

South Dakota Contract Estimating System (CES)

User Manual

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South Dakota Department of Transportation



DEPARTMENT OF
TRANSPORTATION

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CES User Manual

General Overview

CES was developed to provide both DOT staff and Consultants with the ability to work in the same system as an Estimate of Quantities is prepared for a project. CES will replace CDBS and will provide DOT staff with essentially the same functionality, but with Consultants having access to CES it will eliminate the back-and-forth between DOT staff and Consultants when needing to create or revise an Estimate of Quantities. In CES, DOT staff and Consultants will be able to create an Estimate of Quantities, export section items to excel & PDF, and look up bid item price statistics.

CES operates completely in a web-based environment. The Bid Letting Office highly recommends using **Google Chrome** for an internet browser for optimal system performance. CES was designed for desktop and laptop hardware; however, it will also work on tablets.

CES allows multiple people from your company to be logged into a project at the same time. You will receive a warning message if you are not the first person logged in. Each person logged in will be able to see what the other is doing in real time once the webpage has been refreshed. Care shall be taken when multiple people are in the same Section making changes as the last person to save will overwrite others work.

WARNING!! *The following user(s) is currently signed in for this project, or did not properly sign out during their previous visit to this project.*

Email	Last Name	First Name
tim.frost@state.sd.us		

Starting/Logging into the Program

To access CES Web, go to <https://hc65ces.appssd.sd.gov>. Please bookmark CES in your internet browser for easy access.

Sign in with your State Email or Company email.

- Consultants, please note the individual email address used must be associated with a Consulting firm and MUST be registered with the Bid Letting Office. Please contact the Bid Letting Office at (605)773-3275 or email DOTBids if you need to be registered under a company.



If you already have a mySD account, you can use your existing account info to log in.

Don't have an account? A mySD account will let you access State of South Dakota services using a single username and password.

If you have trouble logging in, visit the [mySD and Citizen Portal Login Help](#) page or call 605-773-3011 for assistance.

Continue

Creating a New Estimate

If a consultant will be working on the project, DOT staff must assign the Consultant to the project (see [Assign a Consultant to an Estimate](#) below) before a Consultant will have the ability to work in CES. In most cases, it is likely that an Estimate will be created by DOT staff prior to a Consultant entering CES. In this case, Consultants shall refer to [Modifying an Existing Estimate](#) instructions.

For most of the projects being estimated, the Project Status will be set to “Programmed” however, when working on maintenance (“i” PCNs) or municipal utilities (“X” PCNs) projects the Project Status will need to be set to “All.”

The screenshot shows the CES Home Screen for user Becky Hoffman. The page title is "Welcome Becky Hoffman". The navigation bar includes "TEST", "SDCES", "Home", "Bid Item Price Lookup", "Q&A", "Contact", "Help", and "Sign out". The main content area features a "Project Status" dropdown menu with "Programmed" selected and "All" as an option. A red box highlights the "Project Status" dropdown. To the right of the dropdown is a PCN dropdown menu showing "005K". Below these are buttons for "Create New Estimate", "Select Existing Estimate", and "Modify Existing Estimate". An "Export" button is also present. Below the buttons is a table with columns: "Section", "Section Description", "Alt Bid Group", "Total", and "Responsible Party". At the bottom, there are buttons for "Insert Bid Items" and "Copy/Paste Bid Items", and a table with columns: "Bid Item", "Item Description", "Quantity", "Unit", "Participating", "Unit Price", "Extended Price", "Notes", and "Delete".

Please Note: throughout the document this screen is referred to as the Home Screen.

1. Select PCN from the drop-down box. You may start typing the PCN to assist with filtering.
2. Select “Create New Estimate” and the Estimate Setup Screen will appear.

Estimate Setup

Estimate Setup

Estimate Id: 19391 Project Nbr: PS 8050(32)
PCN: 005K Version Nbr: 1
Active: Version Description:

Section Type	Section Description	Responsible Party
Section B - Grading	Section B - Grading	Project Development
Section D - Erosion Control	Section D - Erosion Control	Project Development
Section E - Structure	Section E - Structure 36-580-650	Bridge Design
Section L - Signal & Lighting	Section L - Signal & Lighting	HDR Engineering

Section Type: Section Description: Responsible Party:

 ← See "Assign a Consultant to an Estimate"

1. Active Indicator

Multiple estimates may be created for a project (e.g. you may want use CES to create an estimate early during the design to determine the most cost-effective option for a site and then later in the design create another version for the complete project Estimate of Quantities). When the active indicator is selected, this estimate will be the active version of the estimate for the project. Therefore, when starting CES and entering the PCN the “active” version of the estimate will always appear.

To change the active version of an Estimate, select the Active indicator box to make the current version active. This will automatically uncheck the Active indicator box from the previously active version.

2. Name the Version Description

- a. Version 1 will only be used for final plans and should be named “Final Design”. Make sure that this version is active at the time of final plan Submittal.
 - b. If additional versions are needed, they should be named something other than “Design” and include the initials of the person who created the version.
3. Select “New” button. This will need to be done each time a section is added.
 4. Select the Section Type from the drop-down menu.
 5. The Section Description will automatically populate; but is editable.
 - a. If creating a Section E the structure number will need to be filled in.
 - i. A separate Section E is needed for each structure.
 6. Select the Responsible Party. (To add a Consultant to the responsible party list, follow the steps outlined under Assign a Consultant to an Estimate).
 7. Select “Save” button.
 8. Press “Home” button to return to the Home Screen.

Assign a Consultant to an Estimate

1. Select “Assign Consultant to this Project” button.
2. A new screen will appear to select the Consultant(s) for the project.
 - a. If the Consultant is not on the list, contact the Bid Letting Office to have them added.
3. Select the “Save” button when finished. A message will appear confirming the Consultant has been added/removed to the Responsible Party list. This step adds the Consultants name to the Responsible Party list in the Estimate Setup Screen.
4. The Consultant can now be assigned to a Section by following steps 2 through 7 as outlined under the [Estimate Setup](#) instructions.

Assign Consultant(s) to Project	
<input type="checkbox"/>	DOT
<input type="checkbox"/>	Ferber Engineering Company, Inc.
<input type="checkbox"/>	FMG Engineering
<input checked="" type="checkbox"/>	HDR Engineering
<input type="checkbox"/>	Helms and Associates
<input type="checkbox"/>	Hofland Engineering
<input type="checkbox"/>	Infrastructure Design Group, Inc.
<input type="checkbox"/>	Interstate Engineering
<input type="checkbox"/>	Johnson Engineering Company
<input type="checkbox"/>	KLJ Engineering
<input type="checkbox"/>	McLaury Engineering, Inc.
<input type="checkbox"/>	PE Group
<input type="checkbox"/>	Pierre R. Harris Engineering

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DOT staff will need to assign a Consultant to at least one Section of the Estimate of which the Consultant is responsible for. Once the Consultant has been assigned to one Section, the Consultant will be able to add any additional Sections they are responsible for.

Selecting an Existing Estimate

There may be multiple versions of an estimate available. As stated earlier, CES will always default to the “active version.” Care should be taken to ensure the correct version of the estimate is selected when entering bid items and quantities. To view the available versions of the estimate, select the “Select Existing Estimate” button.

Section	Section Description	Alt Bid Group	Total	Responsible Party
Section B - Grading	Section B - Grading	Alt. Group	\$56,460.00	Project Development
Section D - Erosion Control	Section D - Erosion Control	Alt. Group	\$0.00	Project Development
Section E - Structure	Section E - Structure 36-580-650	Alt. Group	\$0.00	Bridge Design
Section L - Signal & Lighting	Section L - Signal & Lighting	Alt. Group	\$0.00	HDR Engineering
Construction Item Total			\$56,460.00	
Overall Total Includes Lowest Alternate			\$56,460.00	

The Active version will be indicated with a check mark and will always be displayed at the top of the list.

To select an alternate version simply click on it.

Active	Comment	Version
<input checked="" type="checkbox"/>	Design w/additional structure added	2
<input type="checkbox"/>	Design	1

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The selected version of the estimate is displayed on the Home screen.

Section	Section Description	Alt Bid Group	Total	Responsible Party
Section B - Grading	Section B - Grading	Alt. Group	\$56,460.00	Project Development
Section D - Erosion Control	Section D - Erosion Control	Alt. Group	\$0.00	Project Development
Section E - Structure	Section E - Structure 36-580-650	Alt. Group	\$0.00	Bridge Design
Section L - Signal & Lighting	Section L - Signal & Lighting	Alt. Group	\$0.00	HDR Engineering
Construction Item Total			\$56,460.00	
Overall Total Includes Lowest Alternate			\$56,460.00	

Version 1 Design ←

Modifying an Existing Estimate

Modifying an Existing Estimate should be used when there is a need to add a Section or Edit an existing Section of the Estimate of Quantities. To modify an existing estimate, select the “Modify Existing Estimate” button from the Home screen. This will open the Estimate Setup screen.

DOT staff or an assigned Consultant can follow steps 2 through 7 as outlined under the [Estimate Setup](#) instructions to create the section(s) they are responsible for.

By selecting a Section:

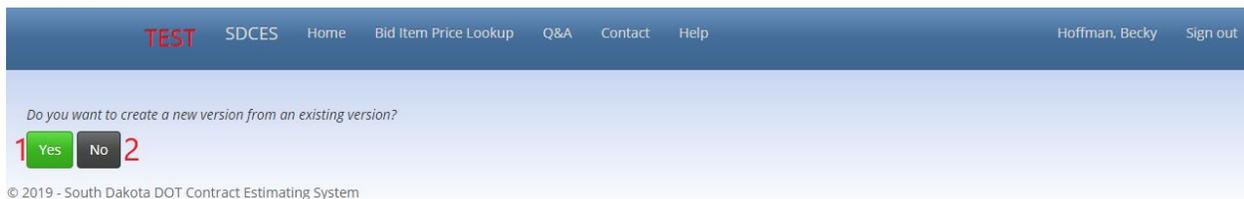
- a. Section can be removed.
- b. Section Description can be edited.

Please note that once the Responsible Party has been set, it cannot be changed. If changes need to be made to a section, you are not responsible for:

- a. Contact the Responsible Party and request the change.
- b. Contact the Bid Letting Office.

Creating a New Estimate from an Existing Version

When needing to create a new version of an estimate for a project but wanting to use essentially the same Section and bid items, CES provides the functionality to create a new estimate based on an existing version. To create a new estimate version from an existing estimate, select the “Create New Estimate” button. A screen will pop up asking “Do you want to create a new version from an existing version?”



1. Select “Yes” if a duplicate version of an existing version needs to be created.
 - a. Select the version of the estimate to duplicate.
 - b. The Estimate Setup Screen will open.
 - i. Note the new version will automatically default to the Active version.
 - c. Enter a Version Description to easily identify it from previous versions.
 - d. Select the “Save” button.
2. Select “No” to create a fresh version you will be starting from scratch.

Bid Items

To add bid items to a Section, select the appropriate Section (it will highlight in grey).

Project Status: Programmed All 005K Create New Estimate Select Existing Estimate Modify Existing Estimate Export

Section	Section Description	Alt Bid Group	Total	Responsible Party
Section B - Grading	Section B - Grading	Alt. Group	\$0.00	Project Development
Section D - Erosion Control	Section D - Erosion Control	Alt. Group	\$0.00	Project Development
Section E - Structure	Section E - Structure 36-580-650	Alt. Group	\$0.00	Bridge Design
Section L - Signal & Lighting	Section L - Signal & Lighting	Alt. Group	\$0.00	HDR Engineering
Construction Item Total			\$0.00	
Overall Total Includes Lowest Alternate			\$0.00	

Version 1 Design

1 Insert Bid Items 2 Copy/Paste Bid Items Section B - Grading \$0.00

Bid Item	Item Description	Quantity	Unit	Participating	Unit Price	Extended Price	Notes	Delete
120E0010	Unclassified Excavation	0	CuYd	<input checked="" type="checkbox"/>	\$3.58	\$0.00	Notes	3 ✕
120E0500	Option Borrow Excavation	0	CuYd	<input checked="" type="checkbox"/>	\$4.56	\$0.00	Notes	✕

Insert Bid Items

1. Select "Insert Bid Items" button.

Note that if the button is not green this means you are not the "Responsible Party" for the Section and will not be able to add or delete any bid items in this Section.

Search for bid items by Bid Item Nbr, Item Description or Section Group.

PCN: 000S - Select Item(s) for Non-Section Method

Filter

Bid Item Nbr: Item Desc:

Section Group: 100 - Clearing and Grubbing Filter

1 Save Selected Bid Item(s) Home

Select	Bid Item	Unit	Item Description
<input type="checkbox"/>	100E0010	Each	Clear and Grub Stump
<input checked="" type="checkbox"/>	100E0020	Each	Clear and Grub Tree
<input type="checkbox"/>	100E0100	LS	Clearing

- a. Select bid items and then select the “Save Selected Bid Item(s)” button. A message “Saved Successfully” will appear.
Continue adding bid items until finished.
2. Select the “Home” button to return to the Home page.

Copy/Paste Bid Items

2. Select the “Copy/Paste Bid Items” button to copy items from one section to another. This function will open an additional screen to display all items in the section and the available section(s) to paste to.
 - a. Select the items to copy
 - b. Select the Section to paste the copied items
 - c. Select the “Paste” button

PCN: 005K - Copy/Paste from Section B - Grading

Select Items to Copy

Select	Bid Item	Item Description
2a <input checked="" type="checkbox"/>	120E0010	Unclassified Excavation
<input type="checkbox"/>	120E0500	Option Borrow Excavation

Select Section to Paste Copied Items 2c

Select	Section	Section Description
<input type="checkbox"/>	Section B - Grading	Section B - Grading
2b <input checked="" type="checkbox"/>	Section D - Erosion Control	Section D - Erosion Control
<input type="checkbox"/>	Section L - Signal & Lighting	Section L - Signal & Lighting

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Delete Bid Items

3. Click the red X to delete bid items.

Entering Quantities

Insert Bid Items		Copy/Paste Bid Items		Section E - Structure 67-090-789 - PCN 020Z Box Culvert - Alternate A - CIP			\$30,749.82 ←	
Bid Item	Item Description	Quantity	Unit	Participating	Unit Price	Extended Price	Notes	Delete
421E0200	Box Culvert Undercut	60	CuYd	<input checked="" type="checkbox"/>	\$69.52	\$4,171.20	Notes	X
460E0120	Class A45 Concrete, Box Culvert	36.0	CuYd	<input checked="" type="checkbox"/>	\$677.31	\$24,383.16	Notes	X
480E0100	Reinforcing Steel	1,200	Lb	<input checked="" type="checkbox"/>	\$1.08	\$1,296.00	Notes	X
480E0200	Epoxy Coated Reinforcing Steel	789	Lb	<input checked="" type="checkbox"/>	\$1.14	\$899.46	Notes	X

When entering bid item quantities, you can tab or enter to get to the next quantity. The program will keep a running total of the cost for the section in the upper right corner. Please refer to “Unit Prices and Engineer Estimate Responsibilities” for further information regarding bid item pricing.

Setting up Alternates

To add bid alternates to a Section, select the “Alt. Group” button of the desired Section. It will display as a black button until an alternate group has been added, it will then display as a green button.

Section	Section Description	Alt Bid Group
Section B - Grading	Section B - Grading	Alt. Group
Section D - Erosion Control	Section D - Erosion Control	Alt. Group
Section E - Structure	Section E - Structure 36-580-650	Alt. Group
Section L - Signal & Lighting	Section L - Signal & Lighting	Alt. Group

Section E - Structure	Section E - Structure 67-090-789	Alt. Group
Section E - Structure	Section E - Structure 67-090-789 - PCN 020Z - Alternate A - CIP	Bid Alt
Section E - Structure	Section E - Structure 67-090-789 - PCN 020Z - Alternate B - Precast	Bid Alt
Section E - Structure	Section E - Structure 67-090-789 - PCN 020Z - Alternate C - CMP Plate Pipe	Bid Alt

PCN: 020Z - Alternates for: Section E - Structure 67-090-789

PCN: 020Z - Alternates for: Section F - Surfacing

Group Description
1 PCN 020Z Box Culvert

Choice Description	Delete
Alternate A CIP	
Alternate B Precast	
Alternate C CMP Plate Pipe	X

4 Save Delete Group Add Choice Home

Group Description
1 PCN 020Z Asphalt Concrete Surfacing

Choice Description	Delete
Alternate A Class Q3 Mix	
Alternate B Class Q3 Mix w/Limestone	

4 Save Delete Group Add Choice Home

- Enter a Group Description.
 - e.g. Asphalt Concrete Surfacing, Granular Material, Box Culvert, Deep Pipe
 - If there are multiple PCN's in the project include the PCN in the description.
- Enter the Choice Description for each Alternate.
 - e.g. Class Q3 Mix, Class Q3 Mix with Limestone, CIP, Precast, Open Trench, Bore and Jack
- Select “Add Choice” to add an additional Alternate. Although in most cases there will only be an Alternate A and Alternate B, CES allow for up to 6 alternates per group if needed.
- Select “Save” to save an alternate group.
- Select “Delete” to delete an alternate group.
- Select “Home” to return to the home screen.

It is important how the Group Description and the Choice Descriptions read as these descriptions are displayed for the alternates in the South Dakota Electronic Bidding Software (SDEBS) Bid File.

The only bid items in the Alternate Group should be those that are specific to that alternate. All items where the quantity does not change, regardless of what alternate is chosen, should be in the original section.

Below are examples of how the alternates (as set-up in CES and shown in the screen shots above) display for the Contractors as they prepare their bid in SDEBS.

- Note: the Alternate Group # is determined by the Bid Letting Office.

Structure Alternate:

Alternate Group 1 PCN 020Z Box Culvert	
Alternate A - CIP	
421E0200	Box Culvert Undercut
460E0120	Class A45 Concrete, Box Culvert
480E0100	Reinforcing Steel
480E0200	Epoxy Coated Reinforcing Steel
SubTotal Alternate A - CIP	
Alternate B - CMP Plate Pipe	
120E0200	Unclassified Excavation, Structure
450E4849	72" CMP 14 Gauge, Furnish
450E4850	72" CMP, Install
450E5276	72" CMP Step Beveled End, Furnish
450E5277	72" CMP Step Beveled End, Install
SubTotal Alternate B - CMP Plate Pipe	
Alternate C - Precast	
421E0200	Box Culvert Undercut
560E0050	6'x3' Precast Concrete Box Culvert, Furnish
560E0051	6'x3' Precast Concrete Box Culvert, Install
560E1050	6'x3' Precast Concrete Box Culvert End Section, Furnish
560E1051	6'x3' Precast Concrete Box Culvert End Section, Install
SubTotal Alternate C - Precast	

Surfacing Alternate:

Alternate Group 3 PCN 020Z Asphalt Concrete Surfacing	
Alternate A - Class Q3 Mix	
320E0001	PG 52-28 Asphalt Binder
320E1003	Class Q3 Hot Mixed Asphalt Concrete
SubTotal Alternate A - Class Q3 Mix	
Alternate B - Class Q3 Mix w/Limestone	
320E0001	PG 52-28 Asphalt Binder
320E1003	Class Q3 Hot Mixed Asphalt Concrete
SubTotal Alternate B - Class Q3 Mix w/Limestone	

Unit Prices and Engineer's Estimate Responsibilities

The unit price that will automatically populate for a bid item is merely an average of all bid prices that have previously been received for that item and is used as an initial place holder until the time the final Engineer's Estimate (EE) is prepared.

For the majority of projects let through the Department, the unit price used for the final EE will be set by Bid Letting Staff. Although the Bid Letting Office is responsible for the final estimated unit prices, both internal DOT designers and Consultants are strongly encouraged to provide thoughts & information regarding bid item pricing.

To provide information that could assist with estimating the unit price for a bid item, the "Note" function should be used. We highly encourage the use of this functionality to list information such as unique circumstances (e.g. site conditions, incidentals, unique measures, or equipment) that could influence the bid item pricing, and to list material or product prices you may know of or received a quote for as you were considering cost effective designs. In addition, you may overwrite the automatically populated average unit price if you feel you have determined a reasonable and justifiable estimated unit price for a bid item. If you do overwrite an average unit price, please use the "Note" functionality as needed to provide justification. If a note has been added to a bid item, the button will turn red which is an indicator to Bid Letting Staff to review the information provided as the final EE is prepared.

The designer is responsible for ensuring that all information entered in CES is accurate at the time final plans are submitted to the Bid Letting Office. At that time, the Bid Letting Office will copy the estimate provided creating a new "Bid Letting" version for funding and bid proposal preparation reasons. Therefore, after the plans have been submitted to Bid Letting, any plan revisions and Estimate of Quantity changes must be summarized in a memo and sent to the Bid Letting Office.

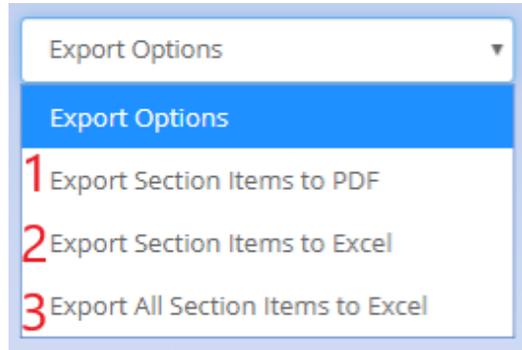
When preparing estimates for X PCN's (City Sewer and Water Contracts) the unit prices in the "Final Design" version of the estimate must be adjusted by the Consultant or City. These are City contracts and therefore the City is responsible for the Engineer's Estimate. The Bid Letting Office will copy the estimate provided creating a new "Bid Letting" version for bid proposal preparation reasons but will not adjust the unit prices. The Consultant is responsible for ensuring that all

information entered in CES is accurate at the time of plans being submitted to the Bid Letting Office. After the plans have been submitted to Bid Letting, any plan revisions and estimate of quantity changes must be summarized in a memo and sent to the Bid Letting Office.

Exporting Sections to PDF or Excel

Select the Section and choose an option from the “Export Options” drop-down menu to export Sections:

1. “Export Section Items to PDF”: This option shall be used to create the PDF of the Estimate of Quantities to be inserted into the final construction plans. This will need to be done for each Section.

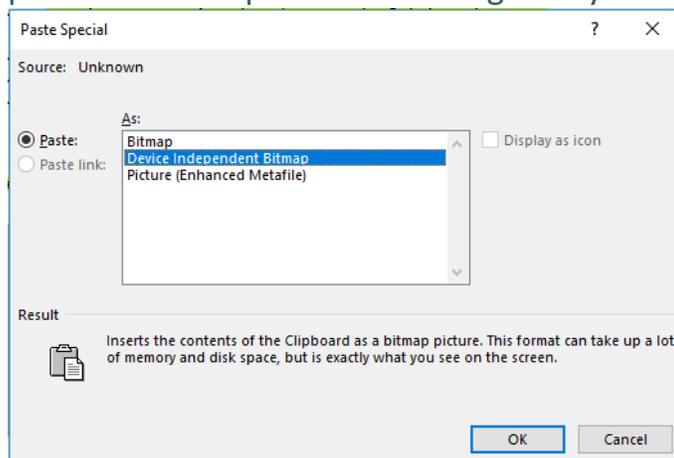


Do not use the export to excel functionality to generate the estimate of quantities used in the plans.

A copy of the exported section will automatically be saved to the C: drive of your computer under Downloads. If you would like it saved to a different location open the PDF in your web browser and save it to your desired location.

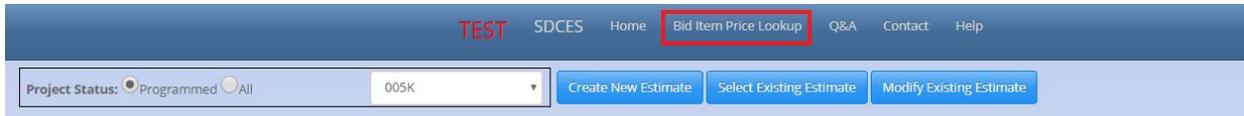
Use the “Take a Snapshot”  tool in PDF to copy the Estimate of Quantities.

When adding the Estimate of Quantities to the word document be sure to use the “Paste Special” option and select “Device Independent Bitmap” to prevent the snapshot from being blurry.



2. “Export Section Items to Excel”: This functionality is provided for a designer to use as desired, however, never use export to excel functionality for the final estimate of quantities that will be inserted into the plans.
3. “Export All Section Items to Excel”: refer to the information and instruction provided in #2.

Bid Item Price Lookup



There is capability to look up bid history for bid items dating back to 2006. Bid items can be queried by using a variety of different search parameters. As you can see in the example below, the Bid Item “PG 58-28 Asphalt Binder” was queried for:

- the last 2 years of history
- projects in the Mitchell Region
- the low two bidders each time the item was bid.

Select the “Search and Export Results to Excel” button to display the search results.

Bid Item Price Lookup

Filter

Bid Item Nbr: Item Desc:

Section Group: 320 - Asphalt Concrete

Bid Price Selection Criteria

Predefined Range **Date Range** **Location (Statewide +)** **Quantity Range**

Last 2 Years From: 05/30/2018 Region or Mitchell Minimum 1

To: 05/30/2019 County NONE Maximum 9999999 Bidders: Top 2 All

Select	Bid Item	Unit	Item Description
<input checked="" type="checkbox"/>	320E0001	Ton	PG 52-28 Asphalt Binder
<input type="checkbox"/>	320E0002	Ton	PG 52-34 Asphalt Binder

This functionality should be very helpful if desiring to create a preliminary cost estimate and is very similar to the software used by the Bid Letting Office to determine final cost estimates. The results will export to Excel where additional sorting can be done if needed.

Sign Out



When finished using CES select the “Sign Out” button in the top right corner of the screen to successfully sign out of CES. If the “Sign Out” button is not used the current user will remain logged into CES.