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Introduction

EBASE is a very flexible, user friendly system for developing estimates for your projects. You may use this system throughout the entire development of a project. The estimates module will take you from project definition estimates to the PS&E phase, and the bids module will continue the process through advertisement, bid opening and award.

This system is not limited to simply building production estimates for projects, you may also use EBASE for things such as "what if...?" scenarios. You need not enter an entire estimate, you may enter as much or as little information as you want, and then add or subtract information at your leisure from that point forward. You may print out reports with as little data entry as one item and one column.

EBASE also allows all users of the system to view all estimates electronically, thus enabling you to share information more quickly and easily. Also, there is the added convenience of having the Standard Bid Item Table (S.I.T.) and Unit Bid Analysis (U.B.A.) easily accessible from the estimates module.

No matter how you plan on using EBASE, I'm sure that you will be pleased with the ease and intuitive nature of this new system. The instructions in this manual lead you through the process of creating a PS&E estimate.

Developing an estimate

An estimate for a project may be passed on from its original conception all the way to the opening of bids for that project.

As an estimate is developed from a project definition estimate to an " L " job estimate and on to a PS&E job number; it may be renamed several times in the process.

Please insure that you are working with only the latest version of an estimate. It will do the designer no good to be changing an " L " number estimate when the project estimate has already been renamed and assigned a PS&E job number (e.g. 05A001)

Getting Started

Broadcast Message

This screen will inform you of upcoming system maintenance and other pertinent information. After reading the message you may close this screen by clicking the Close button.

You will now be at the Ebase Start screen, there are three buttons that you may select on this screen.

Exit:

This will exit you from EBASE

Estimates:

This is a list of existing estimates.
(see *Accessing Existing Estimates for more information*).

New:

Click on this button to create a new estimate.
The New Estimate screen will be displayed.

Std Item:

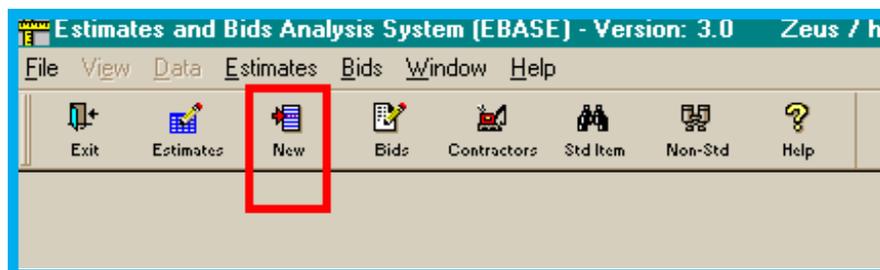
Click on this button to view the Standard Item Table (S.I.T.) without entering the Estimates or Bids databases. Once the S.I.T. is open you may print the S.I.T. of your choice: English & common, or Metric & common.

If you are interested in the Bid History of a particular Standard Item in the Standard Item Table perform a right click on that item, this will display a listing of all the contracts that the particular bid item was used in.

From this listing you may right click on any of the contract numbers displayed to show contract specific information.



EBASE Tip:
If the Estimates you create are not being placed in the correct Region, While you are at the Ebase Start screen from the pull-down menus select, "File" "Change Region." Click on the desired Region to highlight and click "Close". You have just changed your default Region

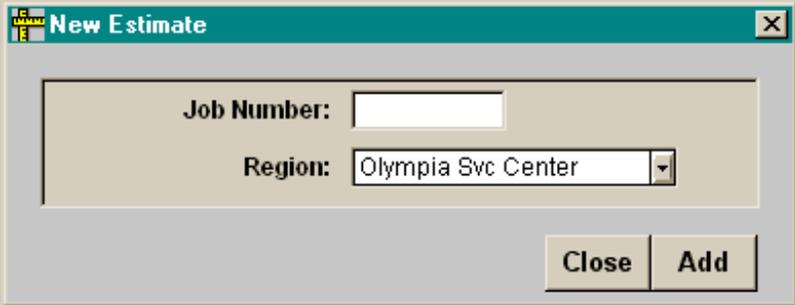


Creating a New Estimate

Job Number:

Enter the name you wish to call your estimate or the PS&E job number of the project for which you are developing an estimate. For example you may use an estimate name such as MIKE2 or a PS&E job number such as 98Y003. If you are creating a project definition estimate you will need to use a name, as a PS&E job number will probably not be available at such an early phase.

Estimate names may not exceed 6 characters in length. PS&E job numbers must be 6 characters in length.



The screenshot shows a window titled "New Estimate" with a close button in the top right corner. Inside the window, there are two input fields: "Job Number:" followed by an empty text box, and "Region:" followed by a dropdown menu showing "Olympia Svc Center". At the bottom right of the window, there are two buttons: "Close" and "Add".

Region:

Select your Region, Olympia Service Center, Marine or Urban Cooridors from the pull down menu. Select **"Add"** to add this estimate to the database , or **"Close"** to abort the procedure. If you select **"Add"** you will be asked if you are sure you want to create the estimate. Select **"Yes"** if you are sure. The Estimates Window screen will be displayed and you may begin entering data.

REVISION

General Info Tab

Estimates and Bids Analysis System (EBASE) - Version: 3.2 .1 Zeus / humepot / EBASE System Administrator

File View Data Estimates Bids Window Help

Exit Close Estimates Reports Std Item Non-Std Help

Estimates Window Job Number: 012017 Version: 2

General Info | Text Data | Funding | Groups | Columns | Bid Items | Non-Bid Items

Identification Information:

Title: **SR90
HARVARD RD I/C
WESTBOUND OFF-RAMP
012017** Last Update: 10/02/2001
Locked:

Contract Number: 000000 Work Order Number: 0L3139 Measurement System: METRIC
Region: Eastern Contingency Percentage: 5.00%
W.I.N: F09029R Engineering Percentage: 14.00%

Contacts:

Design Project Engineer: KEN OLSON Estimator: DAVE DEAN
Construction Engineer: KEN OLSON

Save Summary of Quantities Revisions Access Duplicate / New Version

General Info tab

The **General Info tab** is the first tab in the Estimates Window screen that you will want to fill in. This tab will contain some basic information for the estimate. Click on each of the following:

Title *This area consists of four lines:*

1. Enter the state route or county road, etc. (*press enter*)
2. Enter the first line of project title (*press enter*)
3. Enter the second line of title (*leave blank if not needed*) (*press enter even if left blank*)
4. Enter the PS&E job number (*You must fill in a valid PS&E job number before the project goes on Ad. If a PS&E Job no. is unavailable leave blank, or use your estimate name*)

Last Update (*If you are creating a new estimate, this field will be blank*)

This date is an automatic field and shows the last date an existing estimate was modified.

Locked (*If you are creating a new estimate, this field will be blank.*)

A " Y" will appear in this field if an existing estimate has been locked. An EBASE Administrator will lock an estimate and load it to the Bid Module some-time prior to a project going on Ad. All subsequent versions will be locked until bids are opened.

Contract Number

This is the number that is assigned to a project by the OSC Accounting Office when a project goes to advertisement (i.e. 005316). The contract number is entered in the bids module and is a display only field in the estimates module.

Work Order Number

Enter the work order number that preliminary engineering work is billed against (i.e. 0L1234).

Measurement System

English is the default measurement system. If your project is Metric, you will need to select *Metric* from the pull down menu.

Region

This will already be filled in from the previous screen as one of the Regions, Olympia Service Center, Marine or Urban Corridors.

W.I.N.

Enter the **Work Identification Number** which this project is assigned to.

Contingency Percentage

Enter the contingency percentage in decimal form.
(i.e. If 4.00% then enter .04)(*See Construction Engineering Percentages & Contingencies*)

Design Engineer

Enter the name of the Design Engineer overseeing the project definition, design, or PS&E project for which you are developing an estimate.

Construction Engineer

Enter the name of the Construction Engineer overseeing the construction of the project for which you are developing an estimate.

Estimator

Enter your name in this box.

Engineering Percentage

Enter the appropriate construction engineering percentage in decimal form.
(*See Construction Engineering Percentages and Contingencies*). *Note: All percentages must be entered in decimal form*
(i.e. If 18.00% then enter .18)

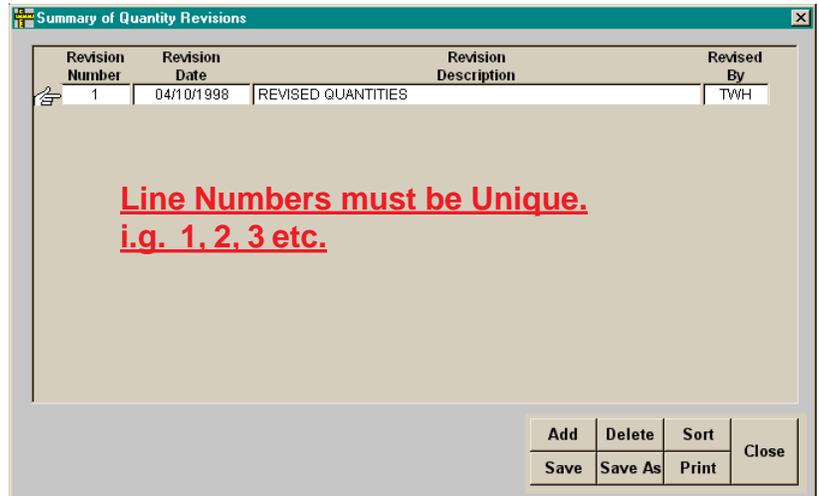
In addition to the data fields in the General Info tab there are four buttons

Save Click the **Save** button to ensure that your data will be saved.

Summary of Quantities Revisions

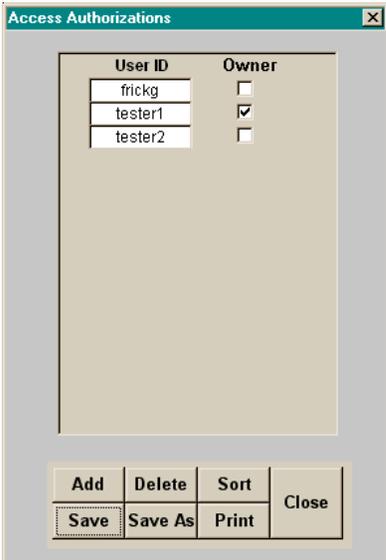
This window allows you to enter and save any revision information that will be printed in the revision block of the summary of quantities plan sheet.

(for use when making changes to the summary of quantities by addendum only)



Access When you create an estimate, you are automatically entered as the owner. As the owner of the estimate you may grant access rights to users who may make modifications to the estimate. You may also remove access rights from users.

To give access rights to a user, click on the **Access** button. The Access Authorization window will appear. Click on **Add**, enter the user's I.D. and click **Save**. To remove access rights from a user highlight the user's I.D. , click **Delete** and click **Save**.



As the owner of an estimate, you may transfer ownership to another user by Clicking the Add button, entering the ID of the new owner and placing a check in the ownership box next to the new ID. Then select your user ID and remove the check, or delete your ID entirely using the delete key to complete the ownership transfer.

Any user in the EBASE system without access rights may view and print reports from your estimate or duplicate your estimate under a new job number. However they will not be able to modify your estimate.

Duplicate/New Version This will allow you to duplicate an estimate with a new job number or create a new version of an estimate with the same job number. Select the **Duplicate/New Version** button.

Duplicate: You may duplicate any estimate by assigning a new job number. You are in essence creating a duplicate estimate with a different name. The original estimate will remain unchanged. Click on the New Job Number box and enter the new job number (or name if a job number is not yet available). The version number will default to version one.

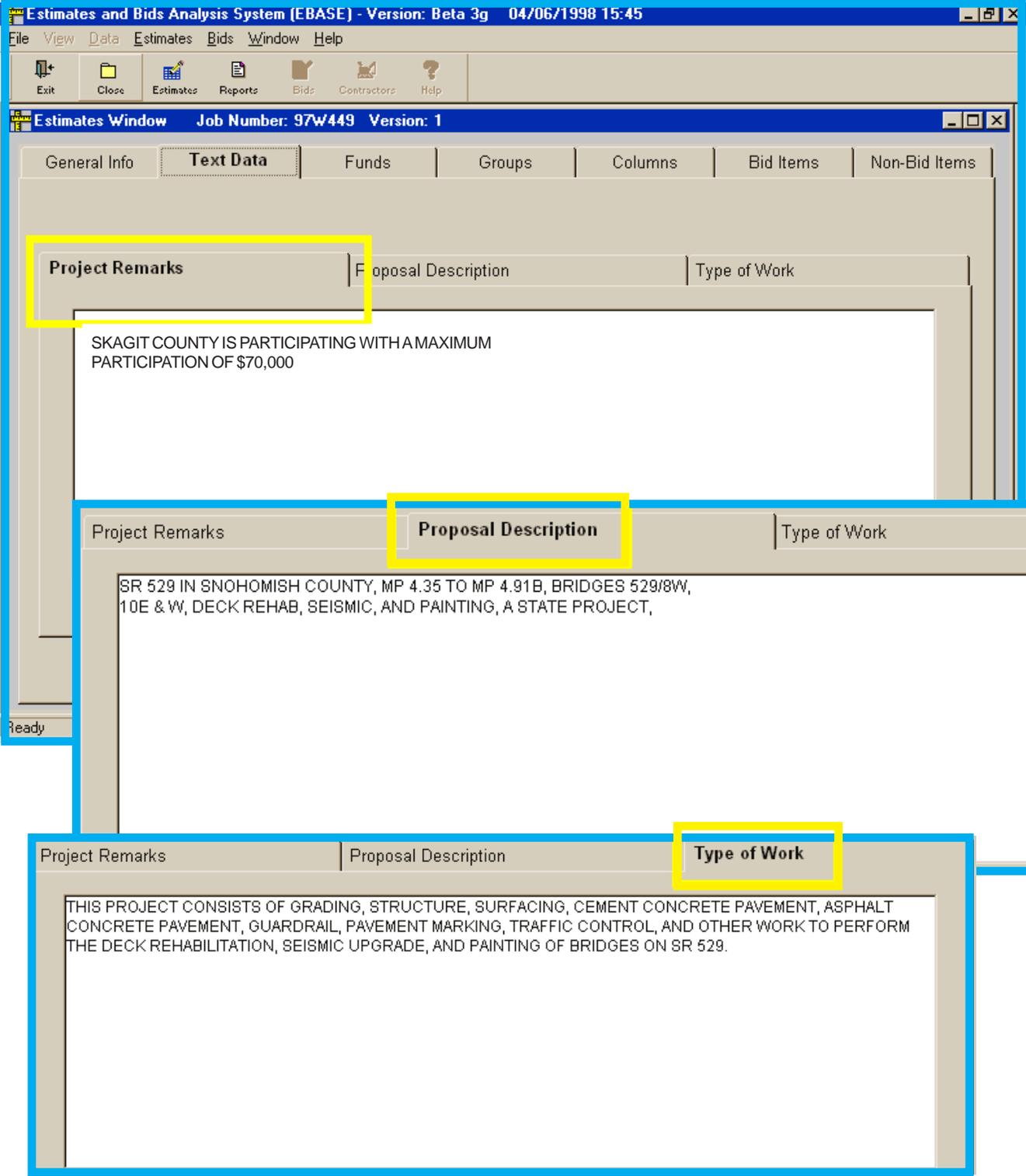


All EBASE users may use the duplicate function whether they have been granted access rights to an estimate or not. If you duplicate an existing estimate, you may make modifications to the duplicate estimate. As you are now the owner of that estimate.

New Version: Select **OK** to advance the version number of an estimate while maintaining the same job number. The user must have access rights to the estimate to perform this function.

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Text Data Tab



Text Data tab

Provides an area to enter project level descriptive remarks.

The Text Data tab contains three sub tabs:

Project Remarks (subtab)

In this area, enter project level comments such as: haul road agreements, no cost service agreements, and other project level comments.

Click **Save**.

Proposal Description (subtab)

Enter the required narrative which contains the state route number(s) ,county(ies), milepost limits for each state route, the project title, federal aid number or state project.

The last character in the Proposal Description shall be a comma.

Example:

SR 5, MP 230.55 VICINITY, AND SR 512, MP 0.00 TO MP 3.51,
IN PIERCE COUNTY, SR 512 INTERCHANGE MODIFICATIONS,
A FEDERAL AID PROJECT,

Click **Save**.

Type of Work (subtab)

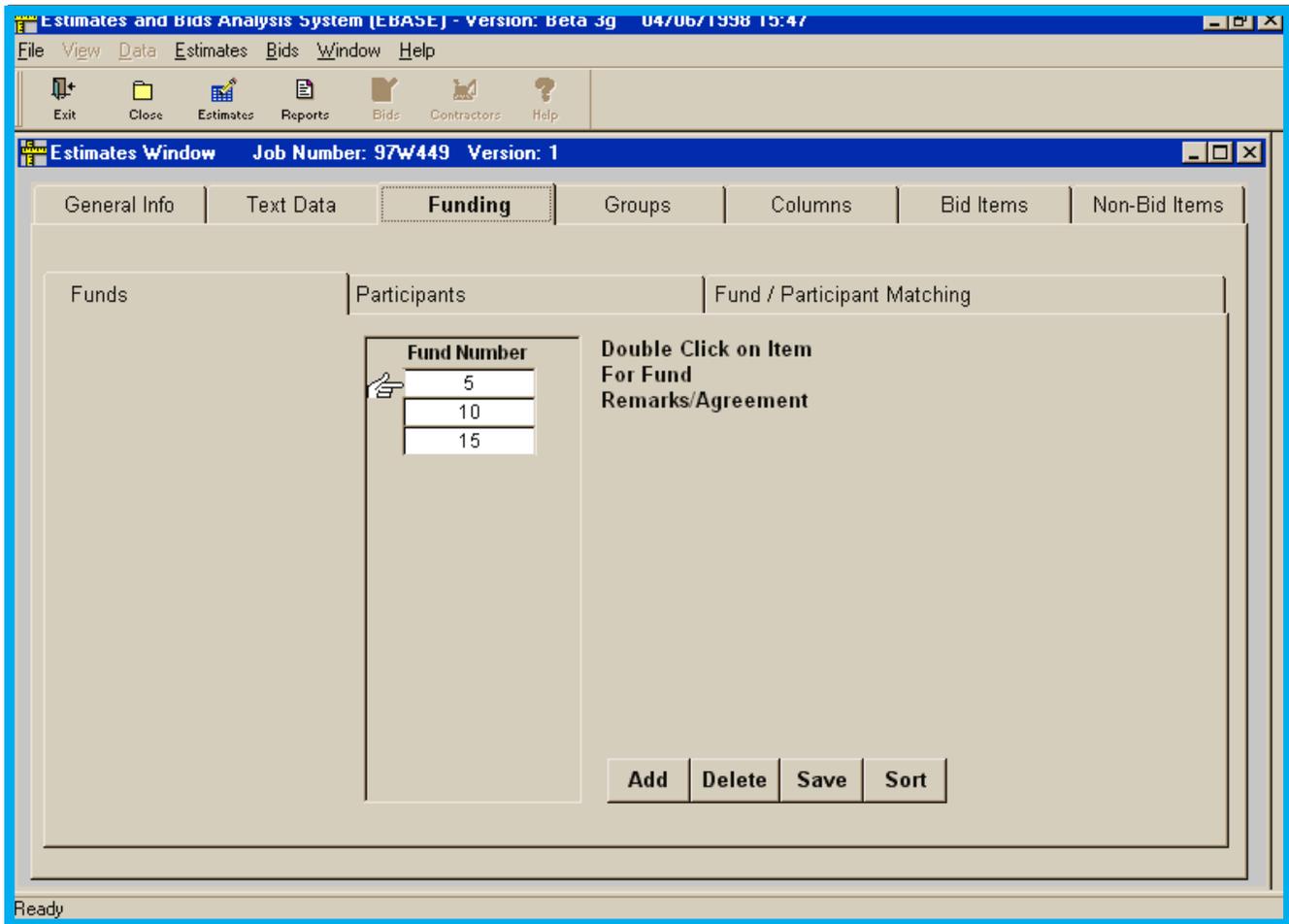
Enter a concise description of the type of work involved in the project. This description may not exceed 4 lines of text.

Click **Save**.

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Funding Tab

(funds)



Funding tab

(Complete the Funding tab before attempting to assign any funds in the Groups tab)

A Fund is comprised of a Participant, or grouping of participants who have agreed to pay for a project or specific portions of a project.

The purpose of the Funding tab is to provide a space to setup and control these participants and the funds to which they are assigned.

The Funding tab consists of three subtabs.

Funds *(subtab)*

A fund number is an Identifier to which fund participants are assigned.

Begin entering the fund numbers by clicking the **Add** button.

This will bring up a data field to enter the fund numbers.

(you must enter a number in each field before you can add a new field)

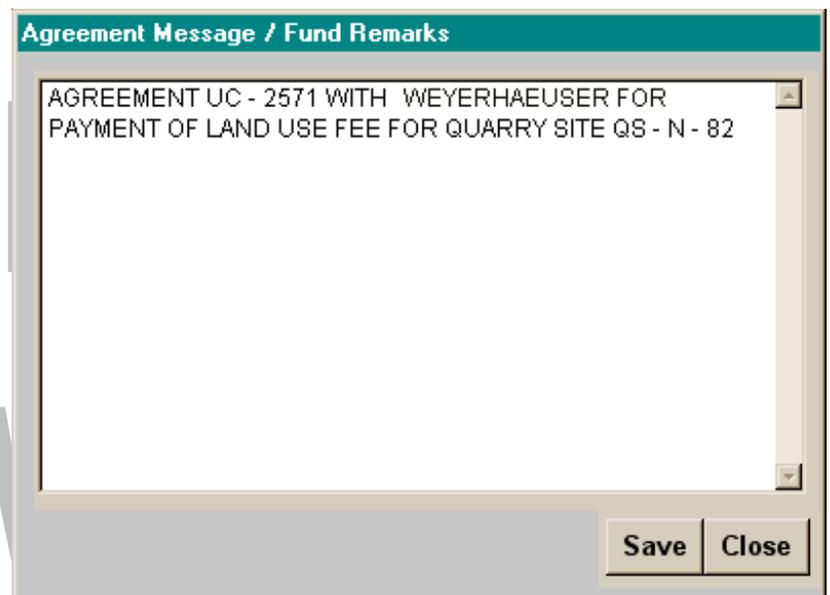
You may use any number sequencing system for the fund numbers that works best for you, (i.e. 1,2,3... 2,4,6...

5,10,15). *After you enter a*

fund number click the

Save button.

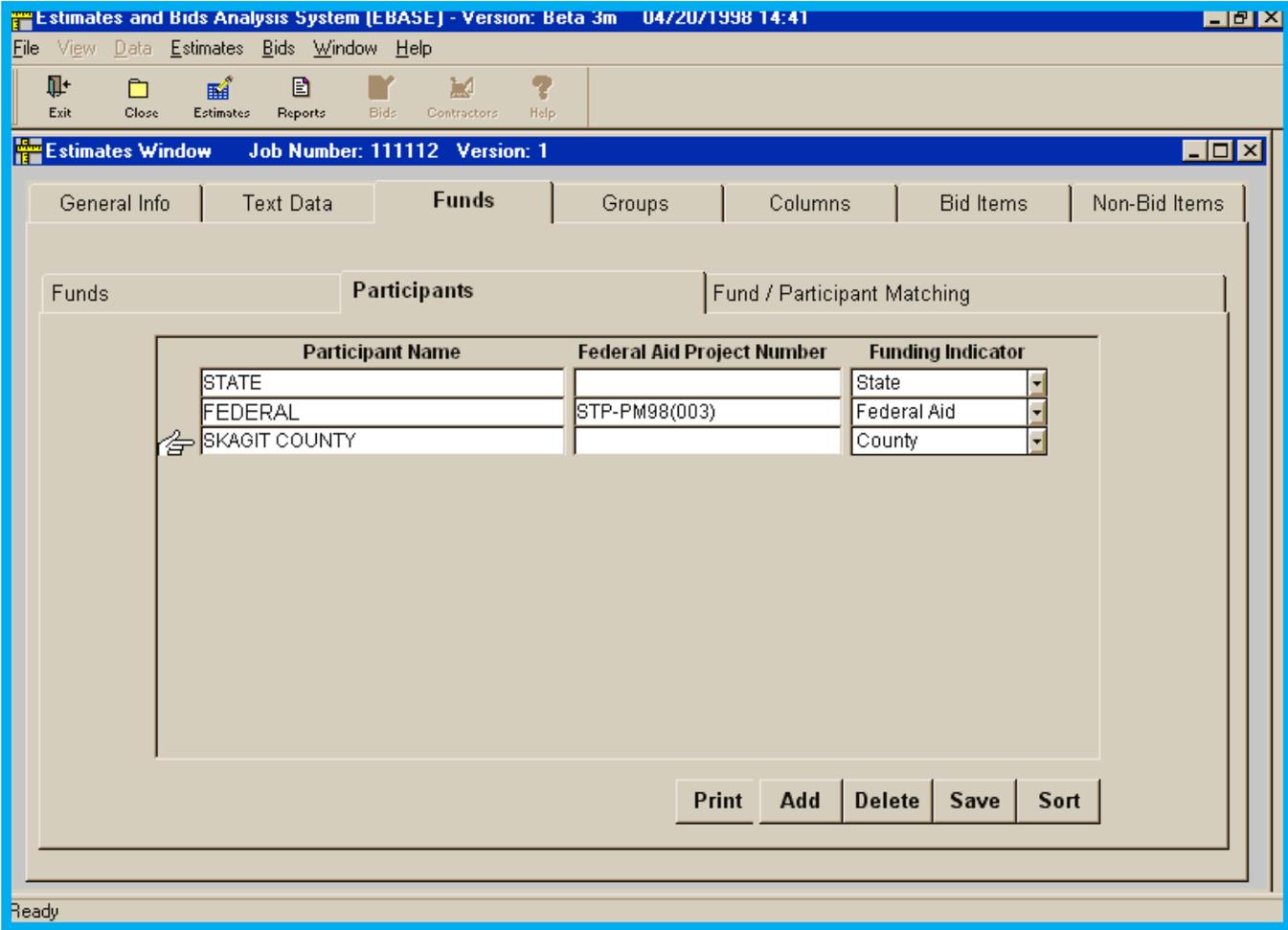
If it is determined that a remark is necessary for a particular fund you may add one by double clicking in the fund number. This will display the Agreement Message/Fund Remarks box. In this box you should enter remarks pertinent to the fund. Text entered on this screen will appear at the bottom of the Fund Report.



*(Click **Save** and then **Close** to get back to the Funds subtab. Once you are back on the Funds subtab, you will need to click the **Save** button on this tab before you can add any more funds)*

Funding Tab

(Participants)



Participants *(subtab)*

This subtab is used to compile a list of all of the project participants. These participants may include federal, county, city, other, & state. All participants must be uniquely identified. An example would be two Federal participants, one could be named FEDERAL NH and the other FEDERAL BR.

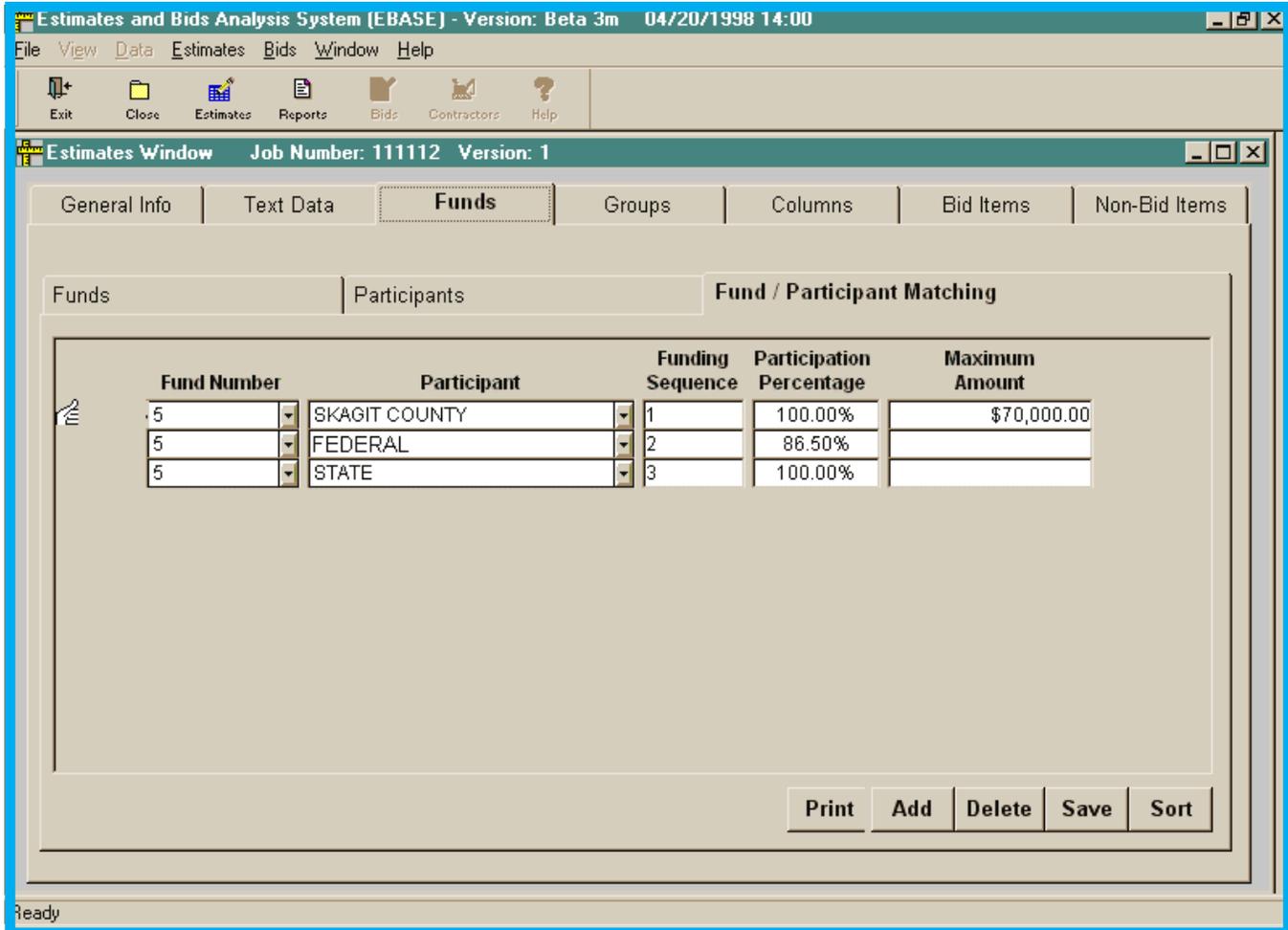
To begin adding participants, click the **Add** button. Enter the participant name, federal-aid project number and select funding indicator from the pull-down list.

Note: There is a limit of four participants per fund.

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Funding Tab

(Fund / Participant Matching)



Fund / Participant Matching *(subtab)*

This tab is used to match the fund numbers from the Funds subtab and the participants from the Participants subtab, thereby defining a fund. Each fund number may have up to 4 participants.

To add your first row of fields begin by clicking the **Add** Button, after entering the first row of fields, from the Fund Number pull-down list choose a fund number, then from the Participants pull-down list choose a participant to place in that fund.

Click the Add button to add additional rows of fields.

Now indicate the Funding Sequence that the participant will be in that fund:

- PRIMARY indicated by the number (1)
- SECONDARY indicated by the number (2)
- TERTIARY indicated by the number (3)
- QUATERNARY indicated by the number (4)

Determining the Funding Sequence

(1) Primary

The primary fund name will pay its percentage of all the groups associated with the fund number.

(2) Secondary

The secondary fund name will pay its percentage of the remainder of all groups associated with the fund number after the primary has been paid.

(3) Tertiary

The tertiary fund name will pay its percentage of the remainder of all groups associated with the fund number after the primary and secondary funds have been paid.

(4) Quaternary

The quaternary fund name will pay its percentage of the remainder of all groups associated with the fund number after the primary, secondary and tertiary funds have been paid.

Example 1: (typical fund)

FUND NUMBER	PARTICIPANT	FUNDING SEQ.	PARTICIPATION %	MAX AMOUNT
5	SKAGIT COUNTY	1	100.00%	\$70,000
5	FEDERAL	2	86.5%	
5	STATE	3	100.00%	

The result of this is: Skagit County=\$70,000, Federal =86.5% of Remainder, State = 100% of remainder

Example 2: (matching fund)

In this example, each of 4 entities have agreed to pay 25% of a specific portion of the work to be performed. To setup the fund for this work you would code the participants as follows:

FUND NUMBER	PARTICIPANT	FUNDING SEQ.	PARTICIPATION %
10	KING COUNTY	1	25.00%
10	CITY OF SEATTLE	2	33.33% of remainder
10	METRO	3	50.00% of remainder
10	STATE	4	100.00% of remainder

The result of this is: King County = 25.00%, City of Seattle = 25.00%, Metro = 25.00%, and State = 25.00% of the total fund

Participation Percentage

After determining the funding sequence of the participant, enter the Participation Percentage that the participant will pay, in the field provided.

Note: All percentages must be entered in decimal form (i.g. If 86.50% then enter .865) The last Participant in each Fund is typically entered at a participation of 100%. This ensures the entire fund covered.

Maximum Amount

Use this field when there is a maximum dollar amount that a participant will contribute. This sometimes occurs for work done by agreement.

Enter the maximum dollar amount, if any, which a participant will contribute. If you need to delete a Maximum Amount, you must replace the deleted amount with a zero.

Deleting Funding Items

Deleting a fund number

To delete a fund number, first delete it from the Funds subtab. The fund number will be automatically removed from the Fund/Participant Matching subtab.

In the Group tab, if a group is already assigned to the fund number you are deleting, it must be reassigned to a different fund number.

Deleting a participant

To delete a participant, first delete it from the Participants subtab. The participant will be automatically removed from the Fund/Participants Matching subtab. The fund number to which the participant was assigned will remain (*since there may be other participants*).

Example of a typical funding setup for an Estimate

Funding

FUNDS

Fund Number
5
10
15

PARTICIPANTS

Participant Name	Federal Aid Project Number	Funding Indicator
STATE		State
FEDERAL	BR-0020(110)	Federal Aid
CITY OF TWISP		City

FUND/PARTICIPANT MATCHING

Fund Number	Participant	Funding Sequence	Participation Percentage	Maximum Amount
5	CITY OF TWISP	1	100.00%	\$10,000.00
5	FEDERAL	2	80.00%	
5	STATE	3	100.00%	
10	FEDERAL	1	86.50%	
10	STATE	2	100.00%	
15	STATE	1	100.00%	

An easy way to setup funds is to imagine them as buckets That each participant is going to help fill. See the funding situation above, illustrated in the text below.

FUND 5

3 STATE

The State will contribute all the \$\$\$ it takes finish paying for the work that is covered by Fund 5. In other words the State will finish filling up the bucket. Since there are only 3 participants in Fund 5, STATE will be entered as the Tertiary Participant in the fund by entering the number 3 as the funding sequence. 100% is entered under Participation Percentage, indicating the STATE will pay for 100% of what is left to pay in the fund after the first two participants have made their contributions. STATE will be a participant in most funds.

2 FEDERAL

The Feds are willing to pay 80% of the work this Fund is paying for, and we want to use as much of their \$\$\$ as they are willing to give us, so they are entered as the Secondary Participant in Fund 5 by entering the number 2 as the Funding Sequence, and since they have said they would pay for 80% of the work, 80% is entered under Participation Percentage.

1 CITY OF TWISP

They are Contributing up to a Maximum Amount of \$10,000. We want to use up as much of The \$\$\$ they are willing to contribute as we can, So they are designated as the Primary Participant Of Fund 5 by entering the number 1 as the Funding Sequence, and a Participation Percentage of 100% So all of the \$10,000 will be used.

FUND 10

3 STATE

The State will contribute all the \$\$\$ it takes finish paying for the work that is covered by Fund 10. In other words the State will finish filling up the bucket. Since there are only 2 participants in Fund 10, STATE will be entered as the Secondary Participant in the fund by entering the number 2 as the funding sequence. 100% is entered under Participation Percentage, indicating the STATE will pay for 100% of what is left to pay in the fund after the first participant has made its contributions. STATE will be a participant in most funds.

2 FEDERAL

The Feds are willing to pay 86.5% of the work this Fund is paying for, and we want to use as much of their \$\$\$ as they are willing to give us, so they are entered as the Primary Participant in Fund 10 by entering the number 1 as the Funding Sequence, and since they have said they would pay for 86.5% of the work, 86.50 % is entered under Participation Percentage.

FUND 15

3 STATE

The State will contribute all the \$\$\$ For THIRD PARTY DAMAGES. If STATE is not paying for the entire project, then a separate Fund must be setup to assign to your REIMBURSEMENT FOR THIRD PARTY DAMAGES group. This Fund, shown here as Fund 15 will contain STATE as the Primary, and only participant, Funding sequence 1 and Participation Percentage of 100%
The Reimbursement for third party damages is setup this way so the Contract may be closed even if we have not recovered our costs for any damages repaired from the "Third Party"

Note: All Percentages must be entered in Decimal Format

Groups Tab

General Info | Text Data | Funding | **Groups** | Columns | Bid Items | Non-Bid Items

Group Number
1
2
3

County: SKAGIT (Select First)
Control Section Number: 294930
Fund Number: 5
Group Description: REALIGN INTERSECTION
Program: Z2 Program Item Number: 753601Q
State Route Number: 536 Tax Rate: 7.80%
Federal Work Type Code: SFTY Safety
Safety Class Code: 1B

Move Group | Print | Add | Delete | Save | Sort

Group Move

Move Which Group: 1
Move To Group Number: 3

Go! | Cancel

Add New Group

What Group Number do you want to assign to this new group?

4

Ok! | Cancel

Groups tab

The Groups Tab is used to enter and manipulate all group specific information.

There are two separate areas displayed on this tab. The first area is the Group Number List which contains a list of all the groups that you create.

A separate group is required for the following:

1. Whenever there is a change in the program item number (PIN).
2. Whenever there is a change in program or sub program (I2, P1, P2, etc.).
3. Whenever there is a change in funding (any change in funding participants, their individual participation rates, or their source of funding).
4. Whenever there is a change in control section.
5. A separate group (one per project) is required for the bid item "Reimbursement for Third Party Damages". This is the only item to appear in this Group. This group must be a State Funds only group.

The second area is Group Detail, which contains several fill-in boxes and pull-down lists.

County

Select the county from the pull-down list for this group.

Control Section Number

This pull-down list contains all the control sections that lie within the county you previously selected.

Fund number

Select the fund number from the pull-down list for this group. If non are available, see the Funding Tab section of the manual to learn how to create Funds.

Group Description

Enter a brief group description, location of group work, roadway width and type (if applicable), and other pertinent comments specific to the group.

Program

Enter the program from the pull-down list.

State Route Number

The state route field is filled in automatically when the control section has been entered. This field may be overwritten if desired.

Federal Work Type Code (for Federally funded projects)

Choose a code from the pull-down list. *(For additional codes see Appendix C, Federal Work Type Codes)*. For certain Work Type Codes such as SFTY also Choose a Safety Class Code. *(See Appendix D, Safety Class Codes)*

Tax Rate

The Tax Rate field is filled in automatically when the control section has been entered. This field may be overwritten if necessary.

Program Item Number (PIN)

This is the assigned Program Item Number that identifies the project in the WSDOT Construction Program. Leave this blank for Trans-Aid projects.

*(Click the **Save** button after you enter the information for each new group)*



EBASE Tip:

For a detailed explanation of Group Break Rules, See Section 460.04 of the Plans Preparation Manual

Creating Initial Group

Enter the group specific information in the blank fields.

You may utilize the pull-down lists. Overtyping the "INITIAL DEFAULT GROUP" wording in the group description field. Click the **SAVE** button.

Adding Additional Groups

Click on the **ADD** button. In the Add New Group box, enter the *number of the new group and click **OK**. Enter the group specific information in the blank fields.

Click the **SAVE** button.

*Please note that although EBASE will accommodate the creation of more than 99 groups, other systems such as CAPS are limited to 99. Do not exceed this 99 Group limit.

Deleting a group

To delete a group, highlight the group number that you wish to delete and click on the **DELETE** button. When you delete a group, all columns associated with that group will remain in the system. Any columns associated solely with a deleted group must also be deleted or reassigned to other groups.

Moving a group

To move a group, Click on the **Move Group** Button. Once the Move Group dialog box is displayed, fill-in the fields provided, specifying which group you wish to move and what group number you would like it to become. Once you have the fields filled-in, click the **Go** button. The group will be moved to the new location and the remaining groups will be re-numbered sequentially.

Group/Column ties remain intact and the re-numbered group(s) are automatically updated on the columns tab as well.

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Columns Tab

Estimates Window Job Number: TOM100 Version: 1

General Info | Text Data | Funding | Groups | **Columns** | Bid Items | Non-Bid Items

Column Number	Group Number	Column Heading
<input type="text" value="1"/>	<input type="text" value="2"/>	APPROACH 146+73 TO 146+32.5
<input type="text" value="2"/>	<input type="text" value="3"/>	BRIDGE 9W DECK REHAB
<input type="text" value="3"/>	<input type="text" value="3"/>	BRIDGE 9W PAINTING
<input type="text" value="4"/>	<input type="text" value="4"/>	BRIDGES 8W & 10W SAFETY
<input type="text" value="5"/>	<input type="text" value="5"/>	BRIDGES 10E & 10W PAINTING

Column Move

Move Which Column:

Move To Column Number:

Add New Column

What Column Number do you want to assign to this new column?

Columns Tab

The purpose of this tab is to provide a space to define column headings that will print on the Summary of Quantities report.

Select the Add button to add the column fields. The column *numbers are automatically entered for you.

*Please note that although EBASE will accommodate the creation of more than 99 columns, other systems such as CAPS are limited to 99. Do not exceed this 99 column limit.

BRIDGE 90/123	SR 5 PIT SITE XXXXX	SR 5 LR 136+322 TO LR 138+523	SR 90 MP 2.35 TO MP 3.67
------------------	---------------------------	--	-----------------------------------

Select a group from the Group Number pull down list to associate the column with a group. In the **Column Heading** field enter the location of the work listed in the column. Examples are shown above.

(Each line has a limit of 10 characters, you must hit enter to proceed to the next line)

Each time you click the **Add** button, the new column will be added to the top of the list of columns. You may get your columns into ascending order by clicking the **Sort** button.

Each group is required to have at least one column associated with it. Additional columns within a group are required for the following:

1. Each bridge and wall shall have their own column in order to identify the quantities of materials required at each of the structures.
2. Each state furnished pit site (mandatory and non-mandatory) shall have their own column.

There are exceptions to rule 1 above:

For projects with a single wall or a single bridge or both, the wall and bridge quantities may be entered into a single column, or combined with another column.

In addition, when paving across multiple bridges, the paving quantities need not be separated out from each bridge, they may be included in the mainline paving quantities.



EBASE Tip:

For a detailed explanation of Column Break Rules, See Section 460.04 of the Plans Preparation Manual.

When applying these exceptions to an estimate, all quantities must be clearly tabulated in the plans.

The intent of rule 1 above is to be able to identify the quantities of work required at each wall and bridge during construction activities.

Reassigning columns to different groups

To reassign a column to a different group, select a new Group Number from the Group Number pull down list that you want the column associated with.

When you begin reassigning columns to different groups, the groups in the Summary of Quantities may appear out of order. This is because the column numbers always determine the order in which they are listed left to right on the Summary of Quantities.

If you have reassigned columns to different groups, you may now want to get the groups back in order. You may do this by moving the columns as explained below.

Moving Columns

Click on the **Move Column** button. Enter the number of the column you wish to move and the number you wish to move the column to. Click **GO**. EBASE will renumber and resequence the columns automatically. The association between groups and columns will remain the same.

Deleting a Column

To delete a column, highlight the column number that you wish to delete and click on the **Delete** button. If you delete a column, the group associated with that column will remain in the system. If the column deleted is the only column that was associated with that group, you should also delete the group.

If bid Items were assigned to a deleted column, the bid item / column association on the bid items tab must be deleted or a new column number must be selected for the bid item association

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Bid Items Tab

Estimates and Bids Analysis System (EBASE) - Version: 3.2 .1 Zeus / humepot / EBASE System Administrator

File View Data Estimates Bids Window Help

Exit Close Estimates Reports Std Item Non-Std Help

Estimates Window Job Number: CLASS0 Version: 1

General Info Text Data Funding Groups Columns Bid Items Non-Bid Items

Items Section Headers

Item Number	Std Item Num	Column Number	Planned Quantity
1	0001	1	25,000.00
2	0035		
3	0050		
4	0070		
5	0595		
6	0902		
7	2945		
8	2972		
9	2990		
10	1054		

Add Item Add Column Standard Items Non-Standard Items Re-Set Item Nums UBA History Data Specifications Lump Sum Breakout Items Item Comments (none) Delete Item Delete Column Sort Save Move Item Spreadsheet Item Report

Section Header: 1 PREPARATION Prorate Item:
 Standard Item: 0070 REMOVING EXISTING STRUCTURE
 Non-Standard Item:
 Add On Description: BR. NO 123/1
 Unit Price: 1.0000 Unit Measure: L.S. Prequal Code: F8

Estimates Window

Select Item Location

Where do you want to place this item(s)?

Go Cancel

Standard Item Selection Window

Std Item Number	Description	Section:	Unit of Measure	Prequal Code	Item Use
0001	MOBILIZATION	1 PREPARATION	L.S.	A1	STANDARD ITEM
0002	MOBILIZATION		L.S.	A1	REQUIRES SPECIAL PROV.
0025	CLEARING AND GRUBBING		ACRE	D6	STANDARD ITEM
0030	CLEARING AND GRUBBING - SITE		ACRE	D6	STANDARD ITEM
0035	CLEARING AND GRUBBING		L.S.	D6	STD. ITEM, GSP REQUIRED
0040	CLEARING AND GRUBBING - SITE		L.S.	D6	STD. ITEM, GSP REQUIRED
0044	STRIPPING INCL. HAUL		C.Y.	D6	STANDARD ITEM
0045	STRIPPING INCL. HAUL - SITE		C.Y.	D6	STANDARD ITEM
0046	ARCHAEOLOGICAL AND PALEONTOLOGICAL SALVAGE		EST.	A1	GSP ITEM
0047	REMOVING MANHOLE		EACH	G2	REQUIRES SPECIAL PROV.
0049	REMOVING DRAINAGE STRUCTURE		EACH	G2	REQUIRES SPECIAL PROV.
0050	REMOVAL OF STRUCTURE AND OBSTRUCTION		L.S.	F8	STANDARD ITEM
0060	REMOVING PORTION OF EXISTING STRUCTURE		L.S.	F8	GSP ITEM

Click Right Mouse Button on Item to View UBA History Data

Sort Filter Apply Selections De-Select All Cancel

Bid Items Tab

The Bid Items tab is used to enter the Standard and Non-Standard Bid Items and the Section Headers for these items. The first items entered should be all Standard items. Additional Standard and Non-Standard items can be inserted later.

Entering Standard Items

To begin, click on the **Standard Items** Button. A box will be displayed that asks "Where do you want to place this item(s)?"

If you have not previously entered any items or if you are entering items at the end of an existing estimate, leave this box blank and click on the **Go** button. The Standard Item table will be displayed. Select all of the Standard Items that you want in the estimate. Standard items are selected by clicking on them (*multiple items may be selected*); deselect any item by clicking on it again. (While you are in the Standard Item table, you may view referenced Special Provisions if they apply to a standard item, by double clicking on the standard item.)

Click on the Apply Selections button, this will import all selected items into the estimate. They will appear in order by construction sequence under the heading "**Item Number**" on the far left of the **Items** subtab. All of the standard items selected, their associated section headers, their standard item number, description, unit of measure, and prequalification code are added to your estimate.

Before adding any Columns or Planned Quantities you should fill in the Unit Price field at the bottom of the tab and if the item is measured L.S. and will be prorated across column, check the Prorated box. If additional descriptive text is an option for the item, a field will appear at the bottom of the tab. Type the add on description in this field. (see the Standard Item table to view the character # limit for each add-on description)

If you would like to see histories of what an item cost in various quantities in each of the Regions, click on the item number you are interested in. Then, click on the **UBA History Data** button. This will open the Unit Bid Analysis database for the item you requested.

FOR ITEMS THAT HAVE A UNIT OF MEASURE DESIGNATED "L.S., EST. OR CALC." THAT ARE NOT PRORATED, ENTER A (1) IN THE UNIT PRICE FIELD AND THE DOLLAR AMOUNT IN THE PLANNED QUANTITY FIELD FOR THE APPROPRIATE COLUMN.

For L.S. items that are **Prorated** Items enter the total dollar amount in the unit price field and click the **Prorate** box. Prorate amounts MUST be whole dollar amounts.

Each item number must be assigned to at least one column. To do this, click on the item that you want to assign to a column and click the **Add Column** button. Fields for the **Column Number** and **Planned Quantity** will be displayed. The default column number 1 will be automatically entered, you may change this column number by selecting a different one from the pull down menu.

Inserting Standard and Non-Standard Items

To enter a non-standard item, place the cursor on the item number where you would like to insert the new non-standard item (*if you want the new item to be item 8, highlight item 8 with your cursor*). Click the **Add Item** button to create a space for the new item and click **save**. Type the name of the new non-standard item in the description box near the bottom of the tab. Now choose a section header (if you need to add a section header, see instructions under 'Section Headers'), unit price, unit of measure, prequalification code, and assign a column and planned quantity. Click the **Reset Item Numbers**.

You may come back to this tab and add Bid Items at anytime. You can add one item at a time by clicking in the item directly below where you want the new item to be placed. Then click **Add Item**; a field will be placed with a zero (0) in it. Change the zero to the desired number, or click the **Save** button and then click the **Reset Item Numbers** button.

Next fill in the bottom area of the tab, choose the Section Header and Standard Item number or enter a Non-Standard item description. Fill-in the Add-on Description if applicable (43 char. max.) and the Unit Price, and check the prorated box (if applicable). Assign a column(s) and Planned Quantity.

Adding multiple items to an existing list is possible by clicking the **Standard Items** button. When the screen pops up asking you where you would like to have the items placed, enter the number of the item that you would like to have the new items placed after. If you choose not to enter an item number and simply click the **Go** button, the new items will be placed at the bottom of the item list.

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Ebase Note:

When adding Standard Items to an existing set, the Standard Item Number shown in the Bid Item Number pane will not be displayed until the Estimate View has been refreshed by reselecting the Estimate in the Main Estimate selection window.

Mobilization

Mobilization must be calculated as a percentage of the Contract Total (work done Contractor) this is the dollar amount before the addition of tax or additives. The calculation is then entered into the estimate as a Lump Sum Bid Item that is Prorated across the applicable Columns of work.

Mobilization is a contract pay item that is used to cover a Contractor's preconstruction expenses and also the costs of preparatory work and operations. Since there is no clear list as to what this work effort is and each Contractor has the ability to adjust their bid as needed to cover these expenses, there are no true rules as what percentage should be used per Contract. The following table is a suggested guide:

Less than \$100,000	Use 8 % to 12 %
\$100,000 to \$250,000	Use 6 % to 10 %
\$250,000 to \$500,000	Use 6 % to 9 %
\$500,000 to \$1,000,000	Use 5 % to 9 %
\$1,000,000 to \$2,000,000	Use 6 % to 9 %
\$2,000,000 to \$5,000,000	Use 7 % to 9 %
\$5,000,000 to \$10,000,000	Use 8 % to 10 %
\$10,000,000 to \$20,000,000	Use 8 % to 11 %
Over \$20,000,000	Use 7 % to 10 %

To more accurately calculate the Mobilization percentage that should be used for each individual project, consideration should also be given to:

- The location of the project
- The complexity of the project
- The need for specialized equipment
- The type of work being performed
- Rural vs. Urban
- Projects with multiple work sites
- Excessive preparatory removal items
- Large quantities of excavation
- Spanning of constructions seasons when it would become necessary for the contractor to shut down and clear the work site between these seasons.

Minor Change and Third Party Damage Bid Items

Most Estimates will contain a bid item for Minor Change and a bid item for Reimbursement for Third Party Damage.

The bid Item "Minor Change" will allow for minor changes during construction without the need for a change order to be issued. This item must be entered in the same column in which the majority of work is taking place. The planned quantity must be entered as \$ -1.⁰⁰ and the unit price entered as \$ 1.⁰⁰.

The bid item "Reimbursement for Third Party Damage" must be assigned to its' own group and column, have a minimum planned quantity of 5 and a unit price of \$ 1.⁰⁰.

Moving Items

To move a bid item to a new location, click on the **Move Bid Item** button. In the dialog box provided specify which bid item you wish to move, and the item number you wish to move it to.

Click **Go**. These items will automatically be re-numbered to their new sequence.

Deleting Bid Items

To delete a bid item, select the bid item you wish to delete and click the **Delete Item** button.

If bid items are to be deleted during the project advertisement phase, the bid item must be changed to Standard Item Number 7800 "Deleted Item". The quantity for this item must be changed to **.01** and the unit price to **.0001**.

Item Comments

The Item Comments button provides an area to enter item specific comments such as, quantity justifications and unique circumstances that pertain to that item.

If an item has comments associated with it, the Item Comments button text will read, "Item Comments Exist!"

These comments will not appear on any of the estimate reports, but may be printed individually if needed.

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Lump Sum Breakout Entry Screen

Job: 97W449 Version: 1 Item: 1 - MOBILIZATION

Standard Item Number	Planned Quantity	Unit Of Measure	Unit Price	Total Cost
9905	100.00	C.Y.	5	\$500.00

Description: SUPERSTRUCTURE - MISC. CONC. CLASSES

Lump Sum Break Out Items Total: \$500.00

Print Sort Add Delete Save Save As Close

REVISION

Lump Sum Break Out Items

The purpose of the **Lump Sum Break Out items** button is to provide a location for listing the Individual items that comprise a Lump sum bid item. The lump sum break out items are used for construction material cost reporting.

Using the Lump Sum Break Out Worksheet

Click the "**Lump Sum Breakout Items**" button on the Bid Items Tab to display the "Lump Sum Break out Items" worksheet.

Use this worksheet to list, individually all the components of the selected L.S. bid item. The costs are calculated for each individual component of the L.S. Item, and a Lump Breakout total is calculated for all listed components. Use this L.S. breakout Total to fill-in the "**Planned Quantity**" field for the Lump Sum bid item on the Bid Items tab.

This worksheet will remain in EBASE as part of the estimate for each bid Item that has had a L.S. worksheet created.

Persons who are interested in the L.S. breakdown for Items in an estimates may be referred to this feature for viewing the information electronically, or this worksheet can be printed for inclusion in the project file.

Deleting Items & Columns From the Bid Items Tab

Select the Item or column that you wish to delete and click the **Delete Item** or **Delete Column** button. You must click the **Save** button each time you delete an Item or Column.

Adding and Deleting items by Addendum

All bid items added by addendum shall be added as the last bid items in the estimate. Items deleted by Addendum, must retain the bid item number in place, but change the item to Standard Item number 7800 "Deleted Item". The quantity shall be .01 in column one, the unit price shall be .0001

The rules for adding and deleting bid items by addendum are to avoid changing bid item numbers for remaining items. An exception to the above rules would be if a new item is added where an existing item is being deleted. In this case you can replace the old item with the new item.

An additional exception to the above rules is when you have alternates in your project. When adding bid items to the base bid by addendum, add the items at the end of the base bid item listing. When adding bid items to alternates by addendum, add the items at the end of the appropriate alternate bid item listing.

Non Standard Items

Manipulate Non-Standard Items on the Items tab the same as you would Standard Items.

Other Buttons on the Items tab

Sort: Sorts the item numbers in ascending order.

Spreadsheet: Brings up a spreadsheet to review your entries
This sheet is for informational purposes only and is not intended
for any other use.

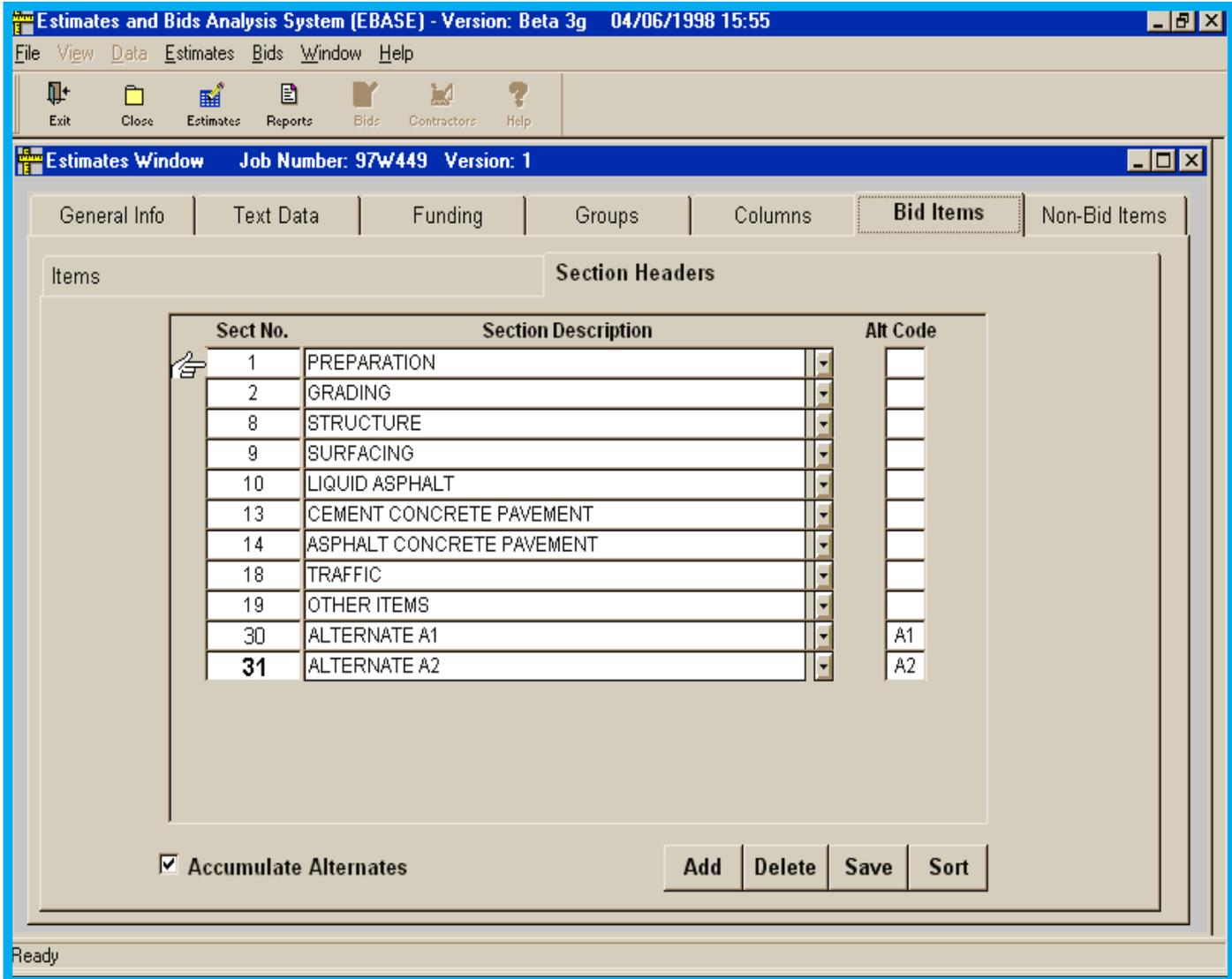
Item Report: Prints out an Item Report.

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Bid Items Tab

(Section Headers)



Section Headers (subtab)

Sect No.	Section Description	Alt Code
11	BITUMINOUS SURFACE TREATMENT	
12	ASPHALT TREATED BASE	
13	CEMENT CONCRETE PAVEMENT	
14	ASPHALT CONCRETE PAVEMENT	
15	SEAL COAT	
16	IRRIGATION AND WATER DISTRIBUTION	
17	EROSION CONTROL AND PLANTING	
18	TRAFFIC	
19	OTHER ITEMS	
20	BUILDING	
29	SUPERSTRUCTURE	
30	OBSOLETE ITEMS HIDEOUT	
35	ALTERNATE A1 - WALL 1	A1
36	ALTERNATE A2 - WALL 2	A2
50	ROAD USER COST	R1

Accumulate Alternates
 Include Road User Cost

Print Add Delete Save Sort

All Standard and most Non-Standard Bid Items will be assigned to the list of Standard Section Headers.

For Standard Bid Items, the Section Header has been pre-determined and is imported when the Standard Item is entered.

For Non-Standard items the Section Header must be selected from the menu in the item details area of the Bid Items tab.

If a Section Header was not previously imported with a Standard item, it may not be in the active list.

To add a Section Header, click the "Add" button enter a "Sect. No." and select a Section Description from the menu.

For some speciality contracts you may need to add a Non-Standard Section Header, Follow the same procedure as above, but use a Sect. No. in the 30's range and manually type the Section Description.

Alternates follow the procedural above, plus enter the appropriate "Alt Code". If the Alternates are accumulative i.e A1 + A2, also check the "Accumulate Alternates" box. (See the Pages 42-43 for a detailed explanation of Alternates.)

Road User Cost (a+b bidding) is set up just like alternates except the Sect. No. to use is 50 or above, and the Alt Code is entered as R1, R2 etc. The Road User Cost box must be checked before EBASE will include items assigned to this type of Section Header. (See pages 44-45 for a detailed explanations of Road User Cost.)

Section Numbers & Related Description

- 1 Preparation
- 2 Grading
- 3 Stockpiling
- 4 Draining
- 5 Storm Sewer
- 5 Sanitary Sewer
- 7 Water Lines
- 8 Structure
- 9 Surfacing
- 10 Liquid Asphalt
- 11 Bituminous Surface Treatment
- 12 Asphalt Treated Base
- 13 Cement Concrete Pavement
- 14 Asphalt Concrete Pavement
- 15 **NOT USED**
- 16 Irrigation and Water Distribution
- 17 Erosion Control and Planting
- 18 Traffic
- 19 Other Items
- 20 Building
- 21-28 **RESERVED**
- 29 Superstructure
- 30-49 Use these for Alternates or Special
- 50 Use for Road User Cost (A+B bidding)



Alternates

Alternate bid Items must be listed as the last entries in the sequence of bid item on that tab.

A separate group and column is required for alternate bid item quantities.

The items within an alternate must carry the same alternate Section Heading and Alternate code. (see how to set this up under the Section Headers Tab portion of this manual). The alternate code is made up of an alphabetic character from A to E in the first position and a numeric character from 1 to 9 in the second position.

In the following example, the bidder must bid the Base and must bid A1 or A2, or may bid both, Base +A1 and Base +A2.

Example:

Base Items	(no alt. code)
Concrete Br. Items	A1
Steel Br. Items	A2

Result:

Base and Base + A1 and Base + A2

Alternates with different alpha characters will combine. In the following example, the bidder must bid the Base and must bid at least one alternate from each "alpha" series of alternates.

Example:

Base Items	(no alt. code)
Concrete Br. Items	A1
Steel Br. Items	A2
Reinf. Concrete Wall items	B1
Reinf. Earth Wall items	B2

Result:

Base and

Base + A1 + B1 and Base + A1 + B2 and

Base + A2 + B1 and Base + A2 + B2

Either/Or Alternates

Occasionally, you may want to award a contract based on funds available. In other words, you may want to construct as much as possible, depending on the bids within the funds available. Use the same alpha character in your alternates and check the **Accumulate Alternates** box. In the following example, the bidder must bid the Base and must bid all of the combinations shown.

Example:

Base Items	(no alt. code)
Building X	A1
Paving Site	A2
Landscaping Site	A3

Result:

Base and Base + A1 and Base + A1 + A2 and
Base + A1 + A2 + A3

The following is another example of wanting to award a contract based on funds available. This example, however, uses different alpha characters to describe the Bridge (A) alternate and the Wall (B) alternate that will combine, BASE +A+B. The bidder must bid the Base and at least one alternate from each "alpha" series of alternates. Check the **Accumulate Alternates** box. As you can see by the result below, we may only want to award based on the Base bid or the Base and B2 for example, depending on funds available.

Example:

Base Items	(no alt. code)
Concrete Br. Items	A1
Steel Br. Items	A2
Reinf. Concrete Wall Items	B1
Reinf Earth Wall Items	B2

Result:

Base and Base + A1+ B1 and Base + A1 + B2 and
Base + A2 + B1 and Base + A2 + B2 and
Base + A1 and Base + A2 and Base + B1 and
Base + B2

Accumulative Alternates

Road User Cost

Road User Cost (RUC) is a tool used to measure the impact of a transportation facility on the traveling public, and the benefits of those proposed improvements provided by a highway project.

The RUC, commonly known as A+B bidding, creates a method by which the Contractor may be rewarded for early completion. This is accomplished by specifying a cost for each working day combined with the cost to perform the work and the cost to the traveling public.

Costs to the public may include:

- Costs associated with travel time.
- Vehicle operation
- Accidents
- Air quality

When determining RUC, there are many elements to consider in ascertaining whether delays to the traveling public will be extreme or minimal. Some examples being:

- Time of day
- Traffic volumes
- Type of work
- Project location
- Urban or Rural
- Critical bridge or Intersection effected
- Length & location of detours

Entering Road User Cost into an Estimate

The procedure for entering RUC into an EBASE estimate is similar to that of entering Alternate Bid Items. Road User Cost items are placed as the last items in the estimate, after all regular bid items as well as any Alternates should they be present.

Begin by creating a Road User Cost Section Header on the Section Header tab. The **Sect. No.** must begin at **50** and increase numerically from that point, dependent on how many RUC's will be listed in the estimate.

The Section Header, Section Description will be "**ROAD USER COST**" and the Alt. Code will be **R1, R2** etc.

For EBASE to incorporate RUC into the estimate the **Include Road User Cost** box must be checked. (see example)

Sect No.	Section Description	Alt Code
1	PREPARATION	
3	STOCKPILING	
4	DRAINAGE	
50	ROAD USER COST	R1

Accumulate Alternates
 Include Road User Cost

Print Add Delete Save Sort

Road User Cost is calculated in dollars per day, and when entering the RUC item on the bid items tab, it is necessary to enter the dollar amount as the "Planned Quantity", and the estimated number of days in the "Unit Price". The Unit of measure to be used for the RUC item is "PDA" (per day), and the prequel code to be used is "Z0". (see example below)

Road User Cost Item descriptions will vary depending on the type of road user cost. E.g. "Night Time Lane Closures", "Lane Rental" etc.

Road User Cost Items are not part of the true Engineer's Estimate. These items are only used in determining award to Bidder's. Although the RUC items are not part of the Engineer's estimate, they must be entered into EBASE so that the data may be transferred to the BIDS database with the regular estimate data, in order to create complete Bid Item information for project advertisement.

If you would like to learn more about Road User Cost / A + B bidding, please visit this web site:

<http://www.wsdot.wa.gov/biz/InnvContract/aplusb.htm>

Non-Bid Items Tab

(Below the line Items)

Estimates Window Job Number: TOM11 Version: 2

General Info | Text Data | Funding | Groups | Columns | Bid Items | **Non-Bid Items**

Number	Column	Item Description	Unit Price
700	1	SEATTLE CITY LIGHT 645	80,000.0000
701	1	WSP ASSISTANCE GC 9131 - GF	25,000.0000
702	2	WSP ASSISTANCE GC 9131 - GF	20,000.0000
860	1	STATE FORCES - MAINT	20,000.0000
861	1	STATE FORCES - HAZMAT	2,000.0000
Total:			\$147,000.00

Print Add Delete Save Sort

REVISION

Non-Bid Items Tab

Non - Bid items are those items of work or materials furnished , that are charged to the cost of the project, but not performed or furnished by the contractor. Non - Bid item descriptions may be 31 characters maximum. Non - Bid item numbers are entered as numbers 700 through 899 inclusive.

Numbers in the 700 to 799 range are to be used for work to be performed *by others* such as utility agreement work and work by state forces other than WSDOT. These items will have construction engineering and contingencies applied to them, but no sales tax.

Numbers in the 700 to 799 range are to be used for Federal Aid participating and Federal Aid non-participating items, depending on the funding source of the columns to which they are assigned.

Numbers in the 800 to 899 range are to be used for *state force work or state furnished materials*. These items will have no sales tax, construction engineering, or contingencies applied to them.

Numbers in the 800 to 859 range are to be used for federal-aid participating items.

Numbers in the 860 to 899 range are to be used for federal-aid non-participating items.

All Non-Bid items are assigned to a single column. Select a column that is within the source of funding for the particular item. If you assign a Non-Bid item to several columns, split the Non-Bid item into several items with different item numbers, but with the same description. Duplicate Non-Bid item numbers are not allowed on this screen.

All non-Bid items will appear throughout the estimate of cost except items in the 860 to 899 range. These items will always appear only on the Summary Report of the estimate and will always be federal-aid non-participating items, or State Funded projects regardless of the column that they are assigned to. If you desire the item number to appear on the reports, you may also enter the item number in the Item **Description field** as part of the description.



EBASE Tip:

For guidelines in the use of State Force Work and State Supplied Materials, See Chapter 750.25 figure 7 of the Plans Preparation Manual.

Estimates Screen

Estimates and Bids Analysis System (EBASE) - Version: 3.2.1 Zeus / humepot / EBASE System Administrator

File View Data Estimates Bids Window Help

Exit Close New Sort Filter Print First Previous Next Last Std Item Delete Non-Std UnDelete Lock Un-Loc

Job Selection Window (DOUBLE CLICK TO SELECT JOB)

Please Select Region: Eastern

Estimates to View: Current Versions All Estimates Deleted Awarded As Built

#	Region	Job No	Version	Contract	Work Order	W.I.N.	Title (Partial Display)	Lock
6	ER	01Z016	1	000000	XL1193		SR 90;00DIVISION ST EB ON-RAMP00REVISION00	
6	ER	01Z017	2	000000	0L3139	F09029R	SR9000HARVARD RD I/C00WESTBOUND OFF-RAI	
6	ER	01Z018	1	000000	XL1239		SR 2000LINCOLN CO. LINE TO SR 21000001Z018	Y
6	ER	01Z019	1	000000	XL1259	F27099A	SR 27000WEST CITY LIMITS TO SPRING ST00000	
6	ER	01Z03P	1	000000	000000		SR 90400RHETT'S CREEK BRIDGE 904/4.250000	Y
6	ER	020304	1	000000	000000			
6	ER	1195W	1	000000	XL1195		WAGNER ROAD TO WILBUR00MP 80.06 TO MP 91.0	
6	ER	1195WS	1	000000	F17499		WAGNER ROAD TO WILBUR	
6	ER	1211DE	1	000000	1211DE		BARKER RD RT TURN LANE 00DEVELOPER COST	
6	ER	98Z019	2	005559	SL2648		SR 2000SR 395 TO VICINITY LAUNDRY RD.00009	Y
6	ER	98Z020	1	005519	0L2484		SR 39500MP 172.3 TO HAMILTON RD.000098Z020	Y
6	ER	98Z021	2	005497	0L3177		SR 2000DAVENPORT TO REARDAN000098Z02100	Y
6	ER	98Z023	1	005539	0L3454		SR 9000HANGMAN CREEK 00BR 90/540N&S0098	Y
6	ER	98Z024	3	005517	0L2711		SR 9000SCHRAG REST AREA RE-BID000098Z024	Y
6	ER	98Z025	3	005568	0L2963		SR 27, 9000PINES I/C WB ON-RAMP000098Z025	Y
6	ER	98Z026	2	005544	0L3039		SR 2 AND SR 21100VIC. FOUR LANES TO SR 2000	Y

129 Records

Print Save As

Estimates Window

Accessing Existing Estimates

From the EBASE start screen click on the Estimates button; this will bring up the Job Selection window. You may choose from five options in which to view the estimates in the database:

Current Versions Only - This is the default option; it will list the current estimate version of the jobs in the active files.

All Estimates - This option will list all versions of the estimates for the active files.

Deleted - This is an inactive file. This option lists all deleted versions of estimates. All users can view these estimates, but only a system administrator can retrieve them. After a three month period in the "deleted" file, an estimate will be permanently be purged from EBASE.

Awarded - Contains estimate reports available for opened jobs. These estimates have the low bidders prices substituted for the Engineer' estimated prices.

These reports are loaded from the Bids Module and will always be version 99.

AsBuilt - These estimates are a copy of the Awarded Estimate. The version number is increased to 100, and the estimate is unlocked and made available for AS-Built revisions to the Summary of Quantities. These estimates are created by the Region EBASE Administrator or EBASE Manager upon request.

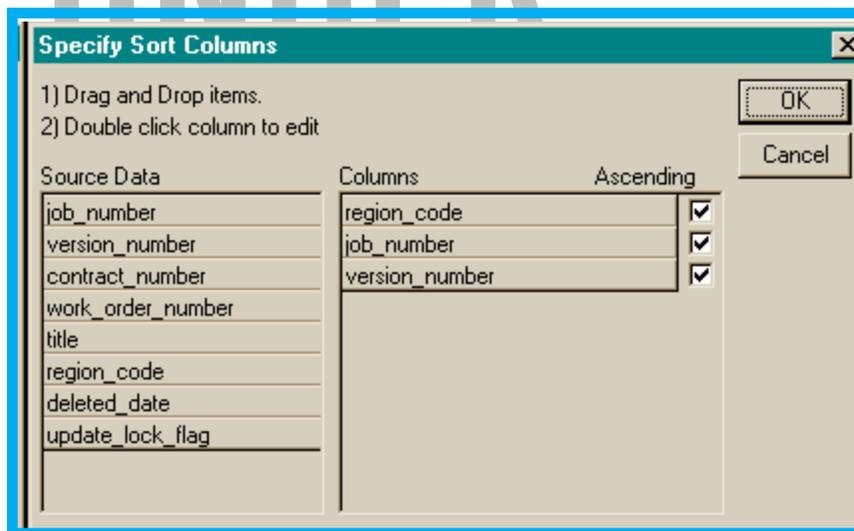
You can scroll down through these lists to locate your project or, you can use the **Sort or filter** buttons to quickly find your project. (See Section: Using the Filter Function). Once you have found your project, click anywhere on the project line to open.

Button Functions

Located at the top of the Job Selection window is a series of buttons. Use these buttons to maneuver through and manipulate your estimates.



- Exit** - Use this button to exit the EBASE program.
- Close** - This button will close the Job Selection window.
- New** - Use this button when you want to create a new estimate
- Sort** - This will open a sort area where you may re-arrange the items by which the Job Selection is sorted. For example, the default sort is:
 1. Region code
 2. Job Number
 3. Version Number



You can change the order of the sort by clicking on the item you would like to sort by and dragging it to the desired position in the sort sequence.

For example, you want to sort by the Job Number first, click on Job Number and drag it to the top of the Columns area; you have just re-ordered the sorting sequence. Click OK to put into effect.

The other sort categories listed in the Source Data area may be dragged into the Columns area and sequenced in the same manner.

Filter - Use this button to tailor the Job Selection window to your specific needs (See Using the Filter Function for examples).

Print - This will print all the job listings shown in the Job Selection window.

First, Previous, Next and Last - Use these keys to maneuver through the projects in the Job Selection window. The **Previous** and **Next** buttons will take you one full screen at a time either backward or forward through the project listings in the Job Selection window. The **First** and **Last** buttons will take you to the first and last projects listed.

Std. Item - This button opens the Standard Item Table. You may view Unit Bid Analysis history for an item, by selecting the item with your mouse, the right clicking on the item. Further you may view specific contract information by first selecting the contract with your mouse, then right clicking on the contract.

Delete - This button will place an unwanted version of an estimate in the deleted file.

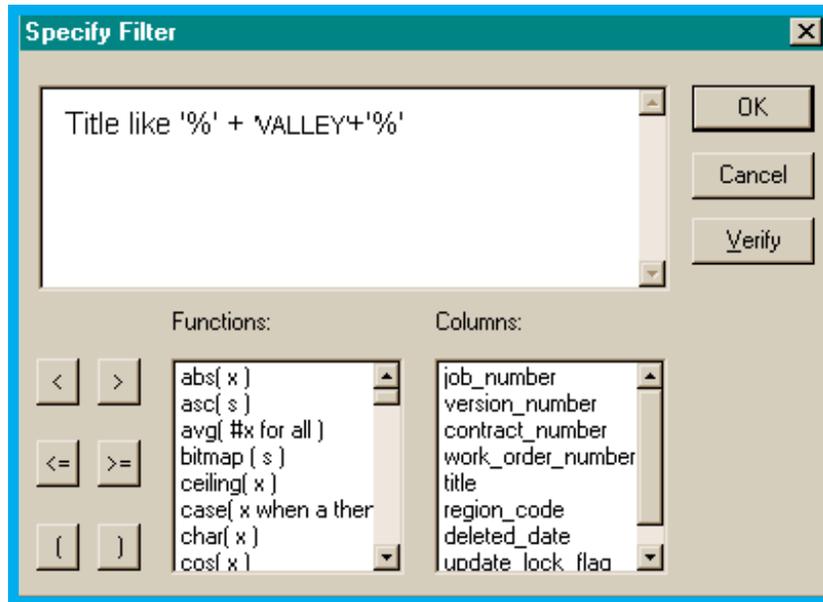
Non-Std. - This button opens the Non-Standard Item Table.

Undelete - This button is used to retrieve a deleted version of an estimate from the deleted file.
(Notify an EBASE Administrator if you wish to retrieve a deleted version of an estimate).

Lock - Use this button to lock an estimate. An EBASE Administrator should perform this function. An EBASE Manager may perform this function.

Unlock - This button unlocks estimates. An estimate may be unlocked by an EBASE manager. Use caution when unlocking an estimate during the advertisement period. This should rarely be done. If changes need to be made to an estimate for addenda, during advertisement, an EBASE Administrator or Manager should advance the version number of the locked estimate. After the estimate is updated, it must be reloaded to the bids module by clicking on the **Move to Bids** button.
(Notify an EBASE Manager if you wish to unlock a version of an estimate).

Filter Screen



Filter examples shown on the following pages demonstrate the method of coding used by EBASE to create data filters. These data filters and many others may be created and applied to any EBASE screen where the Filter function has been made available.

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Using the filter function

Make sure to use caps when typing in your search items, the filter is case sensitive.

The filter function provides a way to extract a file or files by specific criteria.

Example 1:

Say you wanted to find a project you knew had the word "VALLEY" in the title but were unsure of the exact title.

Click on the **Filter** button; this will bring up the Specify Filter dialog box. Scroll through the Columns box until you see the word "**Title**" and double click. Title should now be displayed in the white area at the top of the dialog box. Now type the rest of the command string for it to sort by. When you are done it should look like this:

title like '%' + 'VALLEY' + '%'

Now click on the OK button and all the projects with "VALLEY" in the title will be displayed.

The filter you entered will remain until you either clear the filter box, or click to select a project estimate.

Example 2:

Finding version numbers greater than 10
version_number_>10

Example 3:

Looking for a specific contract number.
Contract_number_='004426'

Example 4:

You want to view only those jobs in the Northwest Region.
region_code = '1'

Example 5:

To find a Planned Quantity range
planned_quantity > 5,000 and planned_quantity < 10,000

Example 6: TO FILTER BY 2 SETS OF CRITERIA:

To find a Planned Quantity + an Award Date on or after a specified date.

**(planned_quantity > 5,000 and planned_quantity < 10,000) and
award_date >= date(yyyy,mm,dd)** (enter your date in year, month, day)

Example 7:

TO FILTER BY 3 SETS OF CRITERIA:

(region_code= '6') and (award_date >= date(yyyy,mm,dd)) and planned_quantity >=2

After you have specified your filter, click on **OK** to apply the filter or click on **Verify** to check if you used a valid code.

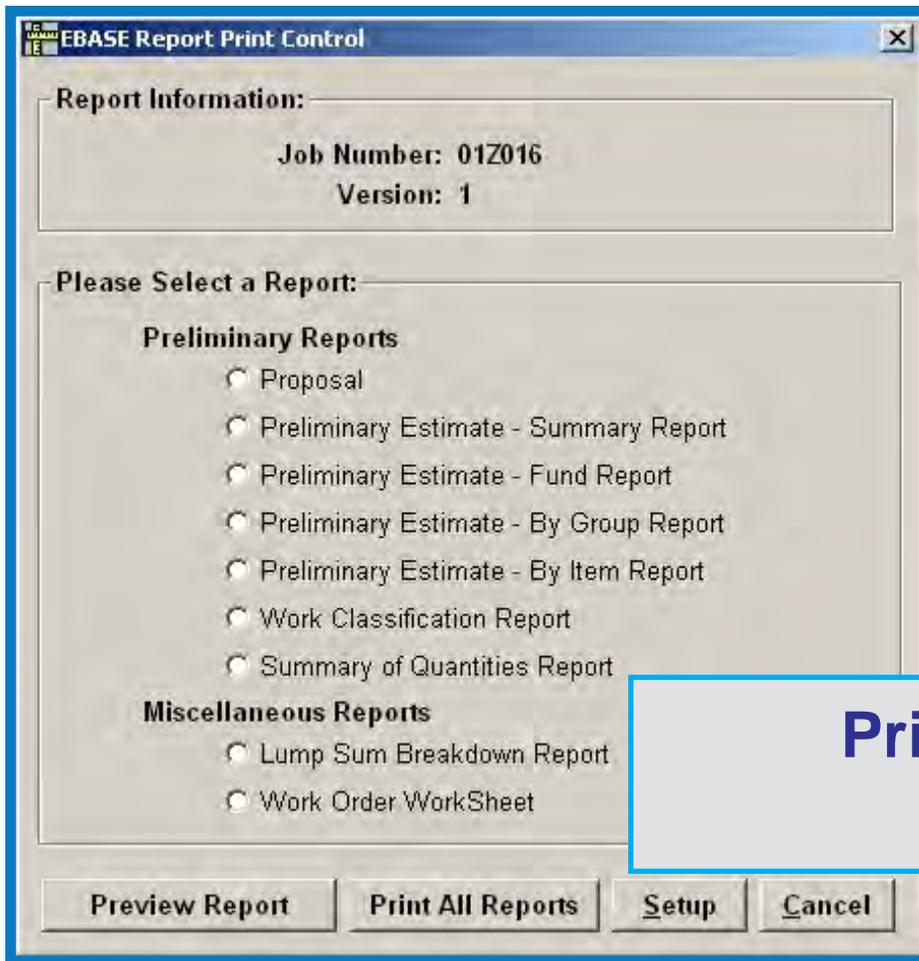
Creating Estimates for Project Definition and other Purposes

Ebase is the designer's and estimator's tool for determining highway project costs based on bid item prices. Estimates for documenting project costs at the project definition stage or for evaluating design alternatives may be created using Ebase.

An example project definition estimate is stored and locked under the name "PDE" under the Olympia Service Center. The information you enter in your project definition estimate will be similar to that as coded in PDE. Look at the coding for that estimate, Print the Summary, by Group and by Item reports. You may even want to duplicate the estimate under another name to use as a template to begin a new project definition estimate.

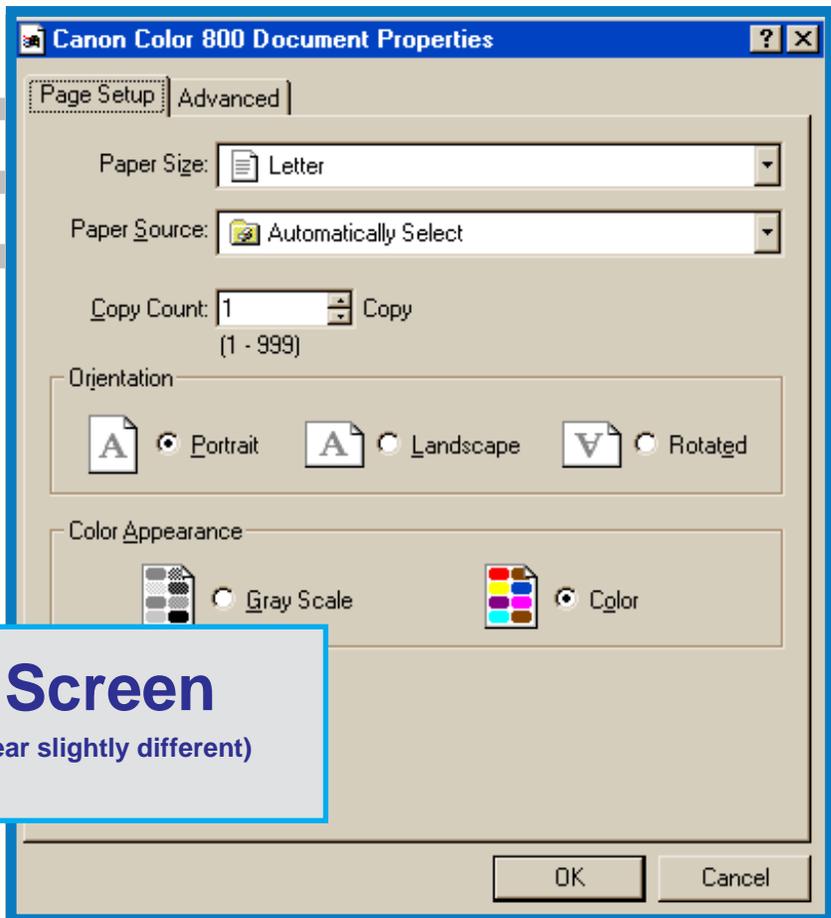
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Printing

Print Reports Screen



Print Setup Screen
(Example only, yours may appear slightly different)

Viewing and Printing Reports

You may view or print reports for any of estimate in EBASE.

Choose the report that you wish to view. Click **OK** to preview. While you are in the preview mode and wish to print your report, Click on the **Print** button or if you must setup a specific printer, do a right mouse button click on the report itself.

When you are finished viewing the report, click on the **Close** button to return to your estimate.

Multiple Estimates reports may be batch printed to obtain a complete estimate document. The reports included in the batch print are:

- Proposal
- Preliminary Estimate - Summary Report
- Preliminary Estimate - Fund Report
- Preliminary Estimate - Group Report
- Preliminary Estimate - Item Report
- Work Classifications Report

To initiate the batch printing the estimate reports, select the "**Print All Reports**" button.

NOTE: the Summary of Quantities must be printed separately due to the 11x17 print requirements

Due to differences in actual print areas between various brands and models of printers, it is highly recommended that one specific printer be selected per work unit, for printing EBASE reports. This will ensure uniform documents.

Reports

Proposal

The Proposal report is the Bid document used by the bidders to record their bid prices. The Proposal report will not be displayed if certain errors are detected. A System Administrator can assist you if errors occur.

Preliminary Estimate - Summary

This shows the estimate summarized at project level and includes sales tax, engineering, contingencies, and non - bid items, as well as Contract Total. Additional pages of this report will be produced for each alternate combination.

Preliminary Estimate - Fund Report

This report shows the breakdown of participation summarized by federal - aid participating or non- participating and by fund name. Additional pages of this report will be produced for each alternate combination.

Preliminary Estimate - By Group

The Group report summarizes the estimate at the group level.

Preliminary Estimate - By Item

This report makes available each item along with its respective planned quantity, unit price and total estimated amount.

Work Classifications

This report groups the bid items into the prequalification work classes for the purpose of determining the predominate class of work in the project. Bid proposals are provided only to bidders qualified to perform the predominate class of work in a project.

The Work Classifications report will not be displayed if missing Pre-Qual Codes are detected.

Summary of Quantities

The Summary of Quantities report is a working document with which the reviewer can refine their column data, funding, group breakouts, items and quantities. This report is included in the plan sheets for each project. To enter Sheet Numbers on the Summary of Quantities Sheets, go to the General Info tab and select the "Summary of Quantities Revisions" button. Enter the Beginning no for the Summary of Quantities sheets, and the total project plan sheet count in the "contract Plans End Page. EBASE will automatically place sheet numbers on each SQ sheet and fill in the sheet reference numbers.

Addendum Shading

The Summary of Quantities report may be shaded for addendum.

To shade the Summary of Quantities report for an addendum:

1. Enter your revision notes using the **Summary of Quantities Revisions** button, located on the General Info Tab.
2. Click Save.
2. Click the reports Icon
3. Select the Summary of Quantities report
4. When the report is displayed in the print preview mode, click on the areas that you need shaded. To remove shading, simply click in the shaded area again.
5. Print the report.

once the report print preview mode has been closed, all addendum shading will automatically be removed.

Lump Sum Report

This report lists the breakout items that have been entered for any of the of Lump Sum bid items.

Work Order Worksheet

This report is used by the Federal-Aid Program Engineer for reporting data to the FHWA.

Addendum for Estimate Reports

When a project is turned in to print for advertisement, it must be loaded to the CAPS2 files and the Bids Module by an EBASE System Administrator. This process locks the estimate and may be performed by clicking on the **Move to Bids** Button. (see following page)

If changes to the estimate are made during the Ad period, an addendum is required. A new version of the estimate must be created using the **Duplicate / New Version** button on the General Info Tab. Once the addendum revisions are complete, the EBASE System Administrator must re-load this new version containing the revised estimate information to the CAPS2 files and the Bids Module, thereby bringing the revised data into these systems and locking the new version of the estimate.

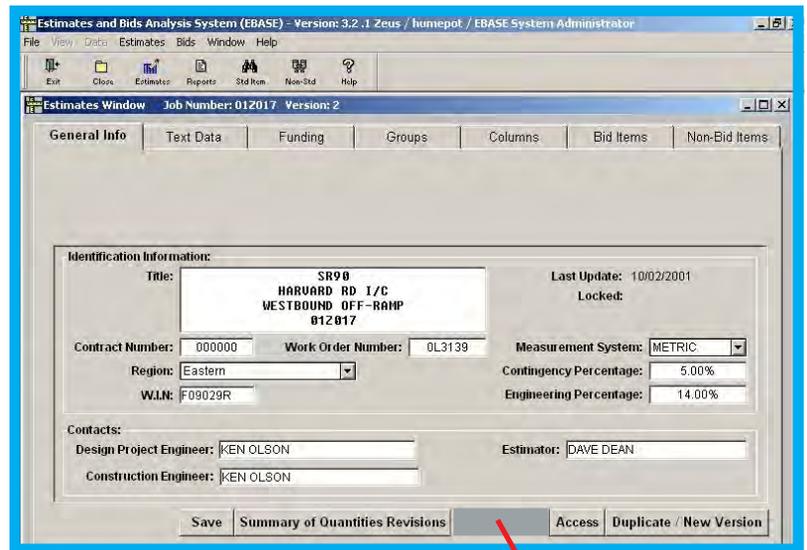
See **Viewing and Printing Reports, Summary of Quantities** for information on Addendum shading.

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Move to Bids

Move to Bids An estimate will be locked automatically when it is moved to Bids. An EBASE Administrator or an EBASE Manager may perform this function.

A cursory review should be performed prior to moving to bids to check for entry errors. This check is important since although EBASE is flexible in the format and data it can use, other systems that rely on EBASE must receive their data in a specific format. (i.e. CAPS - the contract accounting & payment system)



This feature available to only to EBASE Region Administrators

Move to Bids

Click **Move to Bids** when the project is advertised, and whenever the estimate is revised for addenda during the advertisement period.

Please refer to Chapter 2, Levels of Users - EBASE Administrator for pre-load review checklist.

Maintaining EBASE Files

The EBASE Administrator within the Region is responsible for keeping their Region EBASE files organized and current.

There are four estimate sets that the Administrators need to be aware of:

- Current Versions** - This file set displays only the most current version of all estimates within the system.
This file set should ideally contain only the most current version of the engineers estimate for projects that are being developed, on Ad or that have been awarded.
- All Estimates** - This file set displays all versions of all the estimates within the system [excluding version 99].
This file set should ideally contain the most current version of an estimate and perhaps one or two earlier versions.
- Deleted** - This file set displays all versions of estimates that have been deleted from the "Current Versions" and "All Estimates" file sets. This file will occasionally be purged by an EBASE Manager.
This file set is maintained as a back-up file, in case the most current version of an estimate is accidentally lost.
- Awarded** - This file set displays the version 99 [true bids] version of the estimate that is created when a project has been awarded. These estimates are used by Program Management.
This file will be maintained by a system manager.
- As Built** - This file set displays Version 100 Copies of the Awarded estimates that have been created for modification to reflect "As Built" quantities. A Region Administrator must create these estimates.

It is recommended that each Region Administrator set up a regular maintenance schedule for deleting estimates in the "Current Versions" and "All Estimates" file sets. These deleted estimates will go to the "Deleted" file. An EBASE Manager will notify the EBASE Administrators prior to purging the "Deleted" file.

Do not delete estimate files if an Awarded version of the estimated has not been created.

CHAPTER 2 Levels of Users

In order to maintain a required level of security for our estimates system, it was necessary to establish several levels of access to the database. The levels (Users, EBASE Administrators, and EBASE Managers) are defined in the following text:

User (view only)

- May view any estimate on screen.
- May print reports for any estimate.

User (without access rights)

- May view any estimate on screen.
- May print reports for any estimate.
- May duplicate any estimate.
- May create a new estimate.

Users without access rights may create a duplicate of any estimate and create a new estimate from scratch. Once you create a duplicate of an existing estimate by re-naming it, you become the owner of the duplicate estimate. You also become the owner when you create a new estimate. See [User](#) (with ownership) in the text below.

User (with access rights)

- May view any estimate on screen.
- May print reports for any estimate.
- May duplicate any estimate.
- May create a new estimate.
- May modify an unlocked estimate (having been given access rights by an owner).
- May create a new version of an estimate (having been given access rights by an owner).

The owner(s) of an estimate may grant access rights to another user, who may then make modifications to the owners estimate. In making modifications, the user with access rights may create a new version of that estimate or leave the version number the same.

User (with ownership)

- May view any estimate on screen.
- May print reports for any estimate.
- May duplicate any estimate.
- May create a new estimate.
- May modify an unlocked estimate that you own.
- May create a new version of an estimate that you own.
- May grant access rights to a user for an estimate that you own.
- May take access rights away from a user for an estimate that you own.
- May transfer ownership to a user for an estimate that you own.
- May place an estimate that you own in the deleted file.

As the owner of an estimate, you are responsible for the security of that estimate. You may grant access rights to other users, take away access rights, transfer ownership to another user, or place an estimate in the deleted file.

EBASE Administrator

An EBASE Administrator can perform all of the functions of a user with ownership. In addition, an EBASE Administrator can perform the following functions:

As an EBASE Administrator you have full access rights to any project estimate within your Region. These rights include:

- Viewing.
- Printing reports.
- Duplicating and advancing versions.
- Creating new estimates.
- Modification of unlocked estimates.
- Granting and rescinding access rights and transfer of ownership.
- Deleting Estimates.
- Locking Estimates.
- Loading completed estimates to the Bids Module.

As an EBASE Administrator you will be responsible for ensuring that all facets of the estimate are complete before loading it to the Bids Module for Ad.

EBASE has an auto-check function built in to check for certain items when the load to Bids button is pushed, or when a Proposal Report is requested. These items are:

- A Proposal description has been entered
- Bid items are in numerical order
- Bid Items are assigned to a column
- Bid items have a Prequal Code, Unit Price, Unit of measure, Section Header, and that there is a quantity in at least one of the columns listed under a bid item.

EBASE will not check for things like

- Zero or blank Quantities in bid items with multiple columns.
- Columns are actually assigned to groups, or a heading has been entered.
- Bid Items are actually assigned to valid columns
- Groups have any or all the required information entered for each group listed.
- That any Funds are listed , Fund Participants entered or that Participant are matched to funds.
- Will not check for any info on the General Tab with includes the Title + PS&E #, Work Order #, Engineering & Contingency Percentages.

Some additional items to check for are:

- On L.S., CALC. And EST. bid items check to ensure that the Unit Price has been entered as 1.00, and that the total amount for the item is enter under Planned Quantity. The exception to this rule being Prorated L.S. items.
- A column may not have a total of less than \$5.00.
- No blank lines on the Section Headers tab.
- Non Standard bid items are assigned to a Section Header.
- All columns that the bid items are assigned to must have a Planned Quantity entered.
- All Funds, Fund Participants, Groups and columns that are entered into the estimate are used. Please do not leave these as part of the estimate if they are not being used.
- On the General Info tab: a Title W/ PS&E number on the 4th line of the title has been entered.
- Also on this tab check that an Engineering and Contingency % has been entered

It is very important that after an estimate has been loaded to the Bids Module/turned in for AD, that during the Addendum period, a new version number of the estimate is created each time there is an addendum issued that affects the estimate. After this new version of the estimate is updated to reflect the changes made by the addendum, this new version shall be loaded to Bids Module.

Each Region , Marine, and the Olympia Service Center shall have EBASE administrators.

EBASE Manager

An EBASE Manager can perform all of the functions of an EBASE Administrator. In addition, an EBASE Manager can perform the following functions:

- Designate EBASE Administrators.
- May revise any estimate, at any time.
- Permanently delete any estimate from the system.
- Update Lookup tables for the system.
- Update the Administration Table.
- View and update the Audit table.
- Send messages to the users.

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Chapter 3 Bids Module

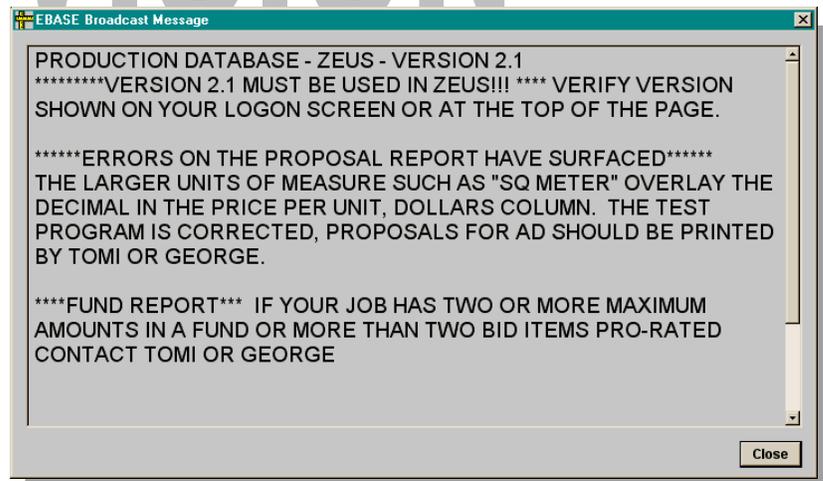
Log on Procedures for EBASE:

From the START menu,

Select PROGRAMS
 DOTApplications
 EBASE

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This screen will inform you of various messages, such as up coming system maintenance etc. After reading the message click the Close button to continue in EBASE. This will take you to the EBASE start screen.



EBASE consists of three modules:

ESTIMATES, BIDS, and CONTRACTORS

Estimates: The procedure and functions of this module are explained in chapter 1 of this manual.

Bids: This module will be used to create all bid reports. (Proposal and Plan holders list, bid status forms, bidchecks, etc). This will be covered in this chapter.

Contractors: Procedures for this database will be explained later in this chapter.

In addition the menu bar has five pull down tabs:

FILE, ESTIMATES, BIDS, WINDOW, AND HELP.

(see example top of next page)

File: This tab is self explanatory.

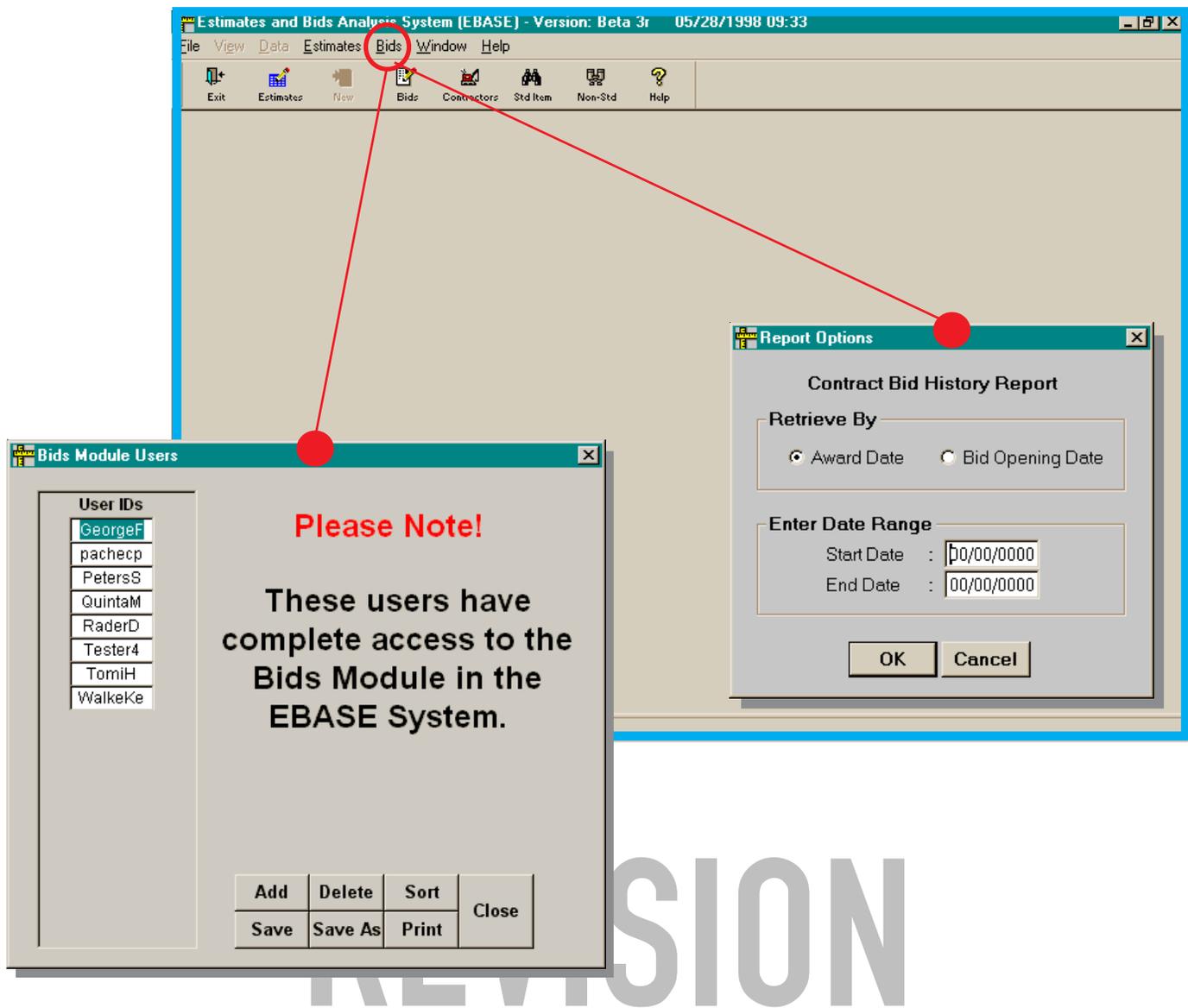
Estimates: Is explained in the previous chapter.

Bids: Click this tab with the left mouse button. Seven options will appear in the pull down menu; Bids, Contractors, Bid Users, Contractor Bid History, Invoice Inventory, Invoice Payments, List and Problem Log. The bids and contractors tabs are alternate methods to access the bid job selection screen and contractors database which are explained later in this chapter. The Invoice Inventory and Invoice Payment Tabs will be explained later in this chapter.

Bid Users: Click this button to access a list of bids module user IDs. This is also the window where a user ID can be added or deleted.

Click Save to save your work and Close to exit back to the EBASE start screen.

Contract Bid History: Click this button to create a contract bid history report. This report requires a beginning and ending date. Month, day, and year. The report is generated by contract award date and will show: Project Title, PS&E Number, Contract Number, Project Description, Engineer's Estimate, Bidder's Name, and total bid.



The Tool bar on the start screen has seven buttons:

- Exit:** Click this button to exit EBASE.
- Estimate:** Click this button to open the Estimates module.
- Bids:** Click this button to open the Bids module.
- Contractors:** Click this button to open the Contractors database.
- Std. Item:** Click this button for the Standard Item lookup table & UBA history.
- Non-Std:** Click this button for Non-Standard Item lookup & Specifications.
- Help:** Click this button for EBASE help.

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Contractors button: Click this button to open the contractors screen.

Contractors Listing *The OSC Ad and Award Office will maintain this database.*

Search for Contractor Name:

Fed ID Num	Office	Contractor Name	Cont Number	Phone
911724720	1	3 KINGS ENVIROMENTAL INC	999604	(360) 887-5464
910896060	1	3A INDUSTRIES INCORPORATED	100303	(206) 725-2200
911473383	1	A & A COATINGS, INC.	100004	(253) 845-1671
910986928	1	A & B ASPHALT, INC.	SUB	(509) 588-5214
820300084	1	A & R CONSTRUCTION, INC.	000650	(208) 746-3394
910991967	1	A. H. POWERS, INC.	100123	(206) 283-9996
539545468	1	A.E. GOODRICK COMPANY	SUB	(253) 581-2198
532783691	1	A.M. EXCAVATION & CONSTRUCTION	SUB	(206) 440-1997
911675193	1	A-1 LANDSCAPING AND CONSTRUCTION INC	100141	(360) 583-0108
911280011	1	ABACUS CONSTRUCTION, L.L.C.	100014	(360) 385-0618

Fed ID Num: Office Number: Contractor Number:

Name:

Address:

City: State: Zip Code:

Phone: Fax Number:

Invoice | Display Invoice | Print | Sort | Filter | Add | Delete | Save | Save As | Close

Search For Contractor Name: Type the first few letters of a company name and the first record with those characters will appear at the bottom of the page. The more characters typed the closer it will take you to a specific record. **Caution, if a contractor has multiple locations, you may need to scroll up or down the listing to find the correct office.** You may use the scroll bar on the right side of the list to move through the listing one record at a time. You may also use the up and down arrows on your keyboard to move from record to record.

Invoice and Display Invoice: These tabs will be explained later in this chapter.

Print: Click this button to print the entire contractor listing.

Sort: Click this button to sort the data. You may sort the data by any combination of the criteria in the left dialog box. Select the criteria in the left dialog box and drag it to the right dialog box and click **OK**. It will sort by the order they are shown in the right dialog box.

Filter: This button is explained in Chapter 1.

Add: Click this button to add a new contractor. Required information is:

- Federal Tax ID No.
- Office number (*for multiple addresses each address is assigned a different office number*)
- Contractor's Prequal number (*if not prequalified enter "sub"*) .
Contractor Prequal numbers are assigned by OSC Prequal Office.

Name

Street Address

POB

City State Zip code - 9 digit (98504-7360)

Phone Number (000) 000-0000 Fax Number (000) 000-0000

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When all the data has been entered click the **Save** button to save the entry. If an error is made, go back to the line with the error, type over and click the **Save** button to save the correction. Click the **cancel** button at anytime before the screen is closed and the message "are you sure you do not want to add a new contractor?" will appear. Answer **Yes** to close the screen without adding a new contractor or **No** to go back to the add screen. After the entry has been saved Click the **Close** button to go back to the contractor database.

Delete: To delete a contractor record, select the contractor and click the **Delete** button. This will delete the record you have selected.

Save: Click this button to save any changes you have made. If you close the screen without saving the entry all data entered will be lost.

Save As: Click on this button to save the file to another drive or other format.
(Do Not change the name of the file in EBASE!!!!)

To view a contractor record scroll through the file unit you find the name, click on the name and the record will come up.

The record may be edited by clicking on the line to be revised and typing over the existing data and clicking the **Save** button. *You are cautioned not to edit these records without first contacting the office that originally entered the information.*

Many contractors have multiple addresses for receipt of plans. Proposal bidding documents may only be delivered to specific addresses as defined in the contractors prequal applications. Do not edit a prequalified contractors address without first contacting the OSC Prequal Office. Those contractors with approved multiple addresses will have their contractors prequal number assigned to each location.

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Bids button:

Click on the **Bids** button. This will open the Job selection window.

This database contains a list of all jobs in the BIDS Module. They may be viewed by Not Awarded Jobs or Awarded Jobs. Not Awarded Jobs include all projects that have not been awarded. Awarded Jobs are all projects in which the contract has been awarded.

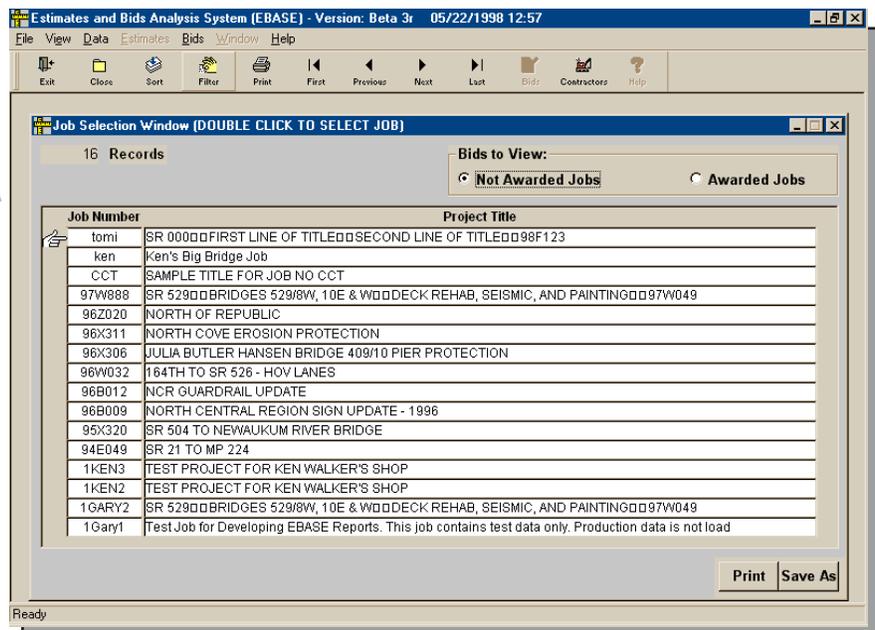
To move back and forth between not awarded and awarded jobs, select the radio button next to the type needed and click the mouse button.

Sort: This button is used to sort the jobs by either: Project Number, Project Title or Award Date.

Filter: This button allows you to filter out various undesired data. Explained in chapter 1, Estimates.

Print: Click this button to print the list.

- Click on the first arrow to move your cursor back to the first page.
- Click on the previous arrow to move back to the previous page.
- Click on the next arrow to move to the next page.
- Click on the last arrow to move to the last page.



Double click on the Job Number or Project Title to open the Bid Analysis window.

The bid analysis window has five tabs:

General Tab:

This tab has data entry fields for project information. Only the highlighted fields can be edited. Information in the grayed out fields defaults from the estimates module when the project is selected.

The screenshot shows the 'Estimates and Bids Analysis System (EBASE) - Version: Beta 3r' window. The 'Bids Analysis Window' is open for Job Number 99W449. The 'General' tab is selected, displaying the following fields: Job Number (99W449), Version (1), Region (0 Olympia Svc Center), Work Order (000000), Revision Date, Bid Status (Scheduled), Contract (991112), Ad Date (00/00/0000), Bid Opening Date / Time (04/15/1998 10:00), Award Date (00/00/0000), Bid Check Revision, Addendum, Awarded Alternates (BASE PLUS A1), Project Title (SR 529 BRIDGES 529/8W, 10E & W DECK REHAB, SEISMIC, AND PAINTING), Project Engineer Name (RICH MITCHELL), Address (EBASE VERSION 3K MODESTO CA 95363-6777), and Phone ((555) 555-1234). Buttons for 'Save', 'Bid Opening Form', 'Bid Status report', 'Bid Check Report', 'Bid Tabulation Report', and 'Update UBA Table' are visible at the bottom.

Bid Status: Click the arrow button for a pulldown menu and select the current bid status. (*Scheduled, Opened, Awarded, All bids rejected, or Bids restored*).

Contract: Enter the six digit contract number.

Ad Date: Enter the date of advertisement.
All Date fields require an 8 digit entry. (*i.e. 04/31/1998*)

Bid Opening Date/Time: Enter bid opening date and time.
i.e. 04/01/1998 10:00

Award Date: When the contract has been awarded, change the status to awarded, enter the award date and click **Save**.

Bid Check Revision: This field is used to change the bid check revision number when an update is required after a report has been printed.

Addendum: Enter the number of addenda issued for the project.

Awarded Alternates: For those projects with Alternate bids enter the base plus alternate combination that was awarded. (*Base bid plus A1+B1*).

Project Title: This field defaults from the Estimate module.

Project Engineer: Enter the project engineer's name, address include plus four zip code, and telephone number.

Buttons on the General Tab:



Save: Click on this button at any time to save any changes made to this screen.

Bid Opening Form: (*bid tally sheet*) Click on this button to create a bid opening form. At the Print Preview screen click on the **Print** button to print a hard copy or click the **Close** button to return to the General tab. The arrow buttons are the same as previously explained.

Bid Status Report: Click this button to create a bid status report. This report shows the required data for the project including the department estimate, number of addenda, number of proposal holders; their names, amount bid(Initial) amount bid(corrected), status of bids and remarks. This report may be printed three times for different purposes.

1. Before any bid data has been entered. This will show the proposal holders and department estimate.
2. For preliminary (apparent) bid results, print the report after the bidders apparent bid totals have been entered

Bid Check Report: This screen will be explained later in this chapter.

Bid Tabulation Report: This screen will be explained later in this chapter.

UBA Update Table: Click this button to transfer the three low bidders' bid prices to the UBA table in the mainframe database. **Caution! This update is to be done one time after the final bid tab has been created and the contract has been executed. This will prevent duplication of data on the mainframe.**

Update Mainframe: Click this button to transfer bid data to the Mainframe data base. (*CAPS, CCIS, Prequal etc.*) As soon as the bid check is verified accurate and again when the contract has been awarded. **Caution: The total entered in the bid data entry field for the low bidder, must agree with the contract total calculated by the bid check.**

Awarded Estimate: Click this button to create a version 99 estimate in the estimates module. To use this feature, click the Bid Item tab; click the box by the awarded contractor's name; click **Save**, then the General tab; click the **Awarded Estimate** button. The contractors' bid prices will be copied to the estimates module creating a version 99 estimate using the actual bid prices.

UNDER
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Bid Item Tab: (Bid entry screen)

Click the **Bid Items** Tab. This is the bid analysis screen (*data entry screen*) for the contractor's bids.

To enter a new contractor click the **Add Contractor** button. This will open the proposal holder file. Double click the contractor's name, this will add the contractor's name and address to the bid check file. If a contractor name is added in error, point the cursor at that name and click the **Delete Contractor** button. This will bring up the message. "Are you sure you want to delete this contractor?" Select **OK** to delete or cancel to go back to the bid analysis screen.

NOTE: A hand cursor will point at the name of the bidder you are entering data for.

Name	Submitted Bid
LAKESIDE INDUSTRIES	\$865,423.12
A AND A COATINGS, INC.	\$923,297.00
MOWAT CONSTRUCTION COMPANY	\$1,234,561.00

Item	Meas	Quantity	Unit Price	Extended Amount
47	HR	5,545.00		
48	EACH	4.00		
49	L.S.			
50	HR	650.00		
51	DAY	116.00		
52	HR	2,370.00		
53	S.F.	1,248.00		
54	L.S.			
55	L.S.			
56	L.S.			
57	EST.			60,000.00
58	EST.			90,000.00
59	EST.			35,500.00
60	EST.			10,000.00
61	CALC			-1.00

Total Submitted Bid: **\$923,297.00**

To move from one bidder to the next, point your cursor at the submitted bid field for that bidder and click once. *Caution! Be sure the cursor is pointed at the desired contractor name before entering bid data.*

Submitted Bid Total, Unit Price and Extended Amount Field:

These are required data entry fields for each bidder.

Use the Tab key to move from each data entry field to the next. The field you are entering data for will always be highlighted. If a calculation error is detected the field will turn red after you have moved to the next field. If this happens verify that you have not made a data entry error and make the necessary correction.

Leading zeros or commas are not required. Decimals are only required when the bid amount includes cents. 100 or 100.00 will both be shown as \$100.00. The system will add the zeros after the decimal. 100.1 or 100.10 will both be shown as \$100.10. Deleted or no charge items do not require an entry. They may be left blank.

Credit Amounts: Enter a minus symbol in front of the amount. (-1)

Lump sum, Estimated and Calculated items:

EBase will not allow a unit price entry for these items. Enter the extended amount only.

When all bid items have been entered click the **Save** Button to save the bid. Then repeat the process for all remaining bids. You may save your work at any time by clicking the save button. Always save your work before exiting.

To edit a bid after it has been saved. Select the contractor by pointing your mouse and clicking on the name. The small white hand will indicate the contractor selected. You may then move through the bid by using either the scroll bar or the tab key to find an item. When you have finished editing click on the Save button to again save your work.

When all bids have been entered and saved. Click on the General Tab. Select bid check report.

Import Bids:

To use this feature, insert the bidders diskette into the disk drive.

1. Select the Bid Items window.
2. Click the **Add Contractor** button.
3. Select the appropriate contractor to copy the bidder to the Bid Item screen.
4. Click **Save**.
5. Enter the contractors apparent contract total in Submitted Bid field. (Caution: Be sure the correct bidder is selected.)
6. Click **Import Bids**. Then click **Open Import Files**.
7. Click **Import**.
8. Click **Bid Items** and **Save**.
9. Close the job and re-open it from the job selection window.
10. Select the Bid Items tab and the bidders prices will have been copied from the diskette. Remove the diskette.
11. Select the General tab.
12. Select the Bid Check Report tab.
13. Print the Bid Check and verify the bid results from the Bid Check report with the bidders hard copy.

If the bidder has made last minute bid changes and/or discrepancies are noted, revise the prices in the bid item screen to agree with the hard copy proposal submitted by the bidder. The signed hard copy is the control (binding) copy. If differences are noted the data on the diskette will be revised to agree with the hard copy. The hard copy can not be revised to agree with the data on the diskette.

File the bids diskette with the original proposal document until the contract has been awarded. Follow normal procedures for the hard copy original bid documents. The diskette may be reformatted and either discarded or reused after the contract has been executed.

Bid Check Report:

Click this button to create a bid check report. This will bring up an error report print preview. Use the right scroll bar to view the error report for each bid entered. Click the **Print Errors** button to print the error report. You may then verify for data entry errors or contractor bid extension errors. If it is a data entry error, Click the **Close** button and make the necessary correction on the bid screen. If the error message is the result of bidder error click the **Continue** button for a print preview of the bid check report. At the preview screen you may use the scroll bars to scroll through the bid check, or you may use the arrow buttons in the tool bar to page through the bid check.

Click the **print** button to print the report, or click the **Close** button to return to the General Tab screen. When the contract has been awarded enter the award date, and use the bid status pull down tab to change the status to awarded. Click the **Bid Items** button and click the awd box next to the awarded contractors' name. Click **Save** and return to the General screen.

Bid Tabulation:

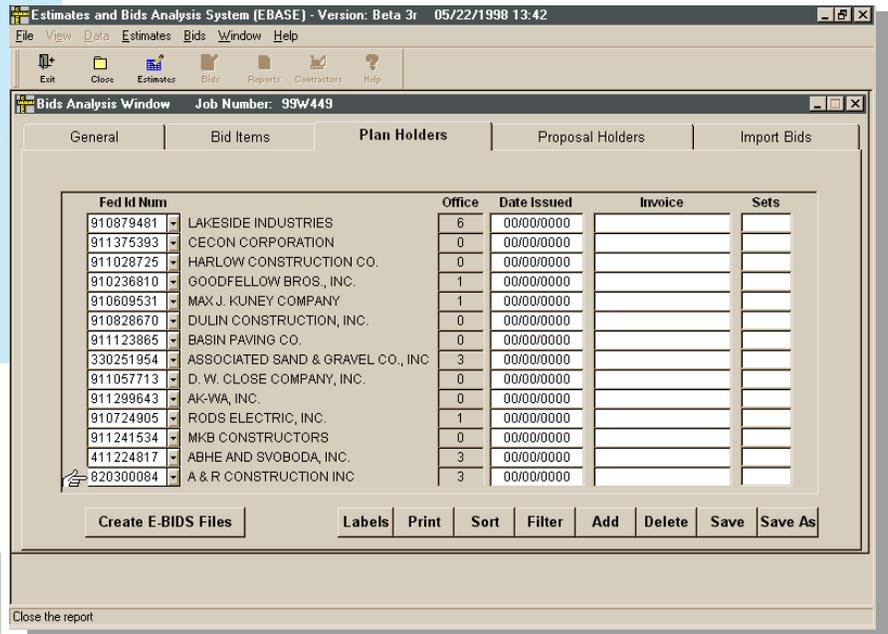
Click this button to create the preliminary bid tabulation report after the bid check has been verified. The preliminary bid tabulation does not require an award date. This is also the button you will use to create the final bid tabulation after the contract is awarded. The final bid tabulations require an award date. Follow the same procedure as the bid check tab.

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Plan Holders Tab:

Click this button to open the plan holders window.

Users are Cautioned! This system does not replace the requirement for plan holders to be entered in the prequal system for verification of eligibility to receive a bid proposal.



Add:

Click this button to add a new contractor to the plan holders list.

It will add a blank field in the federal tax ID column. Click the down arrow in the federal tax ID column to open the contractor database. Scroll through the database until you find the correct contractor name. Click the contractor name to add to the plan holders list. Proposal Holders may be added to this list automatically as described in the procedures for invoice preparation, or as described below. Before adding a contractor with multiple addresses make sure you have selected the correct office number. Contractors with multiple addresses will have an office number assigned to each address. The contractor office numbers and addresses may be viewed in the main contractor database under the contractors button, as explained earlier in this chapter.

Delete:

This button will delete an individual contractor from the plan holders list. Click the contractor name, when it is highlighted, click the Delete button. This will remove the name from the list.

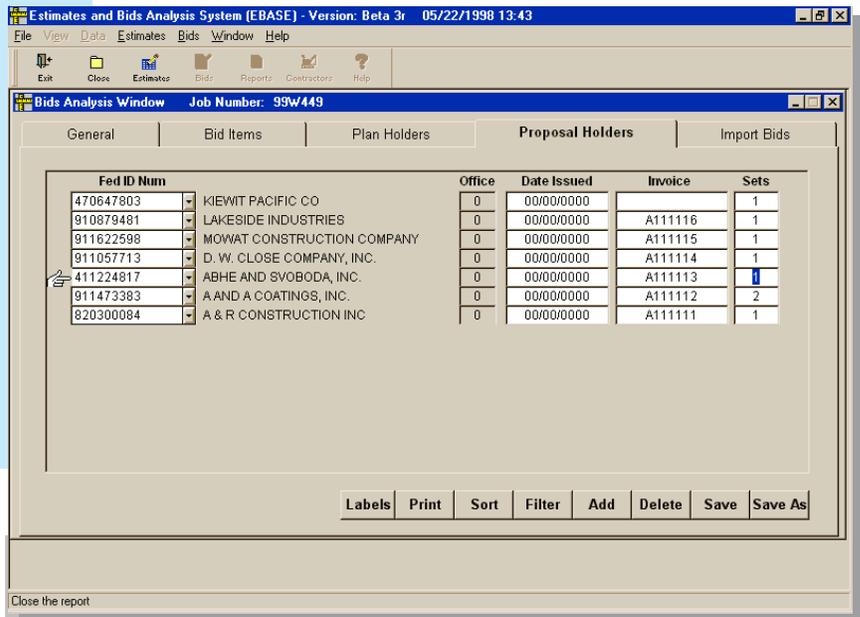
Labels:

Click this button to create mailing labels for the plan holders on this list. A print preview will appear. If the labels are correct click Print to print the labels at your laser printer. They are formatted to print on 1" x 2-5/8" labels. Avery Dennison #5160 or MACO ML-3000 labels 3 per line 10 lines per page. When using this feature you will need to create labels from both the plan holders and proposal holders buttons. *(They are not combined)* You will need both list when preparing a mailing for a project.

Proposal Holders Tab:

Click this button to create a proposal holders list.

Use caution that all proposalholders are prequalified to receive a bid proposal before issuing a proposal and entering them on this list. This system does not replace the prequal system. Click this button to open the proposal holders window.



Add:

Click this button to add a new contractor to the proposal holders list. It will add a blank field in the federal tax ID column. Click the down arrow in the federal tax ID column to open the contractor database. Scroll through the database until you find the correct contractor name. Click the contractor name to add to the proposal holders list. Before adding a contractor with multiple addresses make sure you have selected the correct office number. Contractors with multiple addresses will have an office number assigned to each address. The contractor office numbers and addresses may be viewed in the main contractor database under the contractor's button, as explained earlier in this chapter.

Delete:

This button will delete an individual contractor from the proposal holder list. Click the contractor name, when it is highlighted, click the **Delete** button. This will remove the name from the list.

Label:

Click this button to create mailing labels for the proposal holders on this list. A print preview will appear. If the labels are correct click print to print the labels at your laser printer. They are formatted to print on 1"x 2 5/8" labels. Avery Dennison #5160 or MACO ML-3000 labels 3 per line ID, lines per page. When using this feature you will need to create labels from both the plan holders and proposal holders buttons. *(They are not combined)* You will need both list when preparing a mailing for a project.

Create EBIDS - Files:

When a bidder request to bid using a diskette, these procedures will be followed:

1. Insert a diskette into the disk drive.
2. Open the project file, and at the Proposal Holders screen select the correct bidder.
3. Click **Create EBIDS - File** button. The "Save files to" dialog box will appear.
If it is pointed at the correct drive for your diskette, click **OK**. If it is not, type in the correct drive letter and click **OK**.
4. Once the file has been copied to the diskette, the message: "EBIDS export file has been created at the location you specified". will appear. Click **OK**.
5. Remove the Proposal diskette; attach a diskette label with the bidders name, project title, contract number and PS&E number.
6. Insert the Proposal diskette and the three EBIDs program diskettes into a diskette mailer. Attach the mailer to the invoice that goes to Printing Services to be mailed with the plans, Specifications and printed proposal to the contractor.

UNDER
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INVOICE

Preparation Procedures for EBASE

This system should only be used by Region with the concurrence of the Region Accounting Office. OSC Contract Ad and Award is responsible for accounting for plans invoices/payments prepared in that office and will use this system.

Log on to EBASE, double click the EBASE icon on your desk top, or select the EBASE program from your Start Menu.

Select the correct server (HOKI for testing, **ZEUS** for production)

Enter your **EBASE** user ID and **Password**.

At the main menu single click on the Contractors button. This will take you to the Contractors Listing screen.

For security and your convenience, OSC Ad and Award staff will maintain this listing. Only one user at a time may edit the contractor listing.

Fed ID Num	Office	Contractor Name	Cont Number	Phone
470640263	2	KIEWIT CONSTRUCTION COMPANY	427	(402) 342-2052
11	3	KIEWIT CONSTRUCTION COMPANY	427	(425) 255-8333
8	1	KIEWIT CONSTRUCTION COMPANY	427	(206) 827-6362
4027	1	KIEWIT ENGINEERING CO.	V80004	(402) 271-2820
223	1	KIEWIT NETWORK TECHNOLOGIES, INC.	100244	(402) 342-2052
470647803	5	KIEWIT PACIFIC	100098	(402) 342-2052
470647803	2	KIEWIT PACIFIC CO	446001	(425) 255-8333
470647803	1	KIEWIT PACIFIC CO.	446001	(360) 693-1478
470647803	3	KIEWIT PACIFIC CO.	446001	(402) 342-2052
4109	1	KIMBALL ENGINEERING	V70003	(208) 746-9010

Fed ID Num: 470640263 Office Number: 2 Contractor Number: 427

Name: KIEWIT CONSTRUCTION COMPANY

Address: 1000 KIEWIT PLAZA

City: OMAHA State: NE Zip Code: 68131-3374

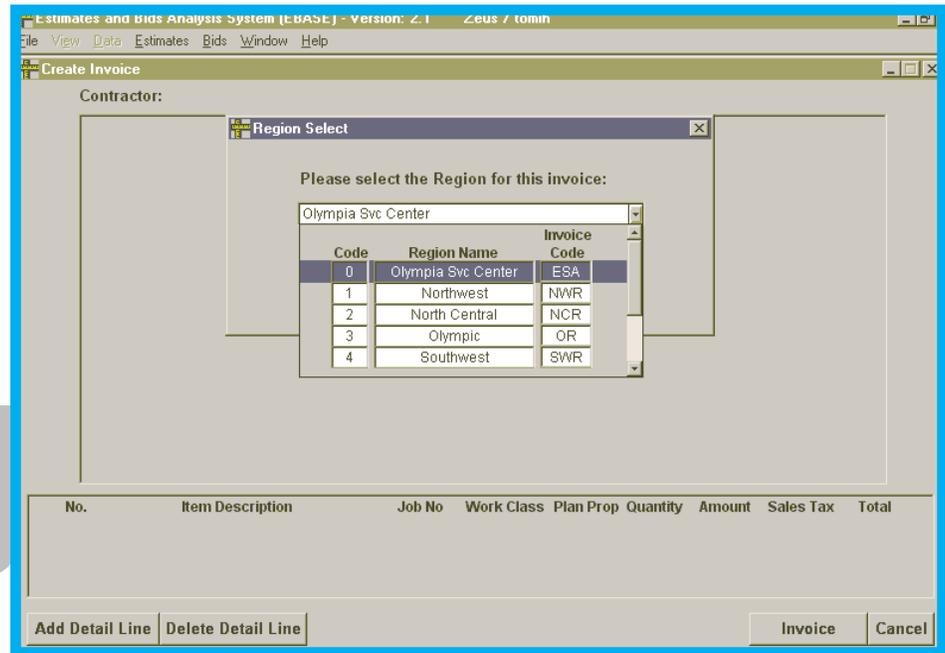
Phone: (402) 342-2052 Fax Number: (402) 271-2981

Invoice Display Invoice Print Sort Filter Add Delete Save Save As Close

“Search for Contractor” Type the first three or four letters of the contractors name in this field. This will take you to the first record beginning with those letters. Click the correct contractor name and office. **(Caution! Verify the accuracy of the data for the selected contractor before clicking the “Invoice” button).** If the contractor name and address is inaccurate or not found, contact the OSC Ad and Award office. OSC staff will add, edit or delete the contractor data from this screen as required.

“INVOICE” Click this button to go to the invoice data entry screen. Click on the appropriate Region in the pull - down menu for the invoice and click **OK**.

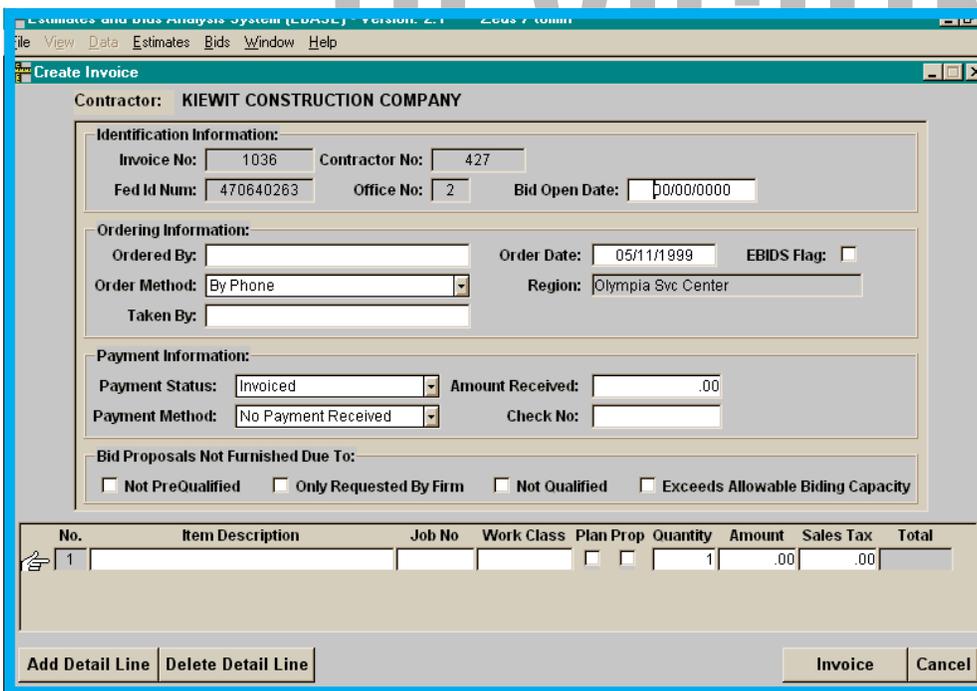
This will take you to the invoice data entry screen and assign the next invoice number in sequence for the region selected. It will also paste the Federal ID#; name; contractor number, address, phone and fax number



for the selected contractor to the invoice.

Fill in the appropriate invoice field.

- Bid Open Date:** Enter the bid opening date for the project requested.
- Ordered By:** Enter the name of the person requesting the plans.
- Order Date:** The system will automatically enter the current date.



Ebids Flag: Check this field only if the customer desires to bid by diskette. The system will print "EBIDS Proposal Requested" on the invoice. (this option will be available soon.)

Order Method: Use the pull-down menu to select the order method (i.e. phone, letter, etc.).

Taken By: enter the name of the person preparing the invoice.

Payment Status: Use the pull-down menu to select the payment status.

Payment Method: Use the pull-down menu to select method of payment.

Amount Received: Enter the amount of payment received.

Check No.: Enter the check number if paid by check. If bid proposal is not issued, place X in the box next to the appropriate reason.

Item Description: Enter the project title.

Job Number: Enter the PS&E number (*This is a required field for each project requested. It enables the contractor data to copy to the appropriate proposal or plan holders list in EBASE when the invoice is printed.*)

Work Class(s): Enter advertised work class(s).

Plans: Enter an X if plans are requested.

Proposal: Enter an X if a proposal is issued. This will automatically paste the contractor's data to the proposal and plan holders list for this project in the Bids Module.

Quantity: Enter the number of plans sets requested.

Amount: Enter the appropriate plans fee.

Sales Tax: Leave this field blank at this time.

Total Amount: This is calculated by the system. It is the number of plan sets times the amount per set plus any sales tax entered (*sales tax is not collected at this time*)

Add Detail Line: If plans for more than one project are requested, you may add additional item description lines by clicking this button. Each time you click it, one line will be added. This line may also be used to show a billing address, if a customer requests plans be delivered somewhere other than the address of record.

Delete Detail Line: If a line is not needed, it may be deleted by clicking this button. When all the data has been entered, you have the option of clicking the

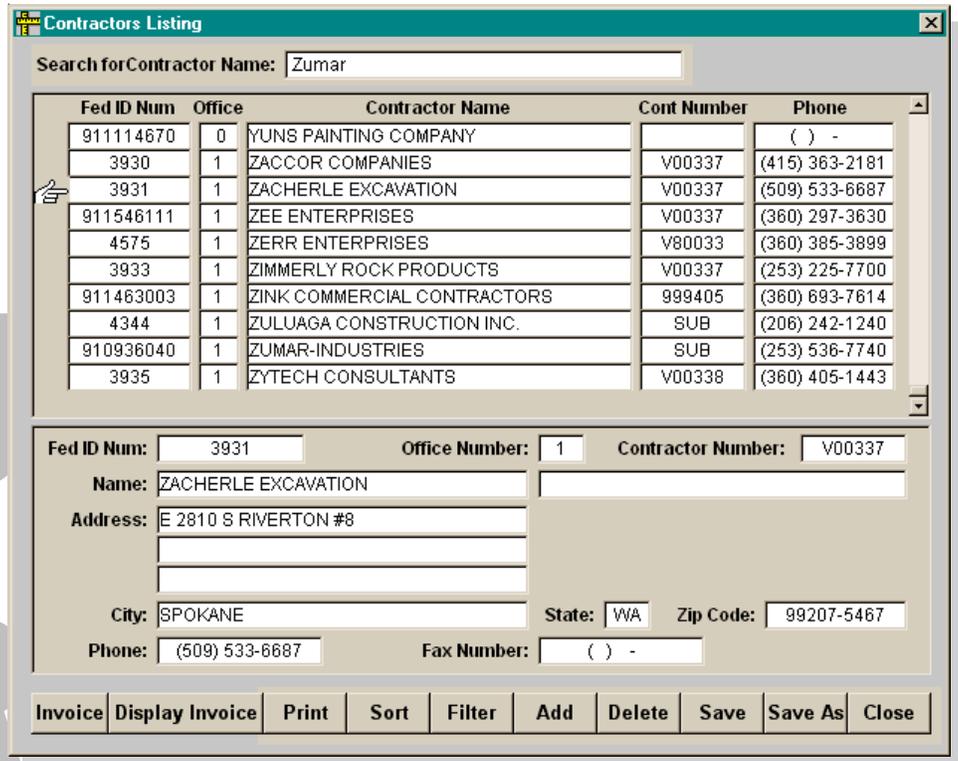
Cancel: button to exit the invoice without saving, or click the **Invoice** button to preview the invoice.

The invoice print preview screen is your last opportunity to edit the invoice. If

you see incorrect data, click the **Close** button in the top tool bar, and you will go back to the previous screen to make the corrections.

If everything is accurate, click the **Print** button in the top tool bar. This will simultaneously save and print the invoice. At the print dialog screen select the number of copies needed. One copy for the customer, one copy for Accounting, one copy for Printing Services and one copy to the issuing office file. (OSC requires six copies. 1- Customer, 1-Plans Desk, 2 - Printing Services, 1 - Accounting, 1 - Control Copy)

If an error is made on the invoice it can be corrected at any time before the **Print** button is clicked. Once the invoice is printed it can not be edited. If an error is made, the invoice must be voided and a new invoice created. Voided invoices must be signed off by the person preparing the invoice and their supervisor. Save the voided invoices for an accounting audit trail.



Display Invoice: Select this button to display a record of all invoices for a selected contractor. This screen will display all invoices that have been issued to a selected contractor. It will show the invoice number, contractors prequal number, invoice date and the date voided, if the invoice has been voided. You may view any listed invoice from this screen by selecting the invoice number and double clicking. The invoice may be reprinted from the view screen (*it can not be edited*).

Click **Close** to return to the Contractor Listing screen.

The following buttons are related only to the Contractor Listing, and are explained earlier in this manual:

PRINT SORT FILTER ADD

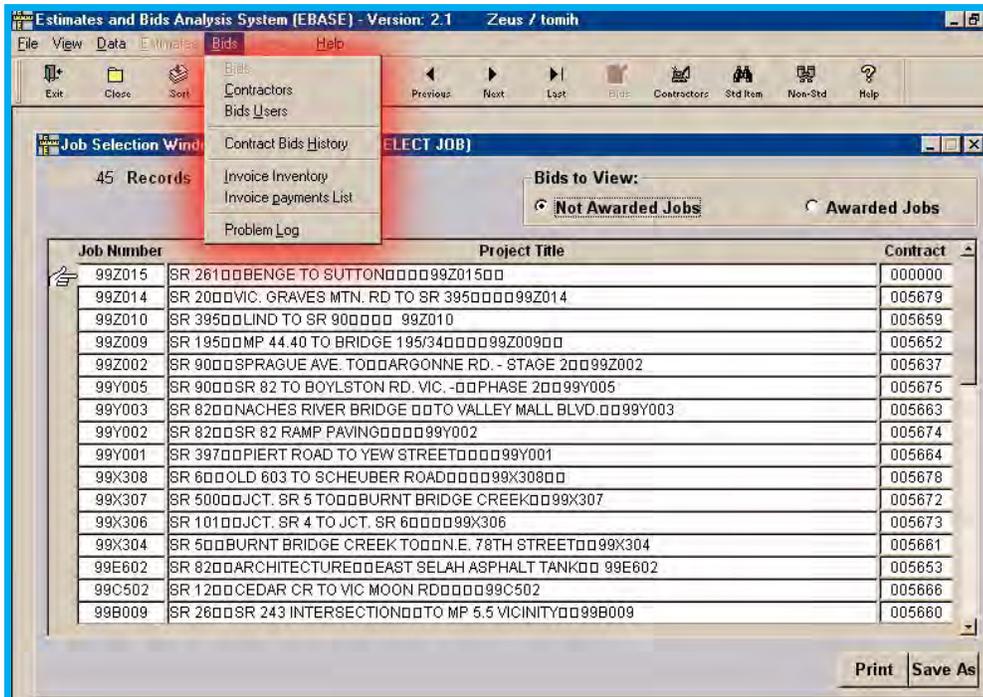
DELETE SAVE SAVE AS CLOSE

ACCOUNTING

for EBASE invoices

This system should only be used by Region with the concurrence of the Region Accounting Office. OSC Contract Ad and Award is responsible for accounting for plans invoices/payments prepared in that office and will use this system.

From the tool bar on the EBASE startup screen, use the pull-down menu under **Bids** to select **Invoice Inventory**.



This will take you to the Invoice Inventory listing. This list is a record of every invoice created in EBASE.

Search by Invoice Number: Type the invoice number in this field to search the listing for a specific invoice record. The Region alpha prefix must be used with this feature. (i.e. SWR1, NWR1, etc.)

When you have found the correct invoice number, **double Click** on that record to view or print a duplicate of the original invoice. This is an inquiry feature only and the original may not be revised.

The following information is shown for each invoice:

- Invoice Number
- Invoice Date
- Bid Opening Date
- Voided Date
- Invoice Amount
- Amount Received
- Payments Received
- Balance Due

This is the window where an invoice may be voided. To void an invoice, select the invoice, type in the void date and click **Save**. This will show **VOID** in red in the view invoice screen. It will also show the void date on the Display Invoice screen in the Contractor Listing window.

If an invoice is voided in error, you may delete the date and the invoice will no longer be shown as void. This is the only edit that may be done to a saved invoice. The void feature should only be used if an invoice is created in error.

All voided invoices need to be signed off by the person who created the invoice, and their supervisor at the time they are voided. Note the reason for void on the invoice.

Invoice Number	Invoice Date	Bid Opening Date	Voided Date	Invoice Amount	Initial Amt Received	Payments Received	Balance Due
Region: Olympia Svc Center							
ESA1	03/22/1999	03/22/1999	00/00/0000	50.00	0.00	50.00	\$0.00
ESA2	03/22/1999	03/22/1999	00/00/0000	25.00	0.00		\$25.00
ESA3	03/22/1999	04/15/1999	00/00/0000	25.00	0.00	25.00	\$0.00
ESA4	03/22/1999	00/00/0000	00/00/0000	15.00	0.00	15.00	\$0.00
ESA5	03/22/1999	04/07/1999	00/00/0000	25.00	0.00		\$25.00
ESA6	03/23/1999	04/14/1999	00/00/0000	80.00	0.00	80.00	\$0.00
ESA7	03/23/1999	00/00/0000	00/00/0000	15.00	0.00	15.00	\$0.00
ESA8	03/23/1999	00/00/0000	00/00/0000	90.00	0.00	90.00	\$0.00
ESA9	03/23/1999	00/00/0000	00/00/0000	150.00	0.00		\$150.00
ESA10	03/23/1999	00/00/0000	00/00/0000	30.00	0.00	30.00	\$0.00
ESA11	03/23/1999	00/00/0000	00/00/0000	75.00	0.00	75.00	\$0.00
ESA12	03/23/1999	04/08/1999	03/23/1999	75.00	0.00	75.00	\$0.00
ESA13	03/23/1999	04/08/1999	00/00/0000	50.00	0.00	50.00	\$0.00
ESA14	03/23/1999	04/01/1999	00/00/0000	75.00	0.00	75.00	\$0.00
ESA15	03/23/1999	04/15/1999	00/00/0000	25.00	0.00	25.00	\$0.00
ESA16	03/23/1999	00/00/0000	00/00/0000	30.00	0.00	30.00	\$0.00
ESA17	03/23/1999	04/14/1999	00/00/0000	25.00	0.00	25.00	\$0.00

Invoice listing:

This button allows you to create an invoice listing by start and end dates, (i.e. 02/01/1999 to 02/28/1999 would produce a listing of all invoices created from 2/1 through 2/28). This can be printed by clicking the **Print** button.

Invoice Payment: Click this button to open the invoice payment screen. When payment is made on an outstanding invoice, enter the amount of payment, mailroom log number and cash receipt number, then click **Save**. Click **Cancel** to cancel the payment record.

Caution! This payment is still required to be entered in TRAINS on a cash receipt for accounting, it is not meant to replace your current accounting procedures.

Click **Close** to exit back to the invoice listing.

Purge Invoices: This feature allows you to print a listing of a block of invoices using a beginning and ending date, then purge (*delete*) the records from the database. This feature should only be used after all invoices and payments within that time period are accounted for. This list will show:

- Invoice Number
- Date of Invoice
- Invoice Amount
- Amount Received with the original order

and a complete payment history including:

- Date Paid
- Receipt No.
- Amount Paid
- Balance Due for each invoice.

The listing is to be files with the accounting copies (*control copies*) of the invoices as an audit record.

Caution! Never purge a block of invoices before printing the listing.

Button Definitions:

- PRINT** - Click this button to print the entire listing.
- SORT** - Click this button to sort the listing by any method shown in the sort dialog box.
- FILTER** - Click this button to set up a filter to show only the records for your region.
- DELETE** - This button will be disabled. You can not delete an invoice.
- SAVE** - Click to save.
- SAVE AS** - Click to save the list to a different directory.
- CLOSE** - Click to exit listing.

UNDER
REVISION

Appendix A

UNDER
REVISION

ESTIMATE GROUP BREAK RULES

Group	Group
100930R	153022S

1. A separate group is required whenever there is a change in Program Item Number (PIN).

Group	Group	Group
100930R	153022S	153022S
Fed-State	Fed-State	State

2. A separate group is required whenever there is a change in the funding (any change in participants, their individual participation rates, or their source of funding).

Funding participants may be the FHWA, a State agency, County, City, or other public agency, private organizations and participation agreements for work to be done by contractor.

Group	Group	Group	Group
100930R	100930R	153022S	153022S
Fed-State	Fed-State	Fed-State	State
CS174100	CS174105	CS174100	CS174100

3. A separate group is required whenever there is a change in control section.

Group	Group	Group	Group	Group
100930R	100930R	153022S	153022S	153022S
Fed-State	Fed-State	Fed-State	State	State
CS174100	CS174105	CS174100	CS174100	CS174100

4. A separate State funded group (1 per project) is required for reimbursement for third party damages.

Appendix B

UNDER
REVISION

CONSTRUCTION ENGINEERING PERCENTAGES & CONTINGENCIES

Contingency percentages are set up to handle unforeseen changes in a project. Changes such as additional work, quantity over-runs, and additional items are some of the contingencies that maybe expected in a project. **Currently for all WSDOT contracts, contingencies are limited to 4% of the total contract amount.** Please contact the Program Management office for guidance on using a Contingency percentage greater than 4%.

For local agency projects administered by WSDOT off the State Highway system no contingencies percentage will be set up.

Engineering percentages are the amount of monies set up in each contract for administration of the project. These percentages will vary by type of work and total dollar amount of the contract. On an average, the department has been running around 15% engineering on all projects in the improvement and preservation programs.

When beginning an estimate enter this 15% average as a beginning* point for Construction Engineering. Prior to the final PS&E submittal, this percentage may be adjusted up or down using the figures in the tables included here.

The Region Program Development/Management staff, based on appropriate justification, can approve any changes in the construction engineering percentages for a project different from the rates listed.

Copies of the approved justification letter shall be submitted with the final PS&E turn in for advertisement.

*** Please use the Charts on Pages B2 & B3 to Calculate Engineering Percentages**

Engineering Percentages for Highway Projects

To use the following tables :

Once the Program and sub-programs have been identified, go appropriate table and find the dollar range that covers the total Construction cost (construction costs will include any below the line items that has Engineering applied to them, such as utility agreements and work by state forces other than WSDOT). Record the corresponding percentage in your estimate.

Preservation Projects

P1 Roadway

(PA) Paving projects.

P2 Structures

(PB) New construction, updating existing structures projects.

(PC) Seismic retrofits.

P3 Other Facilities

(PD) Refurbish existing rest areas to extend service life and improve safety.

(PF) Construct weigh facilities.

(PH) Major Refurbishments of electrical systems, electronics, mechanical systems and major Drainage rehabilitation or replacement projects

(PE) Slope stabilization Projects.

Program P Highway Preservation		
P 1 - Roadway	P 2 - Structure	P 3 - Other Facility
P A - Paving / Safety Restoration	P B - Preservation	P D - Rest Area
	P C - Catastrophic Reduction	P E - Unstable Slope
		P F - Weigh Station
		P G - Program Support
		P H - Major Drain / Electrical

Preservation Projects								
	P1		P2			P3		
	PA	PB	PC	PD	PE	PF	PG	PH
\$0 - 250,000	20%	20%	24%	18%	18%	23%	14%	21%
\$250,000 - \$500,000	18%	18%	24%	16%	16%	20%	12%	18%
\$500,000 - \$1,000,000	16%	16%	22%	16%	12%	18%	10%	16%
\$1,000,000 - \$2,000,000	14%	14%	20%	14%	10%	16%	10%	16%
\$2,000,000 - \$5,000,000	12%	12%	20%	14%	8%	14%	8%	14%
\$5,000,000 - \$10,000,000	10%	10%	18%	14%	6%	14%	8%	14%
\$10,000,000 +	8%	8%	18%	14%	6%	14%	8%	14%

Highlighted percentages indicate that there were not enough projects for an accurate example

Projects with Multiple Programs

Example: **\$3,750,000** Total Construction project costs with:
\$2,225,000 under Preservation P1 paving (PA) and
\$1,525,000 under Improvement I2 collision reduction (ID)

Percentages From Tables

[P1 - PA = 12 %] [I2 - ID = 18 %]

(2,225,000 x .12) + (1,525,000 x .18)

= 14%

3,750,000

Improvement Projects

I1 Mobility — Improve mobility within congested highway corridors.

(IA) Congestion Relief Projects Urban

(IB) Congestion Relief Projects Rural

(IC) Bicycle projects

(IQ) High Occupancy Vehicle projects

I2 Safety — Provide the safest possible highways within available resources.

(ID) Accident reduction projects

(IE) Projects that improve roadway geometrics, eliminate at-grade intersections, install signals / channelization at intersections

I3 Economic Initiatives — Support efficient and reliable freight movement on state highways.

Support tourism development and other Washington industries.

(IF) Freight and Goods improvement to all weather surfaces

(IG) Projects providing four-lane limited access facilities on a trunk system

(IH) Constructing Rest areas

(II) Replacing or modifying structures on the Interstate System with, restricted vertical clearances and limited overload capacities

(IJ) Scenic Byway Projects

(IR) Bicycle rural road shoulder widening projects

I4 Environmental Retrofit — Retrofit state highway facilities as appropriate to reduce existing environmental impacts.

(IK) Reconstruct storm water discharge facilities

(IL) Projects removing fish passage barriers

(IM) Projects including Noise walls, berms, and noise mitigation measures.

(IN) Projects for air quality

Program I Improvement			
I 1 - Mobility	I 2 - Safety	I 3 - Econ Initiative	I 4 - Environ Retrofit
IA - Urban	ID - Collision Reduction	IF - All Weather Highway	IK - Stormwater Runoff
IB - Rural	IE Collision Prevention	IG - Trunk System Completion	IL - Fish Barrier Removal
IC - Urban Bike Connection		IH - New Safety Rest Area	IM - Noise Reduction
IQ - HOV Lane		II - Bridge Restriction	IN - Air Quality
		IJ - Scenic Highway	IO - Wetland Monitoring
I6 - Sound Transit	I7 - Tacoma Narrows	IR - Bike Touring Route	IP - Policy Implementation
IT - Regional Transit Authority	IU - Tacoma Narrows	IS - Avalanche / Flood Control	

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Improvement Projects												
	I1				I2		I3				I4	
	IA	IB	IC	IQ	ID	IE	IF	IG	IH	II	IK	IL
\$0 - 250,000	26%	18%	22%	22%	24%	22%	22%	20%	12%	12%	18%	22%
\$250,000 - \$500,000	23%	17%	22%	20%	22%	20%	20%	20%	12%	12%	18%	22%
\$500,000 - \$1,000,000	20%	16%	20%	20%	20%	18%	20%	18%	12%	12%	18%	22%
\$1,000,000 - \$2,000,000	17%	15%	20%	18%	18%	16%	18%	16%	12%	12%	18%	22%
\$2,000,000 - \$5,000,000	14%	14%	18%	16%	15%	14%	16%	14%	12%	12%	18%	22%
\$5,000,000 - \$10,000,000	12%	13%	16%	14%	13%	12%	14%	12%	12%	12%	18%	22%
\$10,000,000 +	10%	10%	14%	12%	10%	10%	14%	10%	12%	12%	18%	22%

Highlighted percentages indicate that there were not enough projects for an accurate example

Appendix C

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FEDERAL WORK TYPE CODES

Roadway and Surface Types	
A000	Primitive
B000	Unimproved
C000	Graded & Drained Earth
D000	Soil Surface
E000	Gravel or Stone
F000	Bit Surface Treatment
I000	Bituminous Concrete
J000	Portland Cement Concrete
K000	All Others

BridgeType	
The first digit (code X) indicates the Bridge Class. The second digit indicates the nature of the structure.	
X0 __	Highway over Waterway
X1 __	Highway over Railroad
X2 __	Highway over Highway
X3 __	Highway over Waterway and Railroad
X4 __	Highway over Waterway and Highway
X5 __	Highway over Railroad and Highway
X6 __	Highway under Railroad
X7 __	Highway under Highway
X8 __	Highway under Railroad and Highway
X9 __	Other combinations, incl. Highway over Waterway, RR and Highway; also 3- and 4- level grade separations and miscellaneous

Superstructure material Type - The third digit identifies the material of principal supporting spanmembers, of the span	
X_0_	Timber
X_1_	Masonry
X_2_	Concrete, not prestressed
X_3_	Steel
X_4_	Steel and Concrete
X_5_	Timber and Steel
X_6_	Timber and Concrete
X_7_	Composite steel and concrete
X_8_	Concrete, prestressed and post tensioned
X_9_	Aluminum

Superstructure Design Type - The fourth digit identifies type of span (identifies type for main span if bridge comprises 2 or more span types)	
X__0	Slab
X__1	Girder (includes box girder)
X__2	Truss (except cantilever)
X__3	Rigid Frame
X__4	Arch
X__5	Cantilever truss
X__6	Movable
X__7	Suspension
X__8	Box Culvert (bridge length)
X999	Highway tunnel

Bridge Cross Reference List

See latest Bridge List Span Types

X_ _ 36	BAS	Bascule Lift Span
24	CA	Concrete Arch
21	CBOX	Concrete Box girder
Y007 or 28	CCULV	Concrete Culvert
21 or 81	CFP	Concrete Floating Pontoon
21	CG	Concrete Girder
20	CS	Concrete Slab
20	CST	Concrete Slab on Timber Piling
21	CTB	Concrete T - Beam
22	CTRU	Concrete Truss
999	CTUN	Concrete Lined Tunnel
41	ESB	Encased Steel Beam
81	PCB	Pre -Tensioned Concrete Beam
80	PCS	Pre -Tensioned Concrete Slab
81	PCTB	Pre -Tensioned Concrete T - Beam

Bridge Cross Reference List		
See latest Bridge List Span Types		
81	POB	Post -Tensioned Concrete Beam
81	POTB	Post -Tensioned Concrete T - Beam
21	PRC	Precast Reinforced Concrete Beam
81	PRPOB	Pre- Tensioned and Post - Tensioned Beam
81	PTBX	Post - Tensioned Box Girder
31	SA	Steel Arch
71 or 31	SB	Steel Beam
71 or 31	SBOX	Steel Box Girder
Y007	SCULV	Steel Culvert
31	SFP	Steel Floating Pontoon
71 or 31	SG	Steel Girder
36	SL	Steel Lift Span
36	SS	Steel Swing Span
32	ST	SteelTruss
37	SUSP	Steel Suspension Span
Y007	TCULV	Timber Culvert
01	TTLB	Treated Lumber Laminated Beam
01	TLL	Treated Timber Longitudinal Laminated
02	TTRU	Treated Timber Truss
01	TTS	Salts Treated Timber Trestle
01	TTT	Creosote Treated Timber Trestle
999	TTUN	Timber Lined Tunnel
999	TUN	Tunnel
01	UTL	Untreated Log
01	UTLB	Untreated Timber Laminated Beam
02	UTRU	Untreated Timber Truss
01	UTT	Untreated Timber Trestle

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Miscellaneous Type - Cont.	
Y109*	Truck loading facility
Y110*	MCSAP (development code)
Y111*	MCSAP (enforcement program)
Y112*	CDL (development)
Y113*	CDL (testing operations)
Y200*	Bus purchases
Y205*	Purchase of rolling stock (fixed rail)
Y210*	Administrative expenses
Y215*	Operating expenses(net)
Y219*	Ferry boats
Y220*	Noise abatement
Y222	Truck scales, fixed
Y223*	Truck scales, portable
Y224*	Auto restricted zone
Y225*	Terminal and transfer facilities
CENG*	Construction engineering
GMKR*	Geodetic markers
INSP	Bridge inventory, inspection, and classification and other special bridge projects
MAIN	Maintenance
PCON*	Post construction
PENG	Preliminary engineering
PE-1	Route planning, location studies (Appalachian funds only)
PE-2	Engineering design and construction plans (Appalachian)
PLAN	Planning (HPR, PR and PL funds)
RESH	Research (HPR, PR and PL funds)
R-MP	Residential moving payments
ROWA*	Right of way
R-SC	Relocation services costs
RW/B	Business and farm payments
RW/O	Replacement housing payments - Owners
R/WS	Acquisition of scenic strips outside of ROW
RW/T	Replacement housing payments - Tenants
SFTY	Safety related work
UPLN	Urbanized planning
<p>NOTE: This material is reproduced from appendix A to FHWA order H4500.3 March 1, 1989</p> <p>* These are not currently listed in EBASE, but may be added upon request</p>	

Appendix D

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SAFETY CLASS CODES

INTERSECTION/TRAFFIC CONTROL DEVICES

	Work Code	Title	Unit of Measure	Type
*	1A	Channelization, Turning Lanes	—	SFTY
*	1B	Sight Distance Improvements	—	SFTY
*	1C	Traffic Signs	—	SFTY
*	1D	Marking and/or Delineators, Major Item	—	SFTY
*	1E	Illumination, Major Item of Project	—	SFTY
*	1F	Traffic Signals, Upgrade	Each Intersection	**
*	1G	Traffic Signals, New	Each Intersection	**

STRUCTURES

	Work Code	Title	Unit of Measure	Type
	2A	Widen or Modify Bridge for Safety	Each Bridge	X__
	2B	Bridge Replacement for Safety	Each Bridge	X__
	2C	Bridge Construction , New for Safety	Each Bridge	X__
	2D	Replace/Improve Minor Structure Safety	—	SFTY
	2E	Upgrade Bridge Rail	—	SFTY

SAFETY CLASS CODES - CONT.

ROADWAY AND ROADSIDE IMPROVEMENTS

	Work Code	Title	Unit of Measure	Type
*	3A	Widen Traveled Way, no Lanes Added	—	****
	3B	Add Lane(s) to Traveled Way	—	****
	3C	Install Median/Roadway Separation	—	SFTY
	3D	Shoulder Widening/Improvement	—	SFTY
	3E	Roadway Realignment, except RR	—	SFTY
*	3F	Skid Treatment - Overlay	—	SFTY
	3G	Pavement Grooving	—	SFTY
	3H	Breakaway Sign Support	—	SFTY
	3I	Relocate/Breakaway Utility Poles	—	SFTY
*	3J	Guardrail End Treatment	—	SFTY
	3K	Upgrade Guardrail	—	SFTY
	3L	Upgrade Median Barrier	—	SFTY
	3M	Install Median Barrier	—	SFTY
*	3N	Impact Attenuator	Each Device	SFTY
	3O	Flatten Side Slopes: Regrading	—	SFTY
*	3P	Worksite Safety/Maint. Traffic	—	SFTY
*	3Q	Bridge Approach/Guardrail Transition Each Br.	—	SFTY
	3R	Obstacle Removal	—	SFTY

Pedestrian Safety

	Work Code	Title	Unit of Measure	Type
	4A	Sidewalk Construction	—	SFTY
	4B	Pedestrian/Bicycle Over/Underpass	—	SFTY
	4C	Fencing/Pedestrian Barrier	—	SFTY
	4D	Ramps on existing curbs	—	SFTY
	4E	Bikeway Construction	—	SFTY
	4F	Bicycle Nonconstruction		

SAFETY CLASS CODES - CONT.

RAILROAD - HIGHWAY IMPROVEMENTS

	Work Code	Title	Unit of Measure	Type
*	5A	RR Signs & Crossings	Each Crossing	****
*	5B	RR Crossbucks	Each Crossing	****
*	5C	RR Xing Illumination	Each Crossing	SFTY
*	5D	RR Xing Flashing Lights, Upgrade	Each Crossing	SFTY
*	5E	RR Xing Flashing Lightd, New	Each Crossing	SFTY
*	5F	RR Xing Gates & Flash. Lights, New	Each Crossing	SFTY
*	5G	RR Xing Gates, Flash. Lights Previously	Each Crossing	SFTY
*	5H	RR Track Circuitry only	Each Crossing	SFTY
*	5I	RR Xing Surface Improvement	Each Crossing	SFTY
*	5J	RR Crossing Alignment Improvement	Each Crossing	SFTY
*	5K	RR Xing Sight Distance Improvement	Each Crossing	SFTY
*	5L	RR Xing Elimination by Course	Each Crossing	SFTY***
*	5M	RR Grade Sep. to Elim. exist. Xing	Ea. Xing Elim.	X___***
*	5N	RR Gd. Sep. to Elim. Potential Xing	Ea. Xing Elim.	X___***
*	5O	Reconstruct RR Grade Separation	Each Bridge	X___***
*	5P	Reloc/Comsolodate RR for Safety	Net Xing Elim	SFTY***
*	5Q	Relocate Hwy to Eliminate RR Xing	Ea. Xing Elim.	SFTY***
*	5R	Reloc./Adj. RR to Accommodate Hwy Constr.		SFTY

MISCELLANEOUS

	Work Code	Title	Unit of Measure	Type
**	6A	Misc. Safety Improvement	—	SFTY
*		Prequires Line Item Breakdown on all Projects		
**		Assign Specific Work Type, if no work Type use "SFTY"		
***		Report Elimination's & Reconstruction's		
****		Use Pavement Code if Pavement work is Predominant		

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Appendix E

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Prequalification Codes

A1	Any Class
A2	Asphalt Concrete Curb, Gutter &/or Sidewalk & Driveway
A4	Asphalt Concrete Paving
A6	Asphalt Concrete Pavement (Laydown Only)
A8	Asphalt Emulsified Paving
A0	Asphalt Heater Pavement
B2	Asphalt Treated Base
B4	Bituminous Surface Treatment
B6	Bridge Deck Repair
B8	Bridge Rail
B0	Bridges & Structures
C2	Buildings
C4	Cabinet Work
C6	Carpentry
C8	Cement Concrete Curb, Gutter &/or Sidewalk & Driveway
C0	Cement Concrete Paving
D2	Cement Concrete Street Paving
D4	Cement Treated Base
D5	Cleaning Streets
D6	Clearing & Grubbing
D0	Concrete Barrier Construction
E2	Concrete Planing and Grooving
E4	Concrete Restoration
E6	Concrete Sawing &/or Coring
E8	Concrete Slope Protection
E0	Concrete Structures Except Bridges
F2	Concrete Structures (Foundations etc.)
F4	Crushed Surfacing (Placing only)
F6	Crushing
F8	Demolition
F0	Doors
G2	Drainage
G4	Distribution of Water (Incl. Crop Irrigation)
G6	Dredging
G8	Drilling & Blasting
G0	Drywall Construction
H2	Electrical
H3	Electronics - Fiber Optics Based Communication Systems
H5	Engineering (Other than Surveying)
H6	Epoxy Repair
H8	Erecting
H0	Erosion Control
I2	Excavating & Backfilling
I4	Expansion Dam Work
I6	Fencing
I8	Fence Removal
I9	Floating Vessel - Constr., Conversion, Repair
I0	Floor Covering
J2	Gabions
J4	Glass
J6	Grading
J7	Ground Modification
J8	Grouting (Pressure)
J0	Guardrail
K2	Guardrail Removal

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Prequalification Codes

K4	Guide Posts
K6	Guide Posts Removal
K8	Hauling
K0	Heating
L2	Herbicide Application
L4	Horizontal Drains
L6	Impact Attenuators
L8	Insecticide Application
L0	Insulation
M2	Iron Work
M4	Irrigation Systems (Landscape)
M6	Joint Sealing
M8	Landscaping
N2	Lane Markers
N4	Marine Work (not ferry)
N6	Masonry Mechanical
N8	MechanicalN0 Median or Traffic Barrier (Precast)
O2	Metal Retaining Wall
O4	Monument Cases & Covers
O6	Mowing
O8	Painting &/or Sealing Concrete
O0	Painting Buildings
P2	Painting
P4	Paint Steel Structures
P6	Paint Striping
P8	Pavement Jacking
P0	Pavement Marking (Paint)
Q2	Pavement Marking Removal
Q4	Pile DrivingQ6 Pipe Jacking
Q8	Pit Reclamation
Q0	Planting
R2	Plumbing
R4	Pore Pressure Device
R6	Post Tensioning
R8	Prestressed Concrete (Fabrication)R9 Railroad Construction
R0	Riprap
S2	Rock Bolts
S4	Rock Walls
S6	Roofing
S8	R/W Markers
S0	Sandblasting
T2	Seeding, Fertilizing & Mulching
T4	Septic Tanks
T5	DRILLED LARGE DIAMETER SLURRY SHAFTS ***
T6	Settlement Indicators
T7	Sewage Disposal
T8	Sewer Lines
T0	Shaft Excavation
U2	Sheet Metal
U4	Signing
U6	Signing Removal
U8	Sign Structures

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***** T5 - Instructions for use.**

Prequal code T5 shall be assigned only for Drilled Shafts 4' diameter or larger and greater than 15' deep when excavation is performed utilizing the wet method and concrete is placed by tremie methods under a mineral, polymer, or water slurry.

Prequalification Codes

U9	Slurry, Diaphragm, and cut-off walls
U0	Steel Rebar
V2	Steel Rebar for Cement Concrete Pavement
V3	Surveying
V4	Structural Plate Pipe
V5	Terminal Buildings (Ferry)
V6	Theromplastic Pavement Markings
V7	Tieback Anchors Rock, SoilV8 Tile
V0	Timber Bridges
W2	Traffic Buttons
W3	Traffic Control
W4	Traffic Curb
W6	Traffic Signal System
W7	Transporting (hauling materials)
W8	Tunnels
W9	Tunnel Cleaning
W0	Ventilation Systems
X2	Water Lines
X4	Water Proof Membrane (Deck Seal)
X6	Welding
X8	Well Drilling
X0	Wire Mesh Slope Protection
Z0	Missing Pre Qual Code (Must use GSP 08012.FR1 and confirm with Contract AD & Award Office)

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Prequalification Work Classes

Work Class Work Class Description

- 1 **Clearing, Grubbing, Grading & Draining** -Removal of tree stumps, shrubs, modification of ground surface by cuts and fills, excavating of earth materials and placement of drainage structures.
- 2 **Production & Placing of Crushed Materials** - Production & Placing of Crushed Materials and gravel.
- 3 **Bituminous Surface Treatment** - Placing of crushed materials with asphaltic application.
- 4 **Asphalt Concrete Paving** -Production and placing asphalt concrete plant mix pavement.
- 5 **Cement Concrete Paving** - Production and placing cement concrete pavement.
- 6 **Bridges & Structures** - Construction of bridges, wall, and other major structures of timber, steel and concrete.
- 7 **Buildings** - Construction of buildings and related structures within the right-of-way and major reconstruction and remodeling of such buildings.
- 8 **Painting** - Painting bridges, buildings and related structures.
- 9 **Traffic Signals** - Installation of traffic signal and control systems.
- 10 **Structural Tile Cleaning** - Cleaning tunnels, large buildings and structures and storage tanks.
- 11 **Guardrail** - Construction of rail secured to uprights and erected as a barrier between, or beside lanes of a highway.
- 12 **Pavement Marking (Excluding Painting)** - Thermoplastic markings, stripes, bars, symbols, etc. Traffic buttons, lane markers, guide posts.
- 13 **Demolition** - Removal of timber, steel and concrete structures and obstructions.
- 14 **Drilling & Blasting** - Controlled blasting of rock and obstructions by means of explosives.
- 15 **Sewers & Water Mains** - Draining, pipejacking, water systems, pumping Stations, storm drainage systems, sewer rehabilitation, sewage pumping stations, pressurized lines.
- 16 **Illumination and General Electrical** - Highway illumination, navigation lighting, wiring, junction boxes, conduit installation.
- 17 **Cement Concrete Curb & Gutters** - Sidewalks, spillways, driveways, monument case and covers, right-of-way markers, traffic curbs and gutters.
- 18 **Asphalt Concrete Curb & Gutters** - Sidewalks, spillways, driveways, monument case and covers, right-of-way markers, traffic curbs and gutters.
- 19 **Riprap and Rock Walls** - Mortar, rubble, and masonry walls; rock retaining walls and placing of large broken stone on earth surfaces for protection against the action of water.
- 20 **Concrete Structures Except Bridges** - Cast-in-place median barrier, prestressing, post tensioned structures, footings, prefabricated panels and walls, retaining walls, and ramps, foundations and concrete slope protection.
- 21 **Tunnels and Shaft Excavation** - Tunnel excavation, rock tunneling and soft bore tunneling.
- 22 **Piledriving** - Driving concrete, steel and timber piles.

- 23 **Concrete Surface Treatment** - exposed aggregate, fractured in and rope textured finishes; water proofing concrete surfaces (clear or pigmented sealer).
- 24 **Fencing** - Wire and metal fencing, glare screens.
- 25 **Bridge Deck Repair** - Bridge expansion joint repair and modification, bridge deck resurfacing and repair.
- 26 **Deck Seal** - Waterproof membrane.
- 27 **Signing** - Sign structures and signs.
- 28 **Electronics** - NOT USED
- 29 **Slurry Diaphragm and cut-off walls** - Slurry excavation and the construction of structural concrete walls and slurry cut-off walls.
- 30 **Surveying** - Highway construction surveying.
- 31 **Water Distribution and Irrigation Systems** - Irrigation systems and heavy duty water distribution.
- 32 **Landscaping** - Landscaping irrigation, planting sodding, seeding, fertilizing, mulching, herbicide application, insecticide application, weed control, mowing, liming, soil binder, top soil.
- 33 **Engineering** - Work other than surveying, including engineering calculations, drawing and other related work for highway construction.
- 34 **Erosion Control** - Seeding Fertilizing, mulching, slope protection, top soil application hydroseeding, soil stabilization, soil sampling.
- 35 **Precast Median Barrier** - A concrete barrier that is cast and cured in other than its final position, used to divide the median of two adjacent highways or temporarily placed to divide traffic in construction zones.
- 36 **Permanent Tieback Anchor** - installation of permanent rock and soil anchors, soldier piles
- 37 **Impact Attenuators** - Installation of approved protective systems filled with sand, water, foam or other substances which prevent errant vehicles from impacting roadside hazards.
- 38 **Paint Striping** - painting bars, lettering, symbols and striping
- 39 **Wire Mesh Slope Protection** - The installation of zinc coated steel wire mesh anchored with wire rope and reinforced concrete posts or anchored rods. Used for dampening the effects of rolling rocks onto the highway. Slope scaling, horizontal drains, rock dowels, and rock bolts for slope stabilization.
- 40 **Gabions and Gabion Construction** - Construction of walls made with containers of galvanized steel hexagonal wire mesh and filled with stone.
- 41 **NOT USED**
- 42 **Electronics** - Fiber Optic Based Communication Systems - Design and installation of fiber optic based communications systems.
- 43 **Mechanical** - Plumbing work and the installation of heating and air conditioning units.
- 44 **Asbestos Abatement** - Asbestos abatement (L&I certified workers)
- 45 **Hazardous Waste Removal** - The containment, cleanup and disposal of toxic materials. Companies seeking this classification shall have full-time personal with current hazardous waste training (Certification).

- 46 **Concrete Restoration** - Pavement sub seal, cement concrete repair, epoxy coatings, epoxy repair, masonry repair, masonry cleaning, special coatings, epoxy injection, gunite, shotcrete grouting, pavement jacking, gunite repair and pressure grouting.
- 47 **Concrete Sawing, coring, grooving** - Concrete sawing, concrete planning, and grooving, bump grinding, joint repair, concrete coring, rumble strip.
- 48 **Dredging** - Excavating underwater materials
- 49 **Marine Work** - Underwater surveillance, testing repair, subaquatic construction, anchors and cable replacement, floating concrete pontoon repairs and modifications, disassembly and assembly of floating concrete pontoons.
- 50 **Ground Modification** - Pressure grouting, blast densification, stone column, jet grouting, compaction, , dynamic compaction, soil mixing, gravel drain.
- 51 **Well Drilling** - Drilling wells, installing pipe casing and pumping stations.
- 52 **Sewage Disposal** - Hauling and disposing liquid and solid wastes.
- 53 **Traffic Control** - Providing piloted traffic control, traffic control labor and maintenance and protection of traffic
- 54 **Railroad Construction** - Construction of railroad subgrade, placing of ballast, ties and tract and other items related to railroad work.
- 55 **Steel Fabrication** - Welding of steel members, heat straightening steel.
- 56 **Street Cleaning** - Street sweeping with self-propelled sweeping equipment.
- 57 **Material Transporting** - Truck hauling
- 58 **Sand Blasting & Steam Cleaning** - Steam cleaning, and blasting, shot blasting and water blasting
- FERRY SYSTEM CLASSES**
- 81 **Vessel Construction and renovation**
- 82 **Dry docking and hull repairs**
- 83 **Vessel metal fabrication repairs**
- 84 **Vessel electrical repairs**
- 85 **Vessel Miscellaneous Repairs**
- OTHER**
- 99 **Non-Highway Contracting Specialty Items,**