menu (again).

J.   Select **Properties**.

H.   Select the **Program** tab.

K.   Change **Run** to **Maximized**.

L.   Click **Close on Exit** (to put an X in the box).

M.   Click **OK** to save the changes.

N.   Click the EST_96 icon to start the program.

-OR-

Right-Click on the Desktop. From the pop up menu, select New and Shortcut. For the Command line enter:

C:\FPD26RT\FOXR.EXE C:\BRIDGE\OSARC_M0 +x

Adjust the properties starting with letter G above.

Downloading from State Aid

State Aid is currently planning to have a computer bulletin board service (BBS) on-line by the fourth quarter of 1996. This will enable you, the County Engineer, to keep abreast of events within State Aid and to enable you to download the most up-to-date State Aid furnished software.

State Aid has converted our methods of generating pay item documentation (section 902, bid tabs, etc.) to utilize the methods contained in the Contract Estimate Program. Because of this change, State Aid can now exchange project information, from the program, with you. See PROJECT SET-UP MENU - UPLOAD / DOWNLOAD DATA, page 25 for the details.

We will keep you informed as to the progress of the State Aid BBS.

C.C.R.'s, Supplemental Agreements, Advancements, Deductions and Corrections

C.C.R.'s

If a project has an approved Construction Change Request or a Change Order (both known as C.C.R.'s), you will need to read this carefully. In option 2, PROCESS MONTHLY ESTIMATE, or option 3, REPROCESS MONTHLY ESTIMATE, on the PROCESS CONTRACT ESTIMATE MENU, you answer the question "Update the CHANGE ORDER file?(Y/N)" **Y** and continue editing the information on the screen. You will then be asked " ADD, CHANGE OR DELETE A CHANGE ORDER". Select **YES** to add, change or delete one or more C.C.R.'s. Next select **ADD**, **EDIT**, **DELETE** or **CANCEL**. If you select **ADD**, you will then asked if you want to "ADD CCR x TO project?" where x is the C.C.R. number (which is automatically incremented). Select **YES** and enter the amount on line "F" of the C.C.R. form in the space provided, if the amount is correct, select CONTINUE to continue. The program then opens the EDIT PROJECT'S PAY ITEM QUANTITIES editing screen. Edit the quantities **ONLY** for the items affected by the C.C.R. and press **Ctrl+End** when finished. Once you have completed all C.C.R.'s, select **CANCEL** to continue to the next process/reprocess step. **NOTES: 1**. If you select **EDIT**, you cycle through all available C.C.R.'s for the project to select those that need to be edited. **2**. The **DELETE** selection will allow you to delete only the **LAST** C.C.R. entered. **3**. If the C.C.R. changes the unit price for a lump-sum item, mobilization for example, answer the question "Correct Pay Item?(Y/N)" **Y** and continue editing the information on the screen. You will then be asked "CORRECT PAY ITEM ERRORS?". Select YES and select option 3, EDIT PROJECT'S PAY ITEM QUANTITIES, from the EDIT PAY ITEMS MENU to change the appropriate unit price(s).

SUPPLEMENTAL AGREEMENTS

If a project has an approved supplemental agreement, you will need to read this carefully. In option 2, PROCESS MONTHLY ESTIMATE, or option 3, REPROCESS MONTHLY ESTIMATE, on the PROCESS CONTRACT ESTIMATE MENU, you answer the question "Add a SUPPLEMENTAL AGREEMENT items now?(Y/N)" **Y** and continue editing the information on the screen. The screen to add a supplemental agreement item will then appear with the question "ADD SUPPLEMENTAL AGREEMENT ITEMS?", select **YES** to proceed. You are then sent to the pay item menu to select and then edit the supplemental agreement item. The item is then added to the project's pay item file. You may select more than one item, if the supplemental agreement calls for it. **NOTES: 1**. **Supplemental agreement items cannot be deleted**. If an incorrect item is selected, the project will have to reloaded from the latest backup. **2**. If the supplemental agreement adds items **AND** changes the unit price of one or more items, select EDIT PROJECT'S PAY ITEM QUANTITIES from the EDIT EXISTING PAY ITEMS MENU to make the changes. **3**. If the supplemental agreement **ONLY** changes the unit price of one or more items, see Note 3 in C.C.R.'s, above.

C.C.R.'s, Supplemental Agreements, Advancements, Deductions and Corrections

ADVANCEMENTS

If a project has approval for the advanced storage or stockpiling of construction items, you will need to read this carefully. In option 2, PROCESS MONTHLY ESTIMATE, or option 3, REPROCESS MONTHLY ESTIMATE , on the PROCESS CONTRACT ESTIMATE MENU, you answer the question "Add to the ADVANCEMENT file now?(Y/N)" **Y** and continue editing the information on the screen. You will be asked "ADD TO THE ADVANCEMENT FILE?", select **YES** to continue to add an advancement. You are then asked to "PICK ITEM TO ADVANCE". Select the item to advance from the project's pay item file. Enter **A** for automatic updating or **M** for manual updating. Enter **A** for automatic updating. The rest of the required information is entered next. You then may add another. **NOTE: 1. Advancements cannot be deleted, nor can the initial information be edited**. Mistakes can only be corrected by reloading the project from the latest backup. **2**. If the advanced quantity is to be placed against several sites, you need to split the total advanced quantity among the sites as appropriate. For example, the contractor has approval to stockpile 500 LF of 40' PS concrete beams and the project has 3 bridge sites, each requiring 200 LF of 40' PS concrete beams. Advance 200 LF against the 40' PS concrete beam items in sites 1 and 2 and 100 LF against the 40' PS concrete beam item in site 3.

DEDUCTIONS

If an overpayment has been made and State Aid wants to correct this overpayment, you will need to read this carefully. In option 2, PROCESS MONTHLY ESTIMATE, or option 3, REPROCESS MONTHLY ESTIMATE, on the PROCESS CONTRACT ESTIMATE MENU, you answer the question "Update the DEDUCTION file?(Y/N)" **Y** and continue editing the information on the screen. You will then be asked "UPDATE THE DEDUCTION FILE". Select **YES** to update. Select **ADD** to add a deduction, enter the description of the deduction and its amount in the spaces provided. Select **EDIT** to edit or **DELETE** to delete a deduction entry. Cycle through the available entries to find the correct one to edit of delete.

Corrections

If a pay item on an active estimate needs to be corrected, read this carefully. After determining that a pay item on an active estimate is incorrect, first consult with State Aid. In option 2, PROCESS MONTHLY ESTIMATE, or option 3, REPROCESS MONTHLY ESTIMATE, on the PROCESS CONTRACT ESTIMATE MENU, you answer the question "Correct Pay Items ?" **Y** and continue editing the information on the screen. You will then be asked "CORRECT PAY ITEM ERRORS". Select **YES** to proceed to the EDIT PAY ITEMS MENU. Make whatever changes have been discussed.

ACKNOLWEDGEMENTS

DOSSHELL, FoxPro, Windows, Windows 3.1, Windows NT and Windows 95 are trademarks of the Microsoft Corporation.

dBASE and dBASE IV are trademarks of Borland International.

APPENDIX B

ALTERNATE PAY ITEMS

It is not unusual for projects to contain alternate pay items, i.e. items or groups of items to be bid in lieu of another such set or, as in the case of asphalt prime coats, items from which the contractor can select at the time of application. These alternate pay items need to be selected as part of the process of building the pay item file for the Engineer's Estimate, Section 900 and Section 902.

Alternates for Asphalt Prime Coats

Typical asphalt primes are S-408-A, Cut-Back Asphalt for Prime Coat, Grade MC-70 and S-408-B, Emulsified Asphalt for Prime Coat, Grade EA-1. When these items are bid as alternates, they are considered to be one item, with the contractor deciding which to use at the time of application. In order for these items to handled properly by the program, the pay item descriptions must be edited properly. To indicate to the program that these items are to be an "on the project" choice by the contractor: Place the word **OR** (capital letters preferred) as the last characters in the **ITEM_DPS1** field or **ITEM_DPS2** field **FOR ALL BUT THE LAST ALTERNATE ITEM**. The sample Engineer's Estimate shows **OR** as the last 2 characters in the **ITEM_DPS2** field for S-408-A. **DO NOT** put **OR** in the description of the last item, the program combines the items with **OR** as the last characters with the next item in the file, as shown on the sample Section 900. Place an **X** in the **ALT_OUT** field **FOR ALL BUT THE FIRST OF THESE ITEMS**, to prevent them from being used in calculating the Engineer's Estimate.

NOTE: Items with an **X** placed in the **ALT_OUT** field appear in the Engineer's Estimate with 0.00 * in the AMOUNT column.

Base and Surfacing Alternates

If a project includes base and surfacing alternates, indicate each alternate set by placing the number of the alternate (1,2, etc.) in the **TY_SUB2IX** field for each of the included items. It should be noted that only numbers are allowed. When base and surfacing alternates are so indicated, the program produces the results shown in the sample Engineer's Estimate, Section 900 and Section 902. Remember to place an **X** in the **ALT_OUT** field for base and surfacing alternate items not to be used to calculate the Engineer's Estimate.

ALTERNATE PAY ITEMS

Bridge Alternates

If a project includes alternate bridge designs, indicate the alternate items by typing ALTERNATE 1, ALTERNATE 2, etc. in the **TY_SUB2** field for each of those items. You can (should) enter the station and bridge description (see the samples) in the **TY_DESCR** field to make differentiating the alternates easier. Again remember to place an **X** in the **ALT_OUT** field for bridge alternate items not to be used to calculate the Engineer's Estimate. **NOTES:** 1. The **TY_SUB2** and **TY_DESCR** fields are "pre-dittoed", so you only have to type the information for the first item. 2. Because these fields are "pre-dittoed", you must "un-ditto" the **TY_SUB2** and **TY_DESCR** fields for first item following the alternate (or bridge) to which the alternate or description does not apply (as in the case where Bridge "A" has alternates and Bridge "B" does not).

ENGINEER'S ESTIMATE

SECTION 900

SECTION 902

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