

Generating Bid Item and Quantity Tabulations for Bridge Plans from Masterworks and through the Iowa DOT Excel Tool

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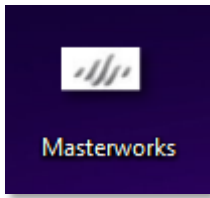
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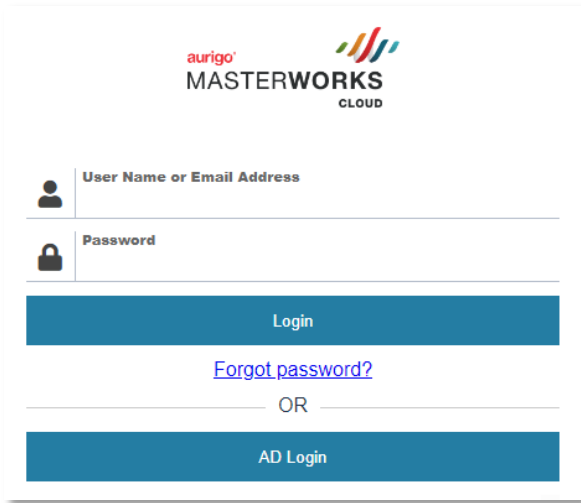
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Generating Bid Item Quantities for All Projects Except Culverts and Overlay Projects

1. Access Masterworks through the desktop icon



2. Log on to Masterworks using “AD Login”.

The login page for Masterworks Cloud. It has a white background with the "aurigo" logo and "MASTERWORKS CLOUD" text at the top. Below the logo are two input fields: "User Name or Email Address" and "Password". A blue "Login" button is below the password field. A link for "Forgot password?" is below the login button. Below the link is an "OR" separator. At the bottom is a blue "AD Login" button.

aurigo
MASTERWORKS
CLOUD

User Name or Email Address

Password

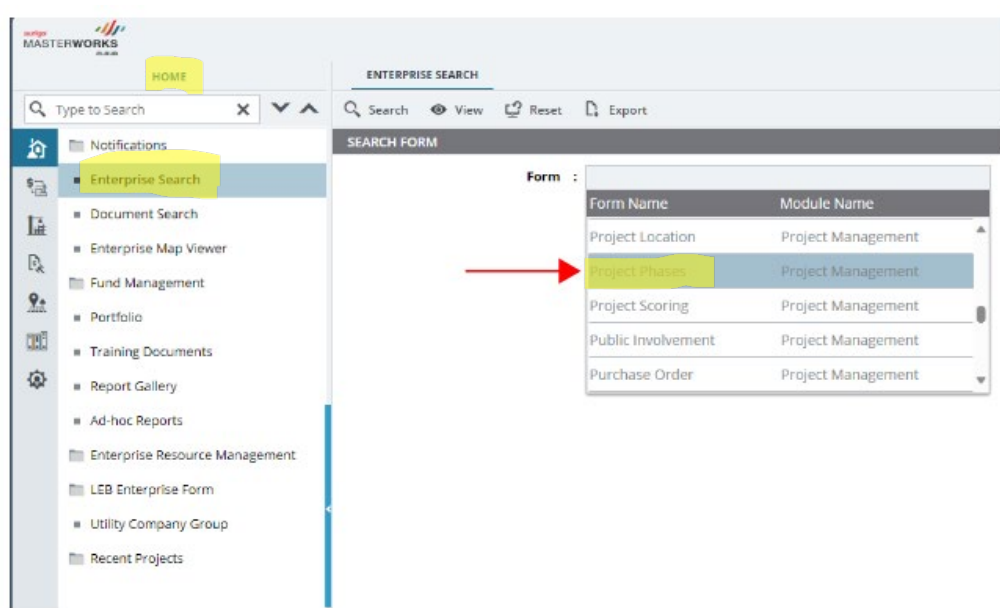
Login

[Forgot password?](#)

OR

AD Login

3. In the “Home” and “Menu” tabs, select “Enterprise Search” and select “Project Phases” under the Select Form search form box.



4. Fill in the project number under “Phase Number” field and then click search in the top left corner.

ENTERPRISE SEARCH

Search View Reset Export

SEARCH FORM

Form : Project Phases X

Phase Number : BRF-330-2(098)--38-64 Unique Phase ID :

PCN : TPMS ID : EqualTo

Previous Phase Numbers: v

Active : Select Right of Way : ☐ Yes ☐ No

Inactive Status Reason : Select Associated RoW Phase :

Pollution Prevention : ☐ Yes ☐ No

Range :

Advance Candidate : Select Phase Status Description :

Phase Program Category : Select Federal Class :

SEARCH RESULTS

Project Code	Project Name	Phase Number	Funding Type	Phase Location	Phase Program Category	Primary County	Base Cost
22-64-330-010	US 63 -- Bridge Rehab // Clear Cre...	BRF-330-2(098)--38-64	Federal	Clear Creek 1.8 mi S of Co Rd 552	BR	Marshall	

5. To add bid items, double click on the project in the search results, and go to “Bid Estimate Information” on the left-hand side list. If there is more than one project, choose the one with the correct project (paren) number. Then choose “Plan Items”.

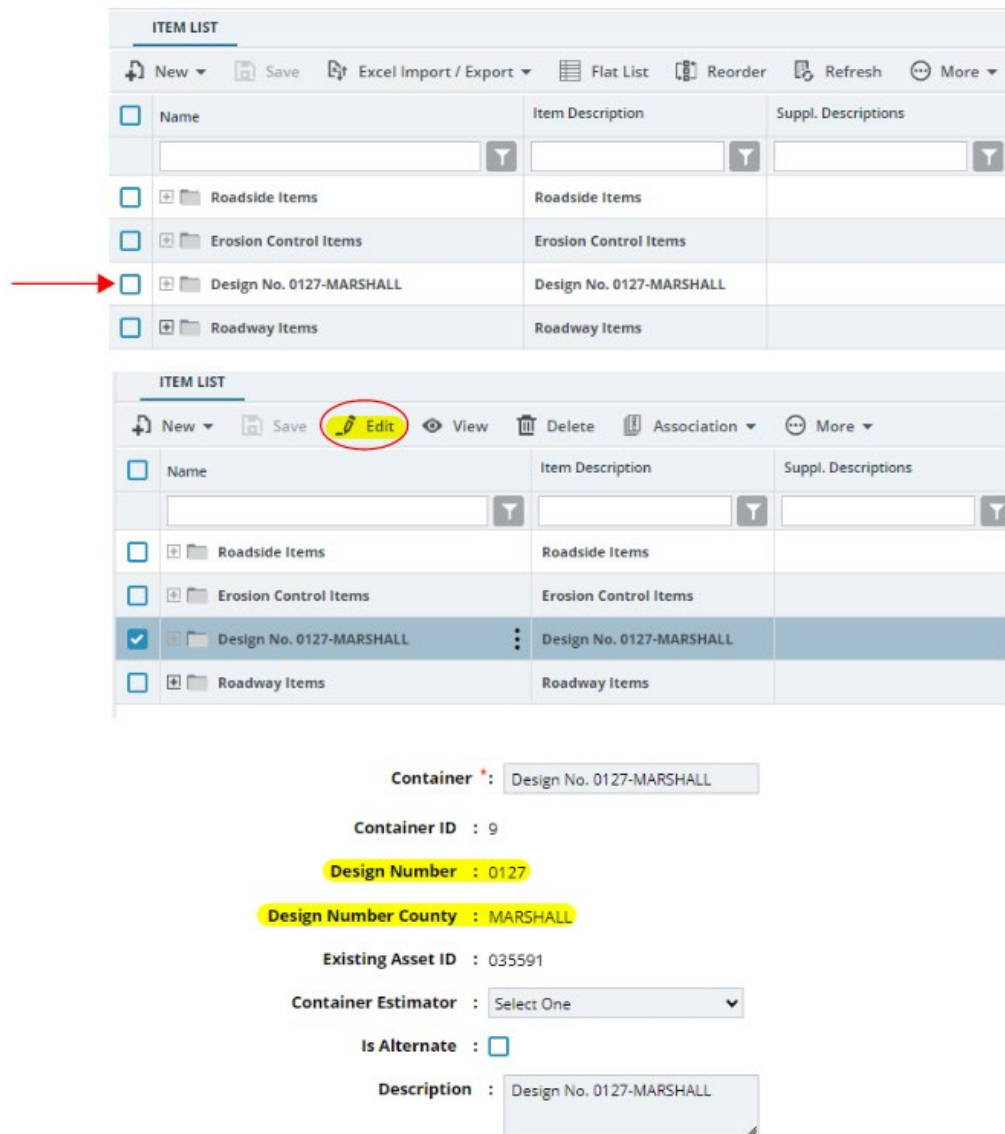
myinfo MASTERWORKS cloud

PLANNING

Type to Search

- Recent Projects
- 330-64-US 63 -- Bridge Rehab // Clear Creek
 - Project Phases
 - BRF-330-2(098)--38-64
 - My Tasks (0)
 - Resource Management
 - Schedule
 - Schedule Task Request
 - Documents
 - Document Search
 - Budget Management
 - Bid Estimate Information
 - (098) - Bridge Deck Overlay
 - Bid Estimate Report Gallery
 - Estimate Items
 - Plan Items
 - Commitments & Expenses
 - Fund Management

6. In the “Item List” window of Plan Items, click on the check box to the left of the container labeled as “Design No. #####-County” and choose “Edit”. To complete this step, the designer will need to be assigned the “Lead Designer” role for the project by a Supervisor or other BSB administration. The “New” and “Edit” icons will be displayed when you have proper permissions.



ITEM LIST

New Save Excel Import / Export Flat List Reorder Refresh More

<input type="checkbox"/>	Name	Item Description	Suppl. Descriptions
<input type="checkbox"/>	Roadside Items	Roadside Items	
<input type="checkbox"/>	Erosion Control Items	Erosion Control Items	
<input type="checkbox"/>	Design No. 0127-MARSHALL	Design No. 0127-MARSHALL	
<input type="checkbox"/>	Roadway Items	Roadway Items	

ITEM LIST

New Save Edit View Delete Association More

<input type="checkbox"/>	Name	Item Description	Suppl. Descriptions
<input type="checkbox"/>	Roadside Items	Roadside Items	
<input type="checkbox"/>	Erosion Control Items	Erosion Control Items	
<input checked="" type="checkbox"/>	Design No. 0127-MARSHALL	Design No. 0127-MARSHALL	
<input type="checkbox"/>	Roadway Items	Roadway Items	

Container *: Design No. 0127-MARSHALL

Container ID : 9

Design Number : 0127

Design Number County : MARSHALL

Existing Asset ID : 035591

Container Estimator : Select One

Is Alternate : ☐

Description : Design No. 0127-MARSHALL

7. Click Edit to modify any information as needed. Set the container estimator to your name as appropriate. Containers should now properly display the project information. In case the container has not been started, the designer may have to select “New” and “Add Container” and use the format “Design No. #####-County” for the container name in a similar process.

ITEM LIST					
<div> New Save Excel Import / Export Flat List Reorder Refresh Lock More </div>					
<input type="checkbox"/>	Name	Item Description	Suppl. Descriptions	Unit	Quantity
	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
<input type="checkbox"/>	Roadside Items	Roadside Items			
<input type="checkbox"/>	Erosion Control Items	Erosion Control Items			
<input checked="" type="checkbox"/>	Design No. 0127-MARSHALL	Design No. 0127-MARSHALL			
<input type="checkbox"/>	Roadway Items	Roadway Items			

The Bridges and Structures container should follow the format:

- Design No. ####-County Name

8. Select the container you want to add bid items to, then click on “New” then “Add Multiple”.

ITEM LIST					
<div> New Save Excel Import / Export Flat List Reorder Refresh Lock More </div>					
	<input type="text"/>	Item Description	Suppl. Descriptions	Unit	Quantity
	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
<input type="checkbox"/>	Roadside Items	Roadside Items			
<input type="checkbox"/>	Erosion Control Items	Erosion Control Items			
<input checked="" type="checkbox"/>	Design No. 0127-MARSHALL	Design No. 0127-MARSHALL			
<input type="checkbox"/>	Roadway Items	Roadway Items			

9. In the “Add Standard Items” tab, select “Add” in the top bar to start adding the bid items.

ADD STANDARD ITEMS				
<div> Save Cancel Add Remove </div>				
Standard Item list : <input type="text" value="Bid Items"/> <input checked="" type="checkbox"/> Use Pay Item No. Groups <input type="checkbox"/> Use Group: <input type="text" value="Default"/>				
<input type="checkbox"/>	Pay Item No.	Description	Container	Already Exists
No Data available.				
<input type="text" value="1"/>				

10. Start searching for the required bid items in the “Standard Items” window and add them, you can find a specific bid item by using the “filter icon”. You can filter items by their “Pay Item No.” or “Description”.

Standard Items X

0 selected of total 3,683 Select All Records

<input type="checkbox"/>	Pay Item No.	Description	Alt
<input type="checkbox"/>	2503-0136542	WITH CASING PIPE, TRENCHED, 3000D LOW...	No
<input type="checkbox"/>	2524-9275100	B SIGNS, 4 IN. X 4 IN.	No
<input type="checkbox"/>	2524-9275222	B SIGNS, 4 IN. X 6 IN.	No
<input type="checkbox"/>	2503-0116342	TRENCHED, 2000D LOW CLEARANCE CONC...	No
<input type="checkbox"/>	2503-0126348	TRENCHLESS, 2000D LOW CLEARANCE CO...	No
<input type="checkbox"/>	2503-0126354	TRENCHLESS, 2000D LOW CLEARANCE CO...	No
<input type="checkbox"/>	2503-0126360	TRENCHLESS, 2000D LOW CLEARANCE CO...	No
<input type="checkbox"/>	2503-0126372	STORM SEWER GRAVITY MAIN, TRENCHLESS, 2000D LOW CLEARANCE CO...	No

Show items with value that:

Contains ▼

And ▼

Contains ▼

Filter Clear

Select
Cancel

11. When you are done with adding all the required bid items, click “Save” in the top left corner in the “Add Standard Items” window. The bid items listed are a part of the container now.

ADD STANDARD ITEMS

Save Cancel Add Remove

Standard Item list: Bid Items ☒ Use Pay Item No. Groups ☐ Use Group: Default

<input type="checkbox"/>	Pay Item No.	Description	Container	Already Exists	Unit
<input type="checkbox"/>	2599-9999005	('EACH' ITEM)		No	EACH
<input type="checkbox"/>	2401-6750001	REMOVALS, AS PER PLAN		No	LS
<input type="checkbox"/>	2533-4980005	MOBILIZATION		No	LS
<input type="checkbox"/>	2413-0698074	DECK REPAIR, CLASS A		No	SY
<input type="checkbox"/>	2599-9999018	('SQUARE YARDS' ITEM)		No	SY

1

12. To add/edit the quantity or notes to any bid item, select the bid item and then select edit on the top left corner. Insert or edit the quantity or notes as needed. When you are done with your editing, click “Save and Exit” on the “Edit Plan Item” window.

ITEM LIST

New Save Edit View Delete Association More

<input type="checkbox"/>	Name	Item Description	Suppl. Descriptions	Unit	Quantity	Method of Meas
<input type="checkbox"/>	Roadside Items	Roadside Items				
<input type="checkbox"/>	Erosion Control Items	Erosion Control Items				
<input type="checkbox"/>	Design No. 0127-MARSHALL	Design No. 0127-MARSHALL				
<input checked="" type="checkbox"/>	2401-6750001	REMOVALS, AS PER PLAN		LS		STD
<input type="checkbox"/>	2413-0698074	DECK REPAIR, CLASS A		SY		STD

Alternate * : Base Bid ▼

Quantity * : 0

Amount in \$: 0.00

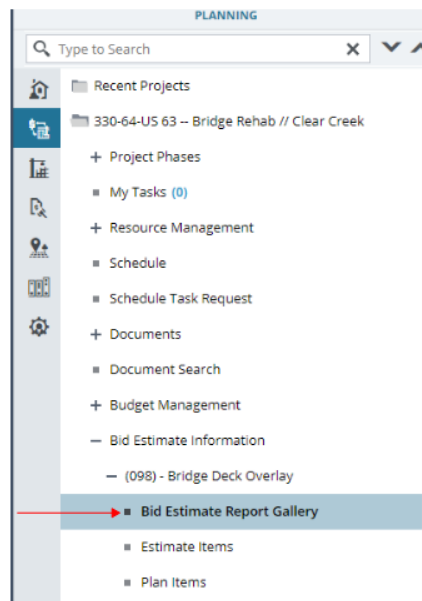
Notes :

Paragraph ▼

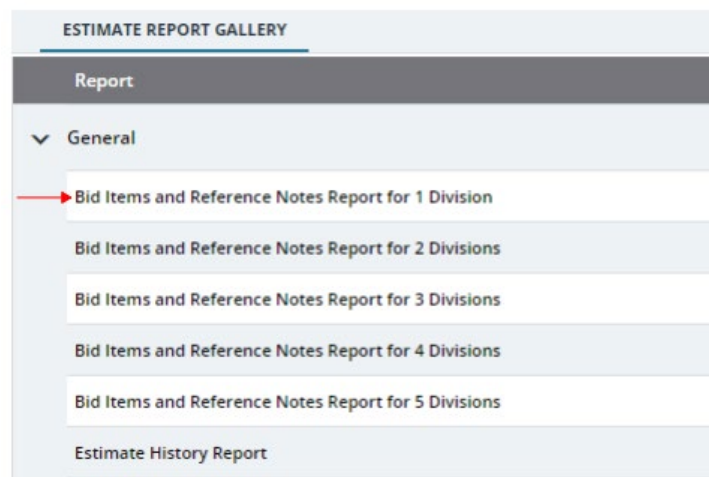
B *I* U abc

Includes all work for removal and off-site disposal of concrete. Removal of scheduled items shall be in accordance with Section 2401, of the Standard Specifications. Any damage to material not to be removed shall be the responsibility of the Contractor and repaired at no extra cost to the state.

- When you are done with all the bid items inside the container, then click on the “Bid Estimate Report Gallery” option under the “Bid Estimate Information” list in the main screen on the left.



- In the “Estimate Report Gallery” window double click on the first option “Bid Items and Reference Notes Report for 1 Division”. The other options mix the bid items from all the selected containers into one report, which is not in this workflow.

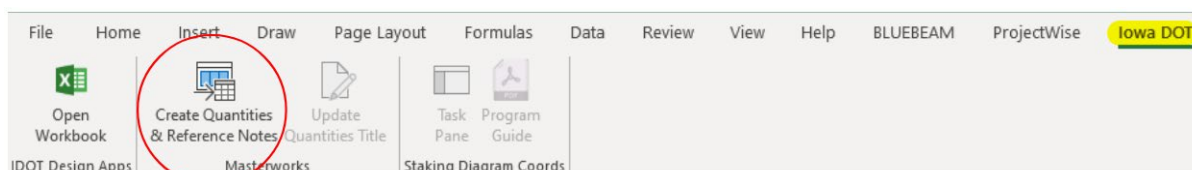


15. In the new window for the “Divisions”, select the container with Design No. ##### – County. You can select the other two fields for “Letter Series” and “Beginning Sheet Number”. These fields are irrelevant to this workflow, so they can be chosen at random. Then click “View Report”.

16. In the next window, click on the black down arrow next to the floppy disk icon. Then select “Excel”. An excel sheet will be downloaded to your file explorer, double click on it to open.

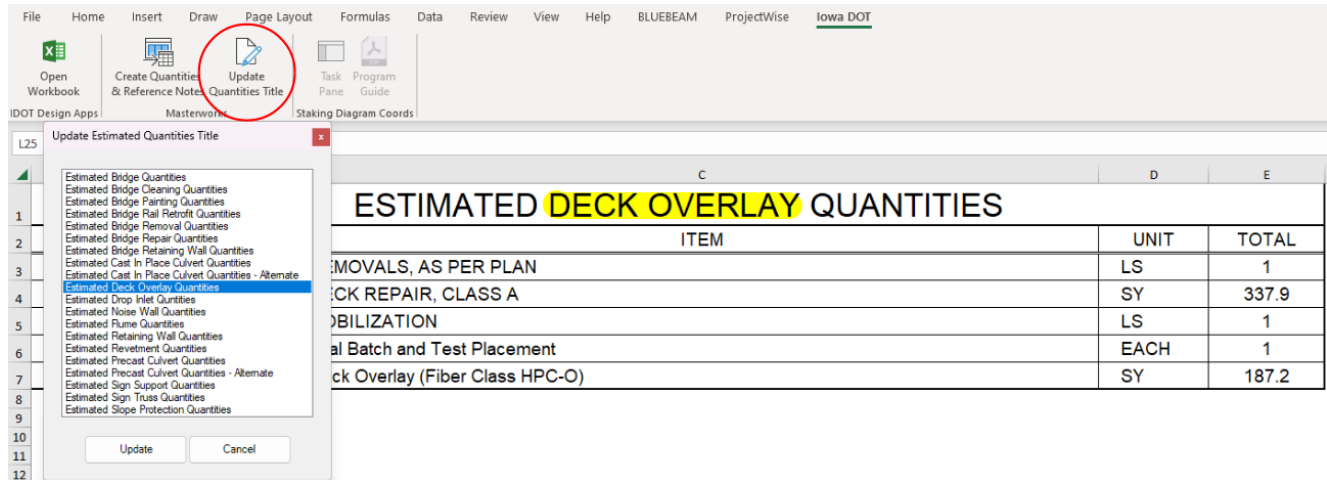
Item no.	Item Code	Item	Unit	Quantities Estimated	Design No. 0127-MARSHALL
1	2401-6750001	REMOVALS, AS PER PLAN	LS	0	Includes all v 2401 of the ! and repaired
2	2413-0698074	DECK REPAIR, CLASS A	SY	0	See general
3	2533-4980005	MOBILIZATION	LS	--	--
4	2599-9999005	('EACH' ITEM)	EACH	0	Includes all v

17. In the excel sheet exported by Masterworks, choose “Iowa DOT” tab in the top menu bar, then click on “Create Quantities & Reference Notes”. **If the “Iowa DOT” tab is not visible, contact the Methods Unit of the Bridges and Structures Bureau to upload the application (contact Ph. # 515-233-7935 or use the following document ([Installation Instructions - IDOT Bridge Tools Add-in .pdf](#)) to uninstall/reinstall the application if issues occur)**



18. Now you will have two additional excel sheet tabs added to the workbook. One for the Estimated Bid Item quantities and the other for the Estimate Reference Item notes. These are formatted in accordance with Bridge & Structures Bureau plan development guidelines.

19. To update the title of the table with the proper heading, choose “Update Quantities Title”. Then choose the correct one from the list on the new window and click “Update”.



20. The designer should then check the format of the estimated quantities and estimate reference notes tables and verify that either do not contain spelling or grammatical errors. All default Estimate Reference Notes need verified, modified, or deleted based on applicability.

	A	B	C	D	E
1	ESTIMATED DECK OVERLAY QUANTITIES				
2	ITEM NO.	ITEM CODE	ITEM	UNIT	TOTAL
3	1	2401-6750001	REMOVALS, AS PER PLAN	LS	1
4	2	2413-0698074	DECK REPAIR, CLASS A	SY	337.9
5	3	2533-4980005	MOBILIZATION	LS	1
6	4	2599-9999005	Trial Batch and Test Placement	EACH	1
7	5	2599-9999018	Deck Overlay (Fiber Class HPC-O)	SY	187.2

21. The “Estimated Bridge Quantities” and the “Estimate Reference Information” notes are now ready for project plan presentation. These will be inserted into the Project Bentley Connect CAD file using the “Place Table” tool in MicroStation. See Appendix C for this workflow.

Appendix A:

Creating Bid Item Quantities for Overlays or Bridge Plans with Bid Item Alternates

ESTIMATED DECK OVERLAY QUANTITIES				
ITEM NO.	ITEM CODE	ITEM	UNIT	TOTAL
1	2413-0698074	DECK REPAIR, CLASS A	SY	25
2	2426-6772016	CONCRETE REPAIR	SF	51
3	2499-0800000	PAVING NOTCH REPLACEMENT	LF	70.7
4	2533-4980005	MOBILIZATION	LS	1
Design No. 0126-Harrison Alternate AA Option 1				
5	2413-0698066	DECK OVERLAY (CLASS O PCC)	SY	240
Design No. 0126 - Harrison Alternate AA Option 2				
6	2403-1000010	TRIAL BATCH AND TEST PLACEMENT (FIBER REINFORCED CONCRETE)	LS	1
7	2413-0698067	DECK OVERLAY (CLASS HPC-O PCC)	SY	240
8	2413-1000005	FIBER REINFORCEMENT FOR CONCRETE REPAIR/OVERLAY	SY	240

If you are creating estimates for deck overlay projects or any project with alternate bid item options (such as ABC projects), follow steps 1 through 7 in the main document to start the bid item container for the bridge project with all bid items. The following steps will be to add bid alternates to an estimate.

1. Under the Item List tab, select “New” and choose “New Container”. You need to create 3 containers: one for all the bid items except the overlay, and one for each overlay option.

The screenshot shows the 'ITEM LIST' interface. At the top, there's a 'New' dropdown menu with 'New Container' selected. Below this, there are three containers listed:

- Design No. 0127-BOONE**: Description is 'Design No. 0127-BOONE'.
- Design No. 127- Boone Alternate AA Option 1**: Description is 'Class O PCC for Overlay'.
- Design No. 127- Boone Alternate AA Option 2**: Description is 'Class HPC-O PCC for Overlay'.

2. Label the three containers as follows:

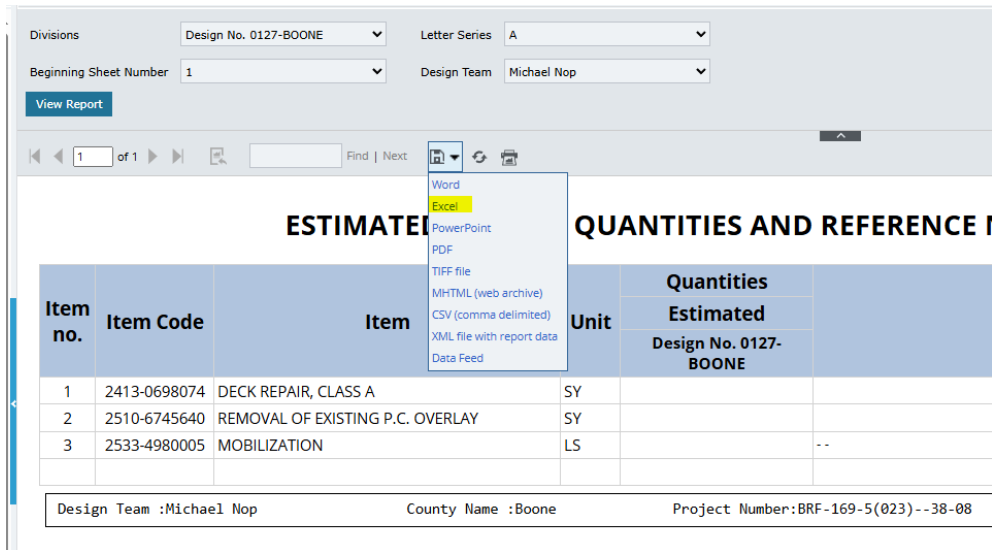
- **Container 1:**
 - i. Name and Description: Design No. ##### - County name
- **Container 2:**
 - i. Name: Design No. ##### - County name Alternate AA Option 1
 - ii. Description: Class O PCC for Overlay
- **Container 3:**
 - i. Name: Design No. ##### - County name Alternate AA Option 2
 - ii. Description: Class HPC-O PCC for Overlay

3. Click “Save & Exit” to create each container

4. Select the container you want to add bid items to, then click on “New” then “Add Multiple”.
5. In the “Add Standard Items” window select “Add” in the top left corner to start adding the bid items.
6. Start searching for the required bid items in the “Add Standard Items” window and add them. You can find a specific bid item by using the “filter icon”. You can filter items by their “Item No.” or “Description”.
7. The containers should include the following bid items at a minimum:
 - **Container 1:**
 - i. All items not associated with the overlay options
 - **Container 2:**
 - i. “Deck Overlay (Class O PCC)”
 - **Container 3:**
 - i. “Trial Batch and Test Placement (Fiber Reinforced Concrete)”
 - ii. “Deck Overlay (Class HPC-O PCC)”
 - iii. “Fiber Reinforcement for Concrete Overlay”
8. When finished adding all the bid items click “Save” in the top left corner in the “Add Standard Items” window.
9. To add/edit the quantity or notes to any bid item, select the bid item then select edit on the top left corner. When finished, click “Save” on the “Edit Plan Item” window.
10. Go to the “Reports” option under the “Bid Estimate Report Gallery” list in the main screen on the left once all bid items are entered.
11. In the “Estimate Report Gallery” window double click on the first option “Bid Items and Reference Notes Report for 1 Division”.
12. In the new window for the “Division” select the container you want to view the report for. Select a “Letter Series” and “Beginning Sheet Number” in their corresponding drop-down menus. Both of these selections are arbitrary- their selection does not affect the final result. Select your unit’s supervisor from the “Design Team” drop down menu. Then click “View Report”.

The screenshot displays the Masterworks software interface. On the left is a sidebar with navigation icons and labels: 'Recent Projects', '169-08-US 169 -- Bridge Rehab // ...', 'Project Phases', 'BRF-169-5(023)--38-08', 'My Tasks (0)', and 'Resource Management'. The main window is titled 'BID ITEMS AND REFERENCE NOTES REPORT FOR 1 DIVI...'. It features a search bar with 'Type to Search' and a 'Back' button. Below the search bar are four dropdown menus: 'Divisions' (selected: Design No. 0127-BOONE), 'Letter Series' (selected: A), 'Beginning Sheet Number' (selected: 1), and 'Design Team' (selected: Michael Nop). A 'View Report' button is positioned at the bottom left of the main window.

13. In the new window click on the black arrowhead next to the floppy disk. Then select “Excel”. An excel sheet will be downloaded to your file explorer. Go back to step 12 and repeat the process until all three containers have been created and downloaded.



Divisions: Design No. 0127-BOONE Letter Series: A

Beginning Sheet Number: 1 Design Team: Michael Nop

View Report

1 of 1 Find | Next

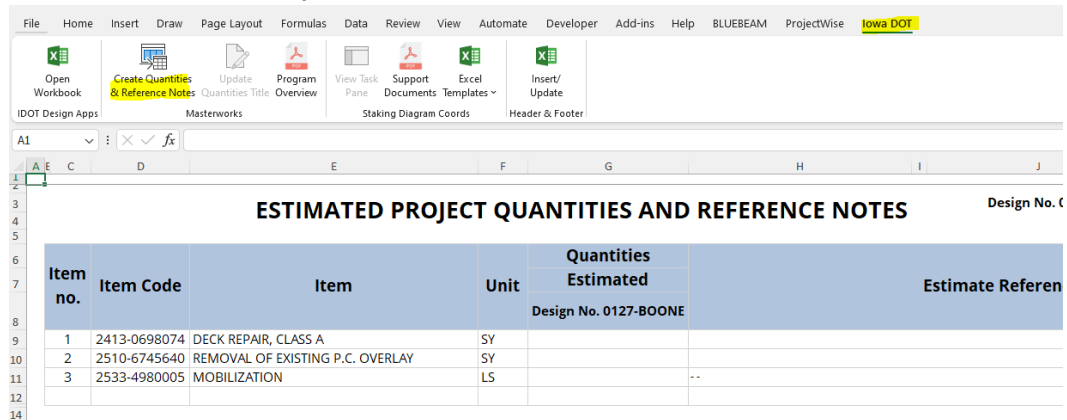
ESTIMATE **QUANTITIES AND REFERENCE**

Item no.	Item Code	Item	Unit	Quantities	
				Estimated	Design No. 0127-BOONE
1	2413-0698074	DECK REPAIR, CLASS A	SY		
2	2510-6745640	REMOVAL OF EXISTING P.C. OVERLAY	SY		
3	2533-4980005	MOBILIZATION	LS		--

Design Team :Michael Nop County Name :Boone Project Number:BRF-169-5(023)--38-08

14. Open Container 1’s excel sheet (the container with all the bid items except the overlay options).

15. In the excel sheet, choose “Iowa DOT” tab in the top, then click on “Create Quantities & Reference Notes”. **If the “Iowa DOT” tab is not visible, contact the Methods Unit of the Bridges and Structures Bureau to upload the application (contact Ph. # 515-233-7935 or use the following document [Installation Instructions - IDOT Bridge Tools Add-in .pdf](#) to uninstall/reinstall the application if issues occur)**



File Home Insert Draw Page Layout Formulas Data Review View Automate Developer Add-ins Help BLUEBEAM ProjectWise **Iowa DOT**

Open Workbook Create Quantities & Reference Notes Update Quantities Title Program Overview View Task Pane Support Documents Templates Insert/Update

IDOT Design Apps Masterworks Staking Diagram Coords Header & Footer

A1

ESTIMATED PROJECT QUANTITIES AND REFERENCE NOTES Design No. 0127-BOONE

Item no.	Item Code	Item	Unit	Quantities	
				Estimated	Design No. 0127-BOONE
1	2413-0698074	DECK REPAIR, CLASS A	SY		
2	2510-6745640	REMOVAL OF EXISTING P.C. OVERLAY	SY		
3	2533-4980005	MOBILIZATION	LS		--

- Two sheets should have been added to the workbook, one for the estimated quantities and the other for the reference notes.

16. To add the bid items from the alternate to the same excel sheet click on “Create Quantities & Reference Notes” again.

- A message window will appear, click “Add as New Sheet” and then click “Continue”

- Navigate to the file location in which you saved the first alternate’s excel spreadsheet. Once you have selected the file, click “Open”.
- Repeat step 16 again, but select open the second alternate’s excel file into the spreadsheet.

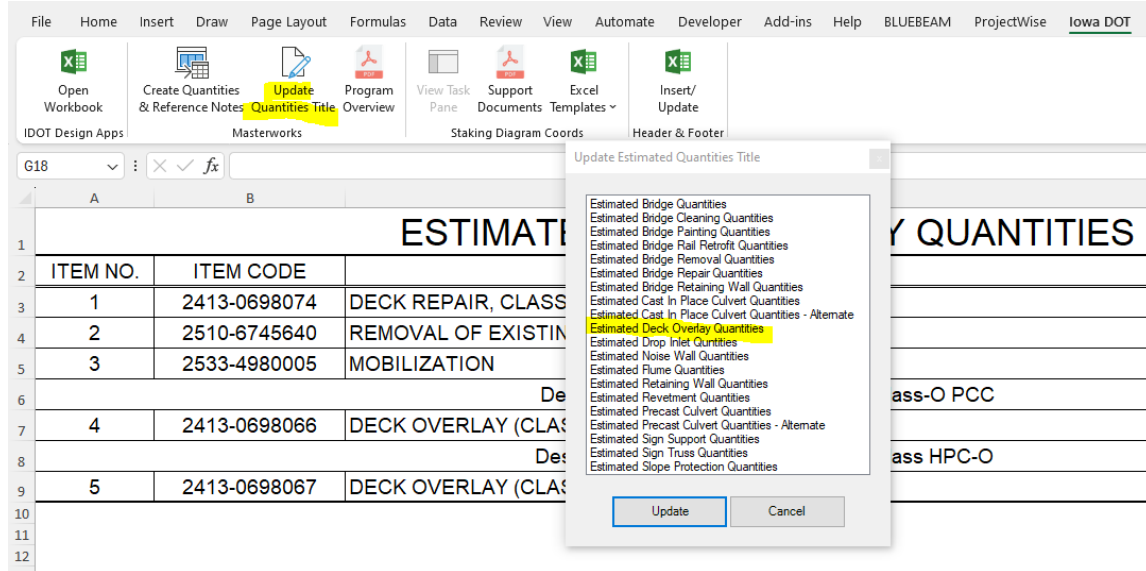
17. “Estimated Quantities” and “Estimate Reference Information” tab should now include both alternates and look similar to the pictures shown below.

- Ensure that each bid item is numbered in chronological order

ESTIMATED BRIDGE QUANTITIES				
ITEM NO.	ITEM CODE	ITEM	UNIT	
1	2413-0698074	DECK REPAIR, CLASS A	SY	
2	2510-6745640	REMOVAL OF EXISTING P.C. OVERLAY	SY	
3	2533-4980005	MOBILIZATION	LS	
Design No. 127- Boone Alt. Option 1 Class-O PCC				
4	2413-0698066	DECK OVERLAY (CLASS O PCC)	SY	
Design No. 127- Boone Alt. Option 2 Class HPC-O				
5	2413-0698067	DECK OVERLAY (CLASS HPC-O PCC)	SY	

ESTIMATE REFERENCE INFORMATION		
ITEM NO.	ITEM CODE	ITEM DESCRIPTION
1	2413-0698074	DECK REPAIR, CLASS A --
2	2510-6745640	REMOVAL OF EXISTING P.C. OVERLAY --
3	2533-4980005	MOBILIZATION --
4	2413-0698066	DECK OVERLAY (CLASS O PCC) --
5	2413-0698067	DECK OVERLAY (CLASS HPC-O PCC) --

18. Change the name of the Estimated Quantities table from “Estimated Bridge Quantities” to “Estimated Deck Overlay Quantities” using the Update Quantities Title feature.



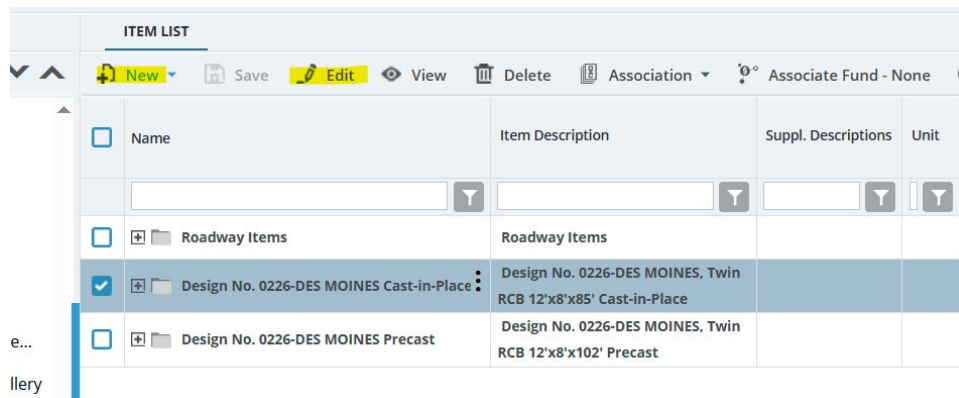
19. The “Estimated Quantities” and the “Estimate Reference Information” notes are now ready for project plan presentation. These will be inserted into the Project Bentley Connect CADD file using the “Place Table” tool in MicroStation. See Appendix C for this workflow.

Appendix B:

Generating Bid Item Quantities for Culverts with Precast Alternate Plans

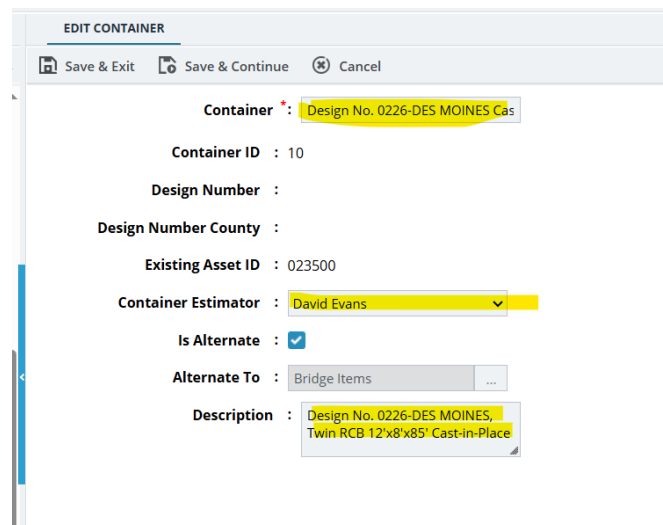
If you are creating estimates for Culvert Precast Alternate project plans, then follow the steps 1 through 7 in the main document to start the bid item container for the Cast-in-Place option.

1. In the new window “Item List”, chose “New” and choose “New Container”. If the container has been already created correctly, skip to step 3. The designer may need to change the container names, in that case, click the container you want to change, and chose “Edit” in the upper left.



In the “Container” window, edit or fill in the information to make sure to have the following:

- In the “Container” field type in format of **Design No. #####-County name, Alternate name**
 - (i.e.: Design No. 0226 – Des Moines Cast-in-Place).
- In the “Description” field type in the format of **Design No. ##### – County name, culvert size and project type** (i.e.: Design No. 0226 – Des Moines, Twin RCB 12’ x 8’ x 85’ RCB Cast-in-Place)



Then repeats the steps for additional containers.

- Click “Save” and “Exit” to create the container or save the container edits.
- Select the container you want to add bid items to, then click on “New” then “Add Multiple”.
- In the “Add Standard Items” window select “Add” in the top left corner to start adding the bid items.

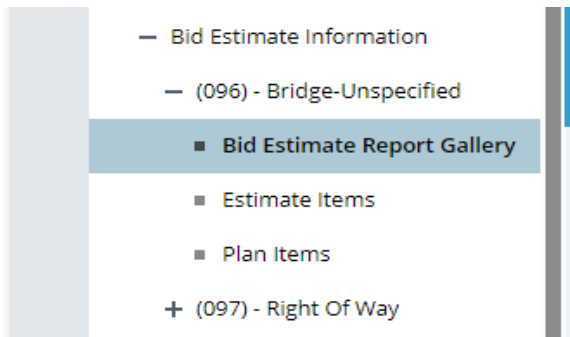
- Start searching for the required bid items in the “Standard Items” window and add them, you can find a specific bid item by using the “filter icon”. You can filter items by their “Item No.” or “Description”.

- When you are done with finding all the bid items click “Save” in the top left corner in the Add Standard Items” window. Now you have all the bid items listed in the container.
- To add/edit the quantity or notes to any bid item, select the bid item then select edit on the top left corner.

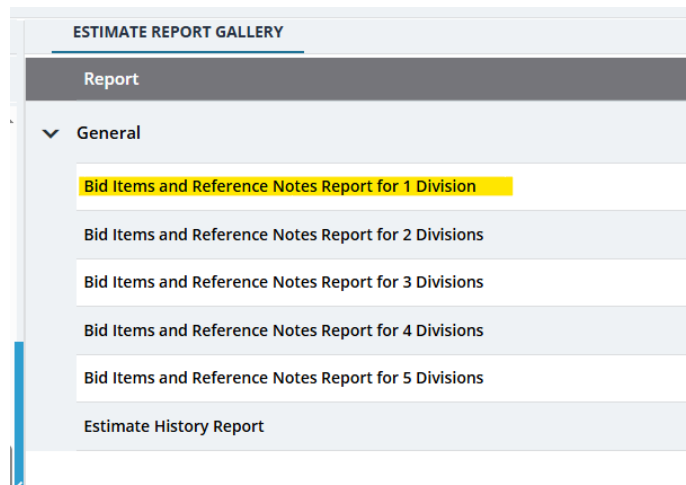
ITEM LIST							
<div> New Save Edit View Delete Association Associate Fund - None More </div>							
<input type="checkbox"/>	Name	Item Description	Suppl. Descriptions	Unit	Quantity	Obsolete	Method of Measurement/Basis of Payment
<input type="checkbox"/>						<input type="checkbox"/>	
<input type="checkbox"/>	Roadway Items	Roadway Items					
<input type="checkbox"/>	Design No. 0226-DES MOINES Cast-in-Place	Design No. 0226-DES MOINES, Twin RCB 12'x8'x85' Cast-in-Place					
<input type="checkbox"/>	2104-2710020	EXCAVATION, CLASS 10, CHANNEL		CY	55	<input type="checkbox"/>	STD
<input type="checkbox"/>	2401-6745625	REMOVAL OF EXISTING BRIDGE		LS	1	<input type="checkbox"/>	STD
<input checked="" type="checkbox"/>	2402-2720000	EXCAVATION, CLASS 20		CY	604	<input type="checkbox"/>	STD
<input type="checkbox"/>	2402-3825025	GRANULAR MATERIAL FOR BLANKET		CY	177	<input type="checkbox"/>	STD

- When you are done with your editing click “Save and Exit” on the “Edit Plan Item” window.

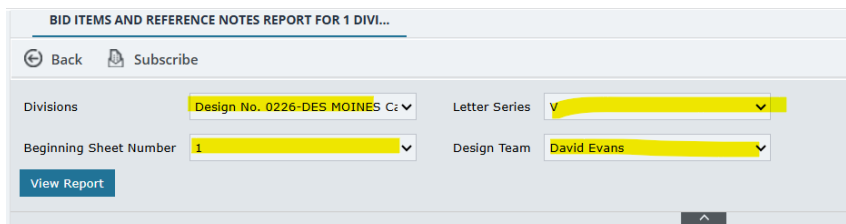
9. When you are done with all the bid items inside the container, then go to the “Bid Estimate Report Gallery” option under the “Bid Estimate Information” list in the main screen on the left.



10. In the “Report Gallery” window double click on the first option “Bid Items and Reference Notes Report for 1 Division”.



11. In the new window for the “Division” select the container for the Cast-in-Place option. In the “Letter Series”, select the letter that you want to use with the page number in the report, and for the “Beginning Sheet Number” select the page number. Then click “View Report”.



12. In the new window, click on the black arrowhead next to the floppy disk. Then select “Excel”. An excel sheet will be downloaded to your desktop. Double click on it to open.

BID ITEMS AND REFERENCE NOTES REPORT FOR 1 DIVI...

Back Subscribe

Divisions Design No. 0226-DES MOINES C Letter Series V

Beginning Sheet Number 1 Design Team David Evans

View Report

1 of 1 Find | Next

Word
Excel
PowerPoint
PDF
TIFF file
MHTML (web archive)
CSV (comma delimited)
XML file with report data
Data Feed

ESTIMATE QUANTITIES AND REFERENCE NOTES

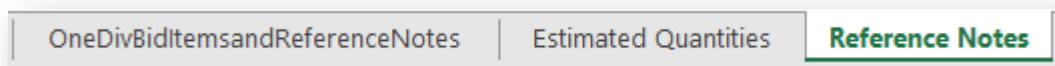
Item no.	Item Code	Item	Unit	Quantities Estimated Design No. 0226-DES MOINES Cast-in-Place	Esti
1	2104-2710020	EXCAVATION, CLASS 10, CHANNEL	CY	55	
2	2401-6745625	REMOVAL OF EXISTING BRIDGE	LS	1	

Contractor to add the following information when
Name of Aesthetic Inspector: Brad Azzolina

13. Go back to step 10 and repeat the process for the precast option and download the precast bid items.
14. In the excel sheet exported by Masterworks, choose "Iowa DOT" tab in the top menu bar, then click on "Create Quantities & Reference Notes". **If the "Iowa DOT" tab is not visible, contact the Methods Unit of the Bridges and Structures Bureau to upload the application (contact Ph. # 515-233-7935 or use the following document ([Installation Instructions - IDOT Bridge Tools Add-in .pdf](#)) to uninstall/reinstall the application if issues occur)**



15. Now you will have two sheets added to the workbook, one for the estimated quantities and the other for the reference notes.



16. To update the title of the table with the proper heading choose "Update Quantities Title" then choose the correct one from the list on the new window and click "Update". For cast-in-place, choose "Estimated Cast in Place Culvert Quantities – Alternate". For precast, choose "Estimated Precast Culvert Quantities – Alternate".

ITEM NO	ITEM	UNIT	TOTAL
1	EXCAVATION, CLASS 10, CHANNEL	CY	55
2	REMOVAL OF EXISTING BRIDGE	LS	1
3	EXCAVATION, CLASS 20	CY	604
4	GRANULAR MATERIAL FOR BLANKET	CY	177
5	STRUCTURAL CONCRETE (RCB CULVERT)	CY	338.2
6	REINFORCING STEEL	LB	56,358
7	ENGINEERING FABRIC	SY	143.7
8	REVTMENT, CLASS E	TON	116.8
9	CONSTRUCTION SURVEY	LS	1
10	MOBILIZATION	LS	1

Two separate Excel files should be generated for Cast-in-Place and Precast culvert options

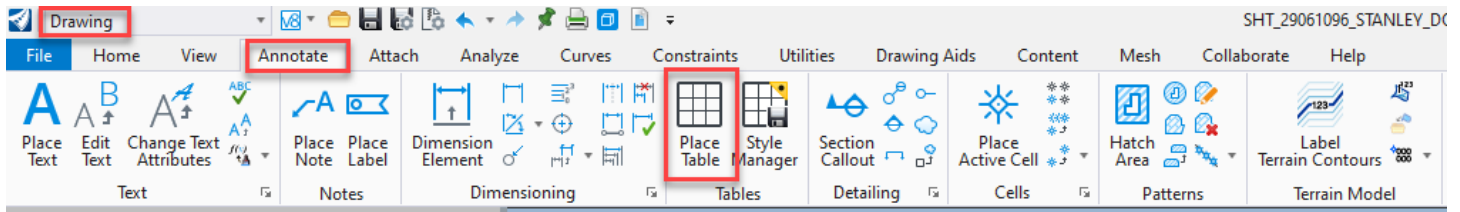
- The "Estimated Quantities" and the "Estimate Reference Information" notes are now ready for project plan presentation for both options. These will be inserted into the Project Bentley Connect CADD file using the "Place Table" tool in MicroStation. See Appendix C for this workflow.

ITEM NO.	ITEM CODE	ITEM	UNIT	TOTAL
1	2104-2710020	EXCAVATION, CLASS 10, CHANNEL	CY	55
2	2401-6745625	REMOVAL OF EXISTING BRIDGE	LS	1
3	2402-2720000	EXCAVATION, CLASS 20	CY	604
4	2402-3825025	GRANULAR MATERIAL FOR BLANKET	CY	177
5	2403-0100020	STRUCTURAL CONCRETE (RCB CULVERT)	CY	338.2
6	2404-7775000	REINFORCING STEEL	LB	56,358
7	2507-3250005	ENGINEERING FABRIC	SY	143.7
8	2507-6800061	REVTMENT, CLASS E	TON	116.8
9	2526-8285000	CONSTRUCTION SURVEY	LS	1
10	2533-4980005	MOBILIZATION	LS	1

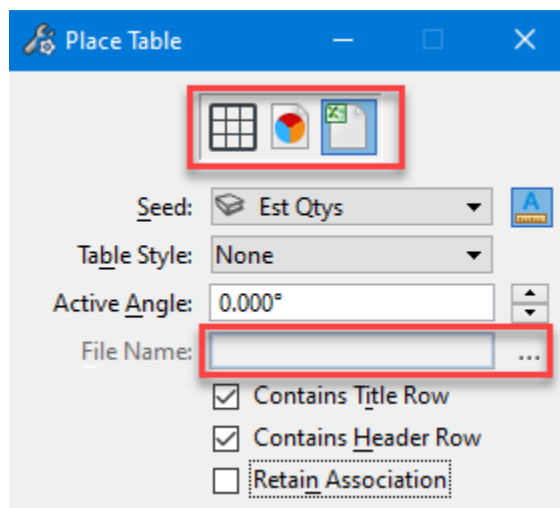
Appendix C:

Inserting the Bid Item Table and Estimate Reference notes into the CADD File

1. For bid item quantities, use the Drawing Workflow. First, select the Annotate tab, and then select “Place Table”.

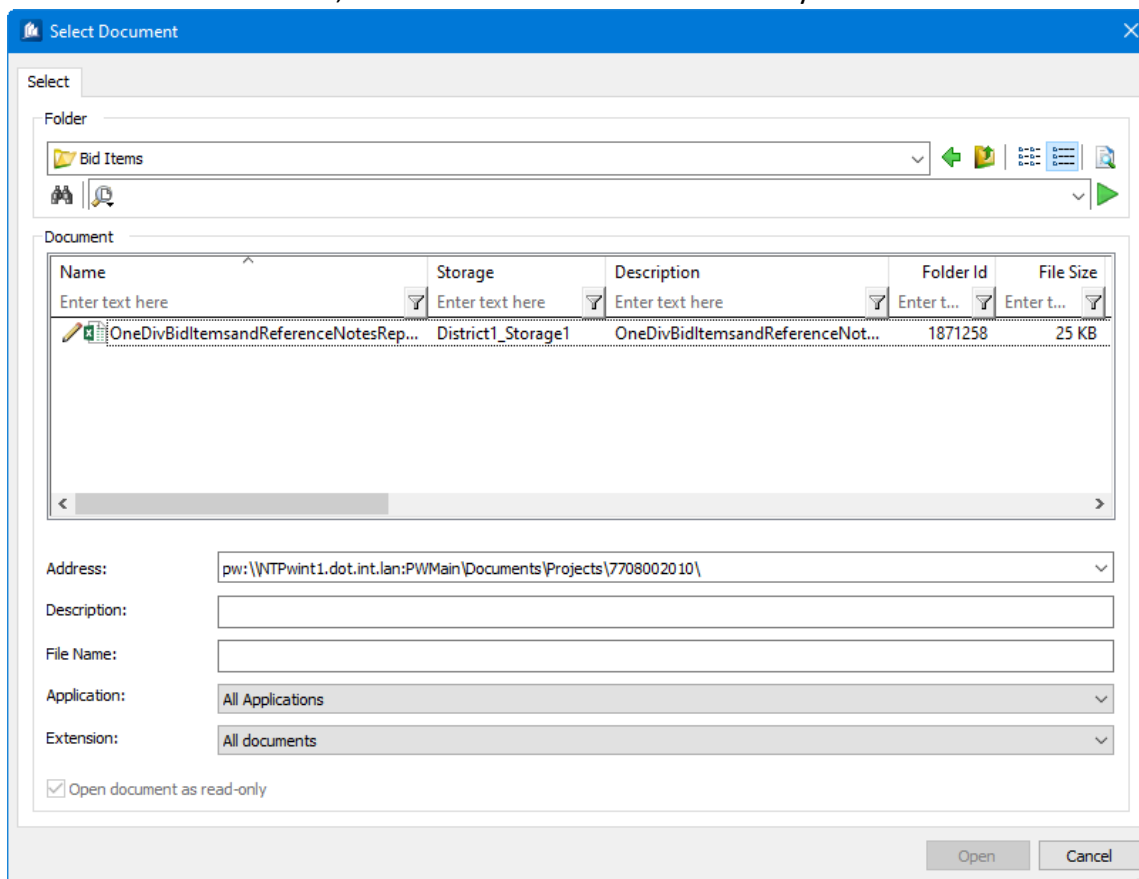


2. The “Place Table” dialog box will open. You need to select the Excel icon “From File”. Then, you need to uncheck “Retain Association”. The File Name will be grayed out, so select the three dots on the right-hand side.



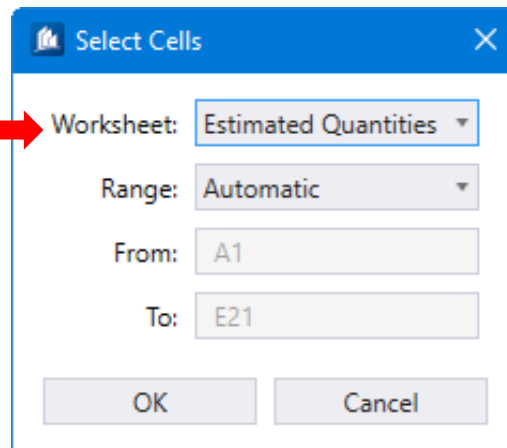
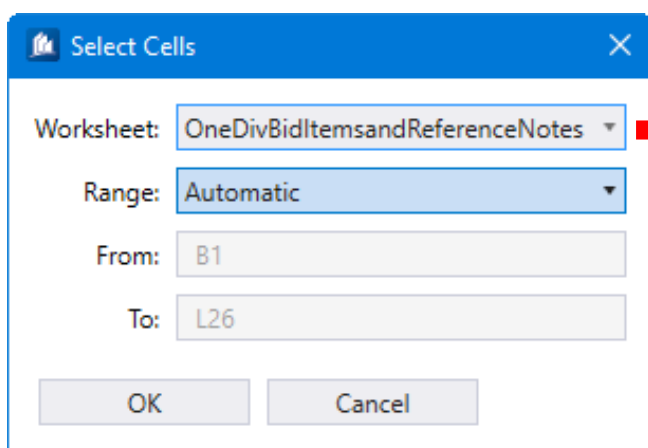
3. Next, navigate to your file in the Projectwise Directory:
(e.g. PWMMain\Documents\Projects\CCRRR0XXXX\Bridge\(\PPP)_WorkType\DOT\Support\BidItems)

Under the Extension field, select “All Documents” and select your Excel File.

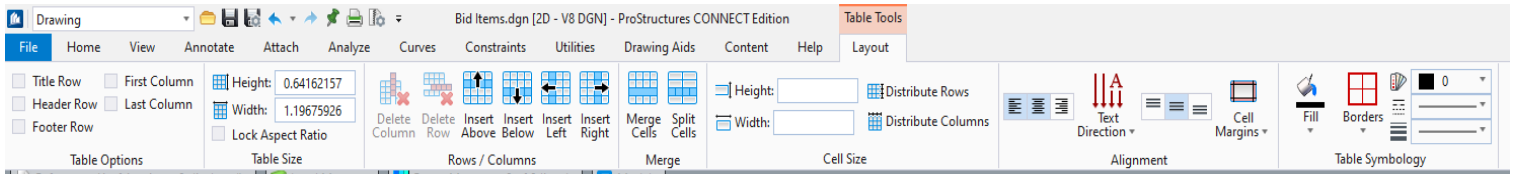


Select your file and click open. Wait a few seconds and a dialog box will appear entitled.

- Once the Dialog Box appears, select the down arrow under Worksheet and select “Estimated Quantities”, then select ok. Wait a few moments and a Generating Table scroll bar will appear. When that scroll bar disappears, your table should appear on the screen.



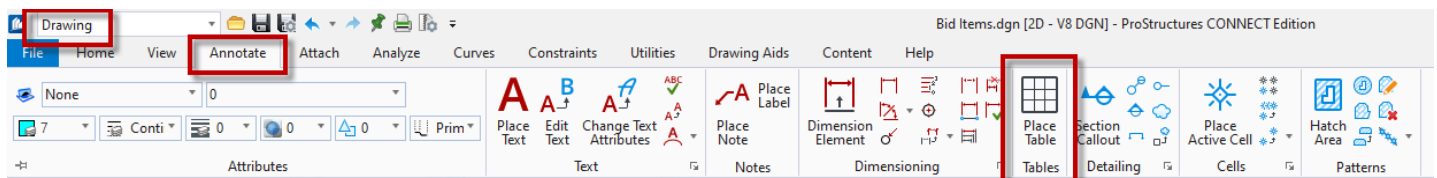
- Place the Estimated Quantities table in the upper left hand corner on the Sheet Model. Once the table is placed move it to the right and down .03 in each direction.
- If the table does not come in with extra spaces, then select the table. Upon doing this, the ribbon on the top of the screen will show the Table Tools.



Select the last row of bid item, then select “insert below” and add Three lines.

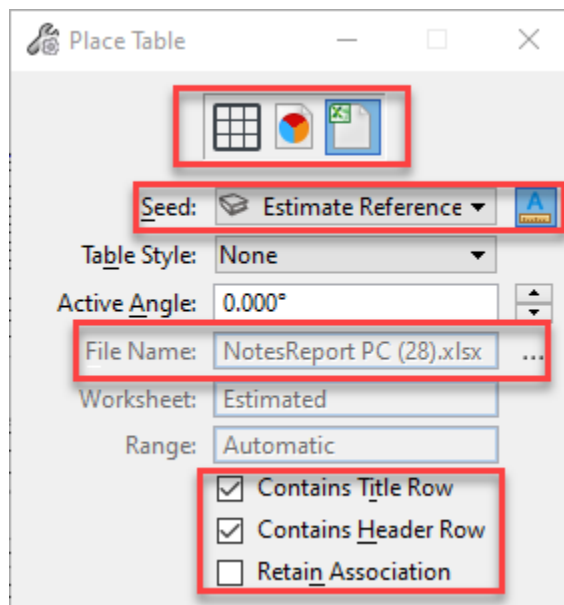
ESTIMATED BRIDGE QUANTITIES				
ITEM NO	ITEM CODE	ITEM	UNIT	TOTAL
1	2104-2710020	EXCAVATION, CLASS 10, CHANNEL	CY	881.7
2	2401-6745625	REMOVAL OF EXISTING BRIDGE	LS	1
3	2402-2720000	EXCAVATION, CLASS 20	CY	216
4	2403-0100010	STRUCTURAL CONCRETE (BRIDGE)	CY	250
5	2404-7775000	REINFORCING STEEL	LB	206
6	2404-7775005	REINFORCING STEEL, EPOXY COATED	LB	52,769
7	2404-7775009	REINFORCING STEEL, STAINLESS STEEL	LB	2,455
8	2407-0564130	BEAMS, PRETENSIONED PRESTRESSED CONCRETE, BTD130	EACH	5
9	2408-7800000	STRUCTURAL STEEL	LB	1,855
10	2414-6424110	CONCRETE BARRIER RAILING	LF	294
11	2501-0201057	PILES, STEEL, HP 10 X 57	LF	1,950
12	2507-2638650	BRIDGE WING ARMORING - EROSION STONE	SY	27
13	2507-3250005	ENGINEERING FABRIC	SY	1,452
14	2507-6800061	REVTMENT, CLASS E	TON	1,488.20
15	2507-8029000	EROSION STONE	TON	22.2
16	2526-8285000	CONSTRUCTION SURVEY	LS	1
17	2533-4980005	MOBILIZATION	LS	1

- For Estimate Reference Notes, use the Drawing Workflow. Select the Annotate tab, and then select “Place Table”.



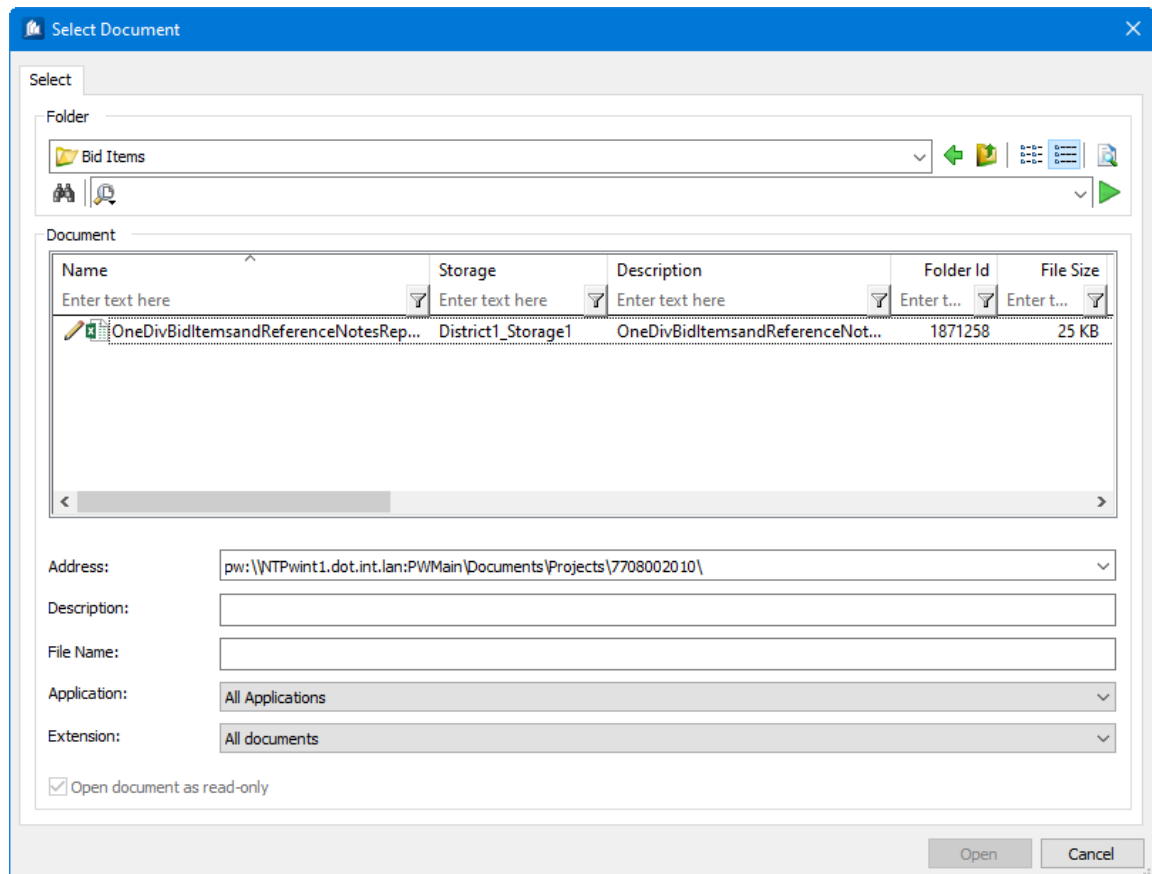
- The “Place Table” dialog box will open. You need to select the Excel icon, “From File”. Then under the Seed drop down, select “Estimate Reference” notes. You need to check on “Contains Title Row” and

“Contains Header Row”. You also need to uncheck “Retain Association”. The file name will be grayed out, so select the three dots on the right-hand side.



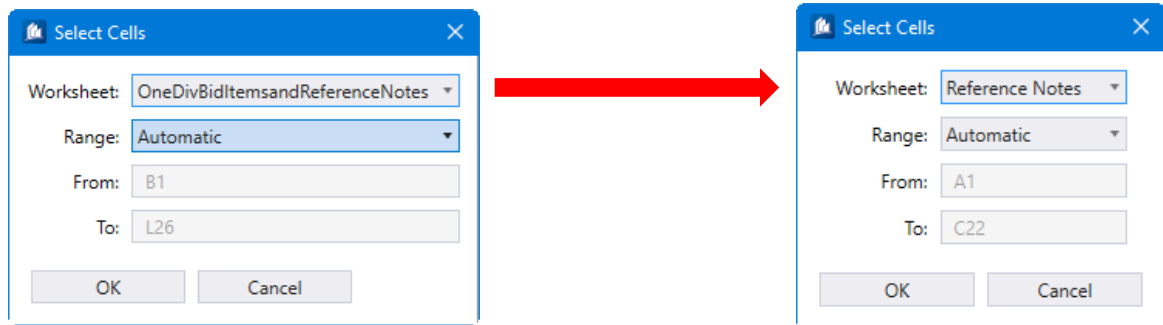
9. Next, navigate to your file in the Projectwise Directory:
(e.g. *PWMain\Documents\Projects\CCRRR0XXXX\Bridge\PPP_WorkType\DOT\Support\BidItems*)

Under the Extension field, select “All Documents” and select your Excel File

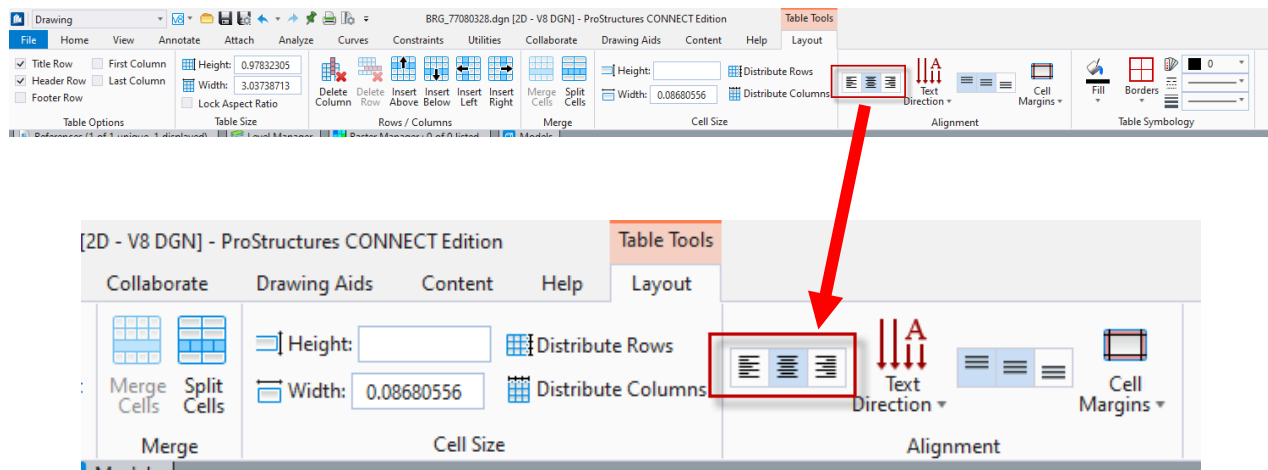


Select your file and click open. Wait a few seconds and a dialog box will appear entitled “Select Cells”.

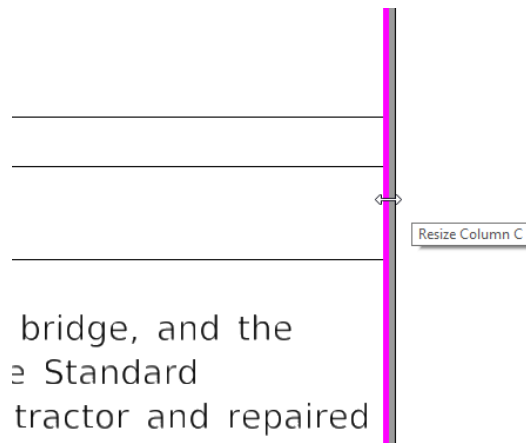
10. Once the Dialog Box appears, select the down arrow under Worksheets. Then select “Reference Notes”, and click ok. Wait a few moments and a Generating Table scroll bar will appear. When that scroll bar disappears, your table should appear on the screen.



11. Place the table under the Estimated Quantities table and move it down .03.
12. If the “ITEM NO.” column is not all centered, then select the table. Once the ribbon is active, select column “A” and column “B”, and select Centered Justified in the ribbon.



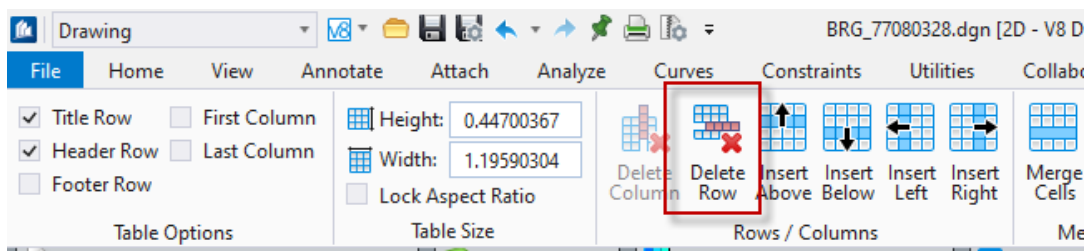
13. If the table is too wide for the sheet, then select the table. Go to the right-hand side of the table and hover over the vertical line of the table. You should see a horizontal line with arrow heads on both sides. Left click and line the vertical edge up with the Estimated Quantities and left click again.



14. If the estimate reference notes table is too long and extends past the bottom border, then copy the table and place this table to the right of the Estimated Quantities table and move it to the right .03.

ESTIMATE REFERENCE INFORMATION		
ITEM NO.	ITEM CODE	DESCRIPTION
1	2104-2710020	EXCAVATION, CLASS 10, CHANNEL
2	2401-6750001	REMOVALS, AS PER PLAN Includes all work for removal and off-site disposal of the remaining portions of the existing eastbound bridge, and the existing westbound bridge. Removal of scheduled items shall be in accordance with Section 2401 of the Standard Specifications. Any damage to material not scheduled for removal shall be the responsibility of the Contractor and repaired at no extra cost to the state.
3	2402-2720000	EXCAVATION, CLASS 20
4	2402-2721000	EXCAVATION, CLASS 21
5	2402-2722000	EXCAVATION, CLASS 22
6	2403-0100010	STRUCTURAL CONCRETE (BRIDGE) Includes cost of furnishing and placing six splash basins (including excavation, erosion stone or Class E revetment, and engineering fabric). Includes all resilient joint filler required. Includes furnishing and placing subrain (including excavation), floodable backfill, porous backfill, geotextile fabric, water flooring, and subdrain outlet at abutments and toe of beam. Includes furnishing and placing 3 inch diameter PVC plastic pipe and expanding foam in the abutment wings. Includes transparent stay-in-place deck form material and installation cost, if used by the contractor, with no additional cost to the state.
7	2403-7000210	HIGH PERFORMANCE STRUCTURAL CONCRETE This bid item includes the concrete for the deck, abutment and pier diaphragms. Refer to the Developmental Specification for High Performance Concrete for Structures for additional information.
8	2404-7775000	REINFORCING STEEL
9	2404-7775005	REINFORCING STEEL, EPOXY COATED
10	2404-7775000	REINFORCING STEEL, STAINLESS STEEL
11	2407-0564050	BEAMS, PRETENSIONED PRESTRESSED CONCRETE, BT050 Includes pier and abutment bearing material.
12	2407-0564115	BEAMS, PRETENSIONED PRESTRESSED CONCRETE, BT0115 Includes pier and abutment bearing material.

15. Once the tables are placed on the sheet properly, go back to the first estimate reference notes table (below the estimate quantities table) and delete the rows that extend beyond the border of the sheet. If necessary, go to the second estimate reference notes table (located to the right of the estimated quantities table) and delete the duplicated ITEM NO. rows.



First estimate reference table (below the quantities table):

26	2507-8029000	EROSION STONE	TON	430.3
27	2533-4980005	MOBILIZATION	LS	1

A	B	C
ITEM NO.	ITEM CODE	DESCRIPTION
1	2404-2710020	EXCAVATION, CLASS 10, CHANNEL
2	2401-6750001	REMOVALS, AS PER PLAN. Includes all work for removal and off-site disposal of the remaining portions of the existing eastbound bridge, and the existing westbound bridge. Removal of scheduled items shall be in accordance with Section 2401 of the Standard Specifications. Any damage to material not scheduled for removal shall be the responsibility of the Contractor and repaired at no extra cost to the state.
3	2402-2720000	EXCAVATION, CLASS 20
4	2402-2721000	EXCAVATION, CLASS 21
5	2402-2722000	EXCAVATION, CLASS 22
6	2403-0100010	STRUCTURAL CONCRETE (BRIDGE) Includes cost of furnishing and placing six splash basins (including excavation, erosion stone or Class E revetment, and engineering fabric). Includes all resilient joint filler required. Includes furnishing and placing subrein (including excavation), floodable backfill, porous backfill, geotextile fabric, water flooding, and subdrain outlet at abutments and toe of berm. Includes furnishing and placing 3 inch diameter PVC plastic pipe and expanding foam in the abutment wings. Includes transparent stay-in-place deck form material and installation cost, if used by the contractor, with no additional cost to the state.
7	2403-7000210	HIGH PERFORMANCE STRUCTURAL CONCRETE This bid item includes the concrete for the deck, abutment and pier diaphragms. Refer to the Developmental Specification for High Performance Concrete for Structures for additional information.
8	2404-7775000	REINFORCING STEEL
9	2404-7775005	REINFORCING STEEL, EPOXY COATED
10	2404-7775009	REINFORCING STEEL, STAINLESS STEEL

FILE NO.	25000	ENGLISH	DESIGN TEAM	25000-0000
SYSTEMTIME	SYSTEMDATE	USERNAME	DGN5PEC	

Second estimate reference notes table (on right side of the quantities table):

A	B	C
ITEM NO.	ITEM CODE	DESCRIPTION
11	2407-0564050	BEAMS, PRETENSIONED PRESTRESSED CONCRETE, BT050 Includes pier and abutment bearing material.
12	2407-0564115	BEAMS, PRETENSIONED PRESTRESSED CONCRETE, BT0115 Includes Contractor filling out beam numbers by location and beam seat elevations in "PPC Beam Data Spreadsheet" and forwarding electronic spreadsheet to the Engineer. Includes pier and abutment bearing material.
13	2407-0564130	BEAMS, PRETENSIONED PRESTRESSED CONCRETE, BT0130 Includes Contractor filling out beam numbers by location and beam seat elevations in "PPC Beam Data Spreadsheet" and forwarding electronic spreadsheet to the Engineer. Includes pier bearing material.
14	2407-0564135	BEAMS, PRETENSIONED PRESTRESSED CONCRETE, BT0135 Includes Contractor filling out beam numbers by location and beam seat elevations in "PPC Beam Data Spreadsheet" and forwarding electronic spreadsheet to the Engineer.
15	2408-7800000	STRUCTURAL STEEL Includes deck drains and intermediate diaphragms.
16	2414-6424038	CONCRETE BARRIER RAIL, 3'-8" Includes material and labor associated with providing and installing the rigid steel conduit, junction boxes and fittings. Includes 2,400 LF of 2' diameter rigid steel conduit. If placement of concrete is done by the slipforming method, Class BR concrete is required. Cast-in-place barrier rails shall use Class C mix. Price bid for this item shall include the cost of cast-in-place formwork required for placement of the concrete.
17	2433-0001048	CONCRETE DRILLED SHAFT, 48 IN. DIAMETER
18	2433-0001054	CONCRETE DRILLED SHAFT, 54 IN. DIAMETER
19	2433-0003000	DEMONSTRATION SHAFT
20	2501-0201057	PILES, STEEL, HP 10 X 57 Includes furnishing and installing steel pile points.
21	2501-6335010	PREBORED HOLES
22	2501-8400172	TEMPORARY SHORING
23	2507-2638650	BRIDGE WING ARMORING - EROSION STONE Includes furnishing and placing engineering fabric, erosion stone, and all required excavating, shaping and compacting for wing armoring.
24	2507-3250005	ENGINEERING FABRIC Engineering fabric shall be material as specified for embankment erosion control in accordance with Article 4196.01.B.3 of the Standard Specifications.
25	2507-6800061	REVEITEMENT, CLASS E Estimated at 1.6 ton/cu yd.
26	2507-8029000	EROSION STONE
27	2533-4980005	MOBILIZATION

16. Verify Estimated Bridge Quantities Table and Estimate Reference Information notes table meets typical format. The number of bid items and estimate reference notes should be equal. The Item Number and Item Code are required.

Example:

Control Point

ESTIMATED BRIDGE QUANTITIES			
ITEM NO.	ITEM CODE	ITEM	UNIT
1	2104-2710020	EXCAVATION, CLASS 10 CHANNEL	CU 2.500
2	2804-0750001	REINFORCING, AS PER PLAN	LS 1
3	2802-2710000	EXCAVATION, CLASS 10	CU 500
4	2402-2712000	EXCAVATION, CLASS 22	CU 807
5	2802-2722000	EXCAVATION, CLASS 22	CU 413
6	2402-2000100	STRUCTURAL CONCRETE (SHOULDER)	CU 2,510.00
7	2802-2000210	HIGH PERFORMANCE STRUCTURAL CONCRETE	CU 1,124
8	2404-7720000	REINFORCING STEEL	LB 176,121
9	2404-7720000	REINFORCING STEEL, BENT UP CURVED	LB 24,000
12	2404-7720000	REINFORCING STEEL, STAINLESS STEEL	LB 5,175
13	2407-0242120	BARMS, PRETENSIONED PRESTRESSING LUGS/LIPS, BT005	EA 0
14	2407-0241120	BARMS, PRETENSIONED PRESTRESSING LUGS/LIPS, BT015	EA 0
15	2407-0241120	BARMS, PRETENSIONED PRESTRESSING LUGS/LIPS, BT015	EA 0
16	2407-0241120	BARMS, PRETENSIONED PRESTRESSING LUGS/LIPS, BT015	EA 0
17	2400-0000000	STRUCTURAL STEEL	LB 22,571
18	2414-0421100	CONCRETE BARRIER RAIL, 2' 6"	CU 1,100
27	2413-0001100	CONCRETE GRADUATED SHAFT, 48 IN. DIAMETER	CU 176.1
28	2413-0001100	CONCRETE GRADUATED SHAFT, 48 IN. DIAMETER	CU 177.2
29	2413-0001100	CONCRETE GRADUATED SHAFT, 48 IN. DIAMETER	CU 177.2
32	2410-0210170	PIPE, STEEL, HP 12 X 57	CU 1.05
33	2410-0210170	PIPING 3' HIGHER	CU 7.70
34	2410-0210170	PIPING 3' HIGHER	CU 7.70
35	2410-0210170	PIPING 3' HIGHER	CU 7.70
36	2410-0210170	PIPING 3' HIGHER	CU 7.70
37	2410-0210170	PIPING 3' HIGHER	CU 7.70
38	2410-0210170	PIPING 3' HIGHER	CU 7.70
39	2410-0210170	PIPING 3' HIGHER	CU 7.70
40	2410-0210170	PIPING 3' HIGHER	CU 7.70
41	2410-0210170	PIPING 3' HIGHER	CU 7.70
42	2410-0210170	PIPING 3' HIGHER	CU 7.70
43	2410-0210170	PIPING 3' HIGHER	CU 7.70
44	2410-0210170	PIPING 3' HIGHER	CU 7.70
45	2410-0210170	PIPING 3' HIGHER	CU 7.70
46	2410-0210170	PIPING 3' HIGHER	CU 7.70
47	2410-0210170	PIPING 3' HIGHER	CU 7.70
48	2410-0210170	PIPING 3' HIGHER	CU 7.70
49	2410-0210170	PIPING 3' HIGHER	CU 7.70
50	2410-0210170	PIPING 3' HIGHER	CU 7.70
51	2410-0210170	PIPING 3' HIGHER	CU 7.70
52	2410-0210170	PIPING 3' HIGHER	CU 7.70
53	2410-0210170	PIPING 3' HIGHER	CU 7.70
54	2410-0210170	PIPING 3' HIGHER	CU 7.70
55	2410-0210170	PIPING 3' HIGHER	CU 7.70
56	2410-0210170	PIPING 3' HIGHER	CU 7.70
57	2410-0210170	PIPING 3' HIGHER	CU 7.70
58	2410-0210170	PIPING 3' HIGHER	CU 7.70
59	2410-0210170	PIPING 3' HIGHER	CU 7.70
60	2410-0210170	PIPING 3' HIGHER	CU 7.70
61	2410-0210170	PIPING 3' HIGHER	CU 7.70
62	2410-0210170	PIPING 3' HIGHER	CU 7.70
63	2410-0210170	PIPING 3' HIGHER	CU 7.70
64	2410-0210170	PIPING 3' HIGHER	CU 7.70
65	2410-0210170	PIPING 3' HIGHER	CU 7.70
66	2410-0210170	PIPING 3' HIGHER	CU 7.70
67	2410-0210170	PIPING 3' HIGHER	CU 7.70
68	2410-0210170	PIPING 3' HIGHER	CU 7.70
69	2410-0210170	PIPING 3' HIGHER	CU 7.70
70	2410-0210170	PIPING 3' HIGHER	CU 7.70
71	2410-0210170	PIPING 3' HIGHER	CU 7.70
72	2410-0210170	PIPING 3' HIGHER	CU 7.70
73	2410-0210170	PIPING 3' HIGHER	CU 7.70
74	2410-0210170	PIPING 3' HIGHER	CU 7.70
75	2410-0210170	PIPING 3' HIGHER	CU 7.70
76	2410-0210170	PIPING 3' HIGHER	CU 7.70
77	2410-0210170	PIPING 3' HIGHER	CU 7.70
78	2410-0210170	PIPING 3' HIGHER	CU 7.70
79	2410-0210170	PIPING 3' HIGHER	CU 7.70
80	2410-0210170	PIPING 3' HIGHER	CU 7.70
81	2410-0210170	PIPING 3' HIGHER	CU 7.70
82	2410-0210170	PIPING 3' HIGHER	CU 7.70
83	2410-0210170	PIPING 3' HIGHER	CU 7.70
84	2410-0210170	PIPING 3' HIGHER	CU 7.70
85	2410-0210170	PIPING 3' HIGHER	CU 7.70
86	2410-0210170	PIPING 3' HIGHER	CU 7.70
87	2410-0210170	PIPING 3' HIGHER	CU 7.70
88	2410-0210170	PIPING 3' HIGHER	CU 7.70
89	2410-0210170	PIPING 3' HIGHER	CU 7.70
90	2410-0210170	PIPING 3' HIGHER	CU 7.70
91	2410-0210170	PIPING 3' HIGHER	CU 7.70
92	2410-0210170	PIPING 3' HIGHER	CU 7.70
93	2410-0210170	PIPING 3' HIGHER	CU 7.70
94	2410-0210170	PIPING 3' HIGHER	CU 7.70
95	2410-0210170	PIPING 3' HIGHER	CU 7.70
96	2410-0210170	PIPING 3' HIGHER	CU 7.70
97	2410-0210170	PIPING 3' HIGHER	CU 7.70
98	2410-0210170	PIPING 3' HIGHER	CU 7.70
99	2410-0210170	PIPING 3' HIGHER	CU 7.70
100	2410-0210170	PIPING 3' HIGHER	CU 7.70

ESTIMATE REFERENCE INFORMATION			
ITEM NO.	ITEM CODE	DESCRIPTION	REMARKS
11	2407-0242120	BARMS, PRETENSIONED PRESTRESSING LUGS/LIPS, BT005	Includes pre and posttensioning material.
12	2407-0242120	BARMS, PRETENSIONED PRESTRESSING LUGS/LIPS, BT005	Includes pre and posttensioning material.
13	2407-0242120	BARMS, PRETENSIONED PRESTRESSING LUGS/LIPS, BT005	Includes pre and posttensioning material.
14	2407-0242120	BARMS, PRETENSIONED PRESTRESSING LUGS/LIPS, BT005	Includes pre and posttensioning material.
15	2407-0242120	BARMS, PRETENSIONED PRESTRESSING LUGS/LIPS, BT005	Includes pre and posttensioning material.
16	2414-0421100	CONCRETE BARRIER RAIL, 2' 6"	Includes material and labor associated with processing and installing the right steel curb, without bearing fillets.
17	2413-0001100	CONCRETE GRADUATED SHAFT, 48 IN. DIAMETER	Includes material and labor associated with processing and installing the right steel curb, without bearing fillets.
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ESTIMATE REFERENCE INFORMATION			
ITEM NO.	ITEM CODE	ITEM	UNIT
1	2104-2710020	EXCAVATION, CLASS 10 CHANNEL	CU 2.500
2	2804-0750001	REINFORCING, AS PER PLAN	LS 1
3	2802-2710000	EXCAVATION, CLASS 10	CU 500
4	2402-2712000	EXCAVATION, CLASS 22	CU 807
5	2802-2722000	EXCAVATION, CLASS 22	CU 413
6	2402-2000100	STRUCTURAL CONCRETE (SHOULDER)	CU 2,510.00
7	2802-2000210	HIGH PERFORMANCE STRUCTURAL CONCRETE	CU 1,124

17. Any bid items added by addendum or plan revision (later) should be added manually in the CAD file.