

WisDOT Construction e-Finals Guidance

Overview

e-Finals are being implemented by WisDOT in partnership with the FHWA e-Construction initiative. The definition of FHWA e-Construction initiative is:

“The collection, review, approval, and distribution of highway construction contract documents in a paperless environment.

- Electronically capturing construction data
- Electronic submission of all construction documentation
- Increased use of mobile devices
- Increased automation of document review & approval
- Essential use of electronic signatures by all parties throughout the process
- Secure document and workflow management accessible to all stakeholders on any device”

For more information: <https://www.fhwa.dot.gov/construction/econstruction/>

WisDOT has taken many steps in working toward paperless construction final records.

Wisconsin’s Records Retention/Disposition Authorization (RDA) for Highway Construction Projects has been updated to accommodate e-Finals. Refer to [Highway Construction Projects RDA](#) for details.

Construction project files are stored electronically in Box utilizing a consistent folder structure. Refer to [Statewide Box Construction Folder Guidance](#).

Construction project records will follow a statewide form/checklist for consistent file naming and file location in Box. Refer to [DT2075 - Final Construction Project Record Checklist](#).

Construction staff administer projects using the AASHTOWare Project (AWP) web-based application. Detailed documentation, training videos, and a frequently asked questions section are provided on a website for consistent data entry and use of the AWP application. Refer to [WisDOT AASHTOWare Project Knowledge Base \(AWPKB\)](#).

This document provides guidance on item source documentation, materials documentation, and as-built documentation for further statewide consistency of e-Finals.

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Item Source Documentation

Source documents include spreadsheets, tickets, CADD files, or other supporting documents such as computation sheets, field book pages, plan sheets, QMP Summary Reports, Change Orders, etc. that include information in which item measurement for payment is based upon. Source documents are to be stored electronically in the project Box folder under ItemSourceDocs and the appropriate subfolder.

Data Collection

Item measurements should be directly entered into AWP, Mobile Inspector, or electronic spreadsheets whenever possible to obtain the efficiencies desired under the e-Finals initiative.

Handwritten measurements may be made in field books or on hardcopy spreadsheets. These measurements must be transferred into electronic spreadsheets. The information entered in the electronic spreadsheet must be verified by an independent person to have been transferred correctly. After verification, the paper copy can either be destroyed or can be scanned/saved to PDF as supporting documentation.

Handwritten sketches or electronic diagrams with measurements must be scanned/saved to PDF as supporting documentation. Once the digital copy is verified as a complete and legible copy of the paper version, the paper copy can be destroyed.

Naming Convention

Source documents are to be organized and named numerically by bid item number or contract item line number.

Examples:

Bid Item: 201.0105 Clearing

- 201.0105-SUM, 201.0105-1, 201.0105-1A, 201.0105-2

Contract Item Line Number: 0140

- 0140.SUM, 0140.01, 0140.02, 0140.02-A, 0140.02-B

Contracts with multiple project ids and/or categories may be organized in additional folders and/or named with those identifiers.

Examples:

Project 4075-39-71 Category 0010, 0020

Project 4075-39-72 Category 0010

- Last two digits of Project ID_Category_Bid Item Number-Page Number
71_0010_201.0105-1, 71_0020_201.0105-1, 72_0010_201.0105-1
- Contract Item Line Number.Category.Last two digits of Project ID.Page Number
0140.0010.71.01, 0140.0020.71.01, 0140.0010.72.01

Check with your WisDOT Project Manager or Region Construction QA Engineer if you have questions on which naming convention to use.

Spreadsheets

Box Location: ItemSourceDocs\Spreadsheets

Spreadsheets used as source documents must be Pantry spreadsheets. Refer to AWPKB for the most up-to-date Pantry sheets (<https://awpkb.dot.wi.gov/Content/constr/Pantry/StatewideXLS.htm>). Summary sheets used should be Sum.xlsx from this list.

Spreadsheet Remarks for Measurements:

For measurements entered directly in the electronic spreadsheet, type “Measured by *Initials*” or “Field Verified by *Initials*” in the Remarks column.

For measurements transferred from a handwritten spreadsheet or field book, type “Transferred Measurement from *Initials*” in the Remarks column.

Spreadsheet Remarks for Supporting Documentation:

For spreadsheet entries with supporting documentation (PDFs of handwritten spreadsheets, computation sheets, field book pages, plan sheets with measurements, CADD drawings/output tables, QMP Summary Reports, etc.), type “See XXX.XXXX-XA” in the Remarks column. The supporting documentation PDF should contain “Measured by *Initials*” or “Field Verified by *Initials*,” as well as the supporting document name/number.

Spreadsheet Remarks for Tickets:

For spreadsheet entries from tickets, type “See Paper Tickets Dated XX/XX/XX” or “See e-Tickets XXX.XXXX-XA” in the Remarks column.

Spreadsheet Examples:

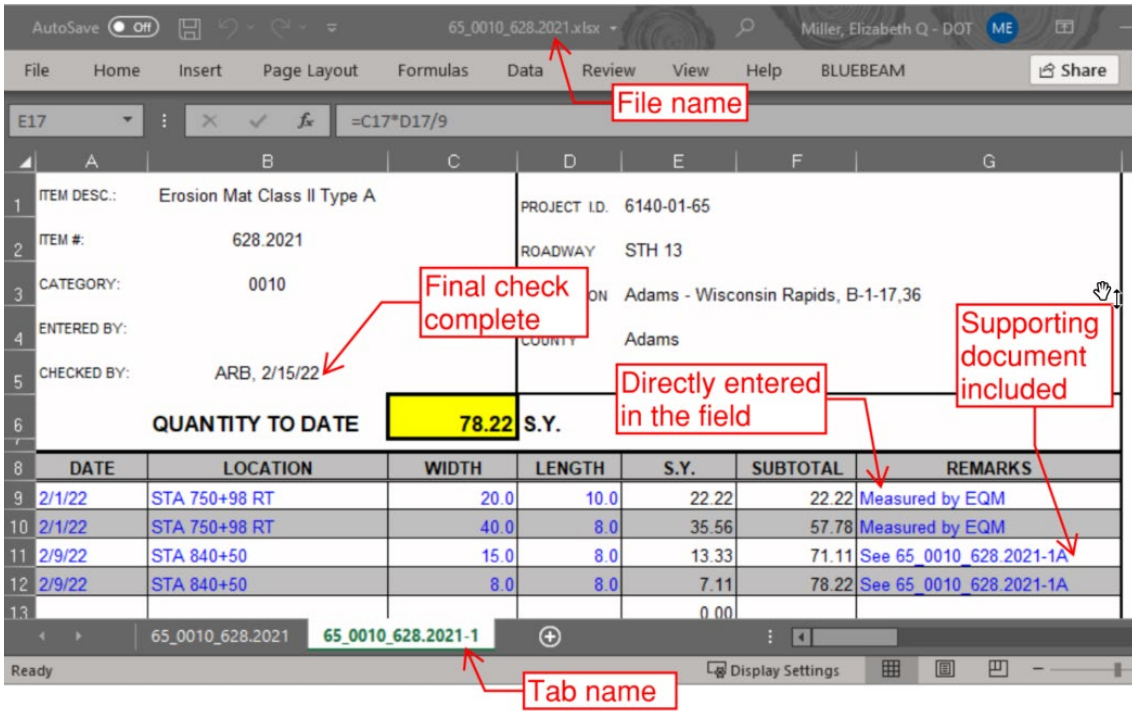
The screenshot shows an Excel spreadsheet with the following data:

DATE	LOCATION	SY	SUBTOTAL	REMARKS	
2/1 - 2/9	Project Wide		78.22	78.22	See Page 65_0010_628.2021-1
TOTALS:			78.22		

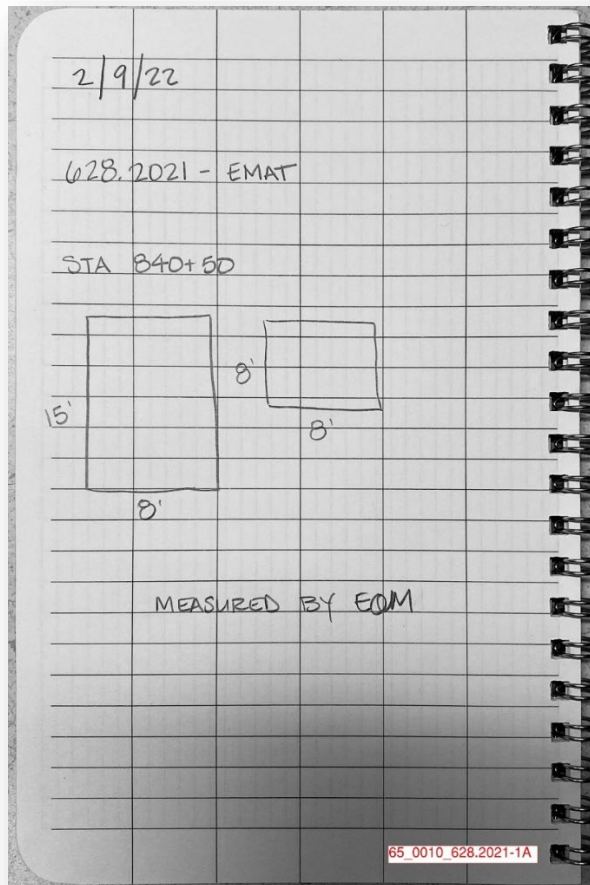
Annotations in the image include:

- File name:** Points to the title bar of the Excel window.
- Final check complete:** Points to the 'SY' column header.
- Tab name:** Points to the tab name '65_0010_628.2021' at the bottom of the spreadsheet.
- Supporting Document:** Points to the 'REMARKS' column.

Pantry Summary Sheet



Supporting Pantry Spreadsheet with Appropriate Naming Conventions and References



Supporting Documentation; Handwritten and Scanned to PDF

Tickets

Box Location: ItemSourceDocs\Tickets

Load tickets submitted by the contractor may be used for source documentation in one of the following methods:

e-Tickets:

- Save the PDF of individual tickets, PDF summary report of tickets, and/or CSV file in the project Box folder. A Pantry spreadsheet is not necessary with these types of ticket source documents.

Hardcopy tickets:

- enter them into a Pantry spreadsheet and keep the paper tickets in the final records box/accordion folder, OR
- scan them to PDF and save in the project Box folder. The paper tickets may be destroyed once the digital copy is verified to be a complete and legible copy of the original tickets.

Ticket Examples:

Tickets Report							
Ticket	Plant	Asset	Vendor	Product	Date	Loaded	Qty (Ton)
Walbec Northeast Asphalt							
CTH A (CTH V-E) Gibraltar #17							
263	37023	119663-14735	119663	3 LT 19MM	4/23/2021	08:58 AM	24.01
262	37023	119663-13432	119663	3 LT 19MM	4/23/2021	08:55 AM	22.82
261	37023	119663-16235	119663	3 LT 19MM	4/23/2021	08:52 AM	24.27
260	37023	819988-16933	819988	3 LT 19MM	4/23/2021	08:44 AM	23.87
259	37023	816914-15862	816914	3 LT 19MM	4/23/2021	08:38 AM	23.84
258	37023	818062-15918	818062	3 LT 19MM	4/23/2021	08:35 AM	23.73
257	37023	479904-14738	479904	3 LT 19MM	4/23/2021	08:30 AM	23.93
256	37023	119663-11130	119663	3 LT 19MM	4/23/2021	08:26 AM	23.41
255	37023	119663-17077	119663	3 LT 19MM	4/23/2021	08:24 AM	24.59
254	37023	119663-10353	119663	3 LT 19MM	4/23/2021	08:16 AM	22.07
253	37023	119663-10726	119663	3 LT 19MM	4/23/2021	08:12 AM	25.61
252	37023	119663-10715	119663	3 LT 19MM	4/23/2021	08:09 AM	24.06
251	37023	119663-15932	119663	3 LT 19MM	4/23/2021	08:05 AM	24.57
3 LT 19MM 310.79 Ton Posted 4/26/21 KMV Item 460.5223 HMA Pavement 3 LT 58-28 S 0174.0010.71.37							

PDF Summary Report of Tickets Provided by Contractor

ITEM DESC:	Base Aggregate Dense 3/4-Inch	PROJECT I.D:	5140-03-72
ITEM #:	305.0110	ROADWAY:	STH 27
CATEGORY:	0010	DESCRIPTION:	South Junction CTH P/Saugstad Road
ENTERED BY:	CMR	COUNTY:	Vernon
CHECKED BY:	AJN 8/10/21	See Paper Tickets Dated 6/18/21	
DATE PLACED:	6/18/21		
LOCATION:	Sidewalk STA 101+25 - 109+50 LT & RT	10 LOADS TODAY	
		217.10 TONS TODAY	
21.50	22.11	22.06	21.46
20.99	21.75	22.21	20.97

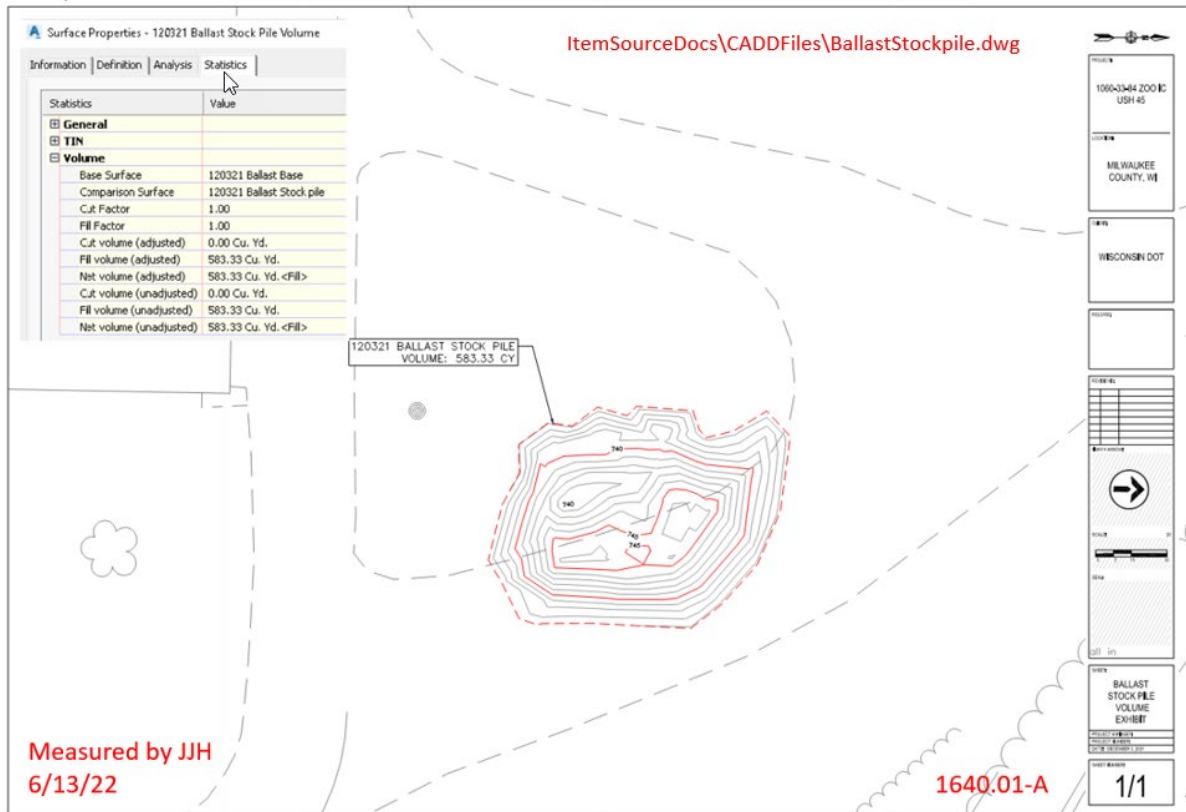
Spreadsheet for Hardcopy Tickets Retained

CADD Files

Box Location: ItemSourceDocs\CADDFiles

In addition to saving the DWG or DGN file in this folder, quantities that were surveyed need to include a PDF of the CADD drawing or printout of the CADD measurements in the project Box folder, because the actual CADD files are not able to be opened on some computers. The PDF shall list the file path of the DWG or DGN file.

CADD Example:



Referencing Source Documentation in Item Posting Remarks

There are several acceptable ways for posting items for payment estimates.

- **Direct Entry Postings:** Quantities may be posted directly into Daily Work Reports in AWP or Mobile Inspector without source documentation when the item requires no measurement or covers an entire project such as Lump Sum, Each, Month, Dollar items. Station Location may be entered in the posting as the specific location of the item quantity or as “Project Wide” if the item covers the entire project. Administrative items and other Dollar items added to the contract and posted as direct entry should also refer to the Change Order Number in which the payment is based on.

Postings				Disincentive IRI Ride, Item 804.4410			Unit: DOL	
DWR Date	Inspector	Seq No	Project	Category	Auth Quantity	Quantity Posted	Station Location	Remarks
10/26/2021	First.LastName	1	9180-31-60	0010	387.340	387.340	EB & WB Lanes STA 312+88 - 668+23	Direct Entry. Refer to CCO 8.

Postings								
Traffic Control, Item 643.5000 Unit: EACH								
DWR Date	Inspector	Seq No	Project	Category	Auth Quantity	Quantity Posted	Station Location	Remarks
7/1/2021	First.LastName	2	9180-31-60	0010	1.000	0.350	Set Project Detour & WB Lane Closure at C-42-793	Direct Entry
7/18/2021	First.LastName	2	9180-31-60	0010	1.000	0.300	STH 22/US 41 Roundabout Closures, Switched Lane Closure to EB at C-42-793	Direct Entry
8/1/2021	First.LastName	2	9180-31-60	0010	1.000	0.100	Removed C-42-793 EB Lane Closure	Direct Entry
8/18/2021	First.LastName	2	9180-31-60	0010	1.000	0.250	Removed Project Detour	Direct Entry, Final Post

Other Each or Linear Foot items may also be posted as direct entry if no calculation is needed, and sufficient location and measurement information is given within the posting. This option is only acceptable for single continuous measurements that are individually posted directly into a Daily Work Report on a mobile device.

Postings								
Apron Endwalls for Culvert Pipe Reinforced Concrete 24-Inch, Item 522.1024 Unit: EACH								
DWR Date	Inspector	Seq No	Project	Category	Auth Quantity	Quantity Posted	Station Location	Remarks
7/1/2021	First.LastName	2	9180-31-60	0010	6.000	1.000	STA 520+86, 24' RT	Direct Entry
7/18/2021	First.LastName	2	9180-31-60	0010	6.000	1.000	STA 520+86, 24' LT	Direct Entry

Postings								
Storm Sewer Pipe Reinforced Concrete Class III 12-Inch, Item 608.0312 Unit: LF								
DWR Date	Inspector	Seq No	Project	Category	Auth Quantity	Quantity Posted	Station Location	Remarks
7/18/2021	First.LastName	2	9180-31-60	0010	165.000	10.000	MH 12.0 to INL 12.1	Direct Entry
10/25/2021	First.LastName	1	9180-31-60	0010	165.000	26.000	MH 12.0 to INL 12.2	Direct Entry

- **Referenced Intermediate Postings:** Quantities may be posted with remarks referring to individual source documents as the project progresses. Once a source document has been referenced, revisions made to quantities shall be clearly shown on the source document and posted as a correction.

Postings								
DWR Date	Inspector	Seq No	Project	Category	Auth Quantity	Quantity Posted	Station Location	Remarks
7/1/2021	First.LastName	2	9180-31-60	0010	4,165.000	1,984.000	STA 392+04 - 412+67	See ItemSourceDocs \Spreadsheets\649.0150-1
7/18/2021	First.LastName	2	9180-31-60	0010	4,165.000	354.000	STA 400+22 - 404+47	See ItemSourceDocs \Spreadsheets\649.0150-2
10/25/2021	First.LastName	1	9180-31-60	0010	4,165.000	1,960.500	STA 392+04 - 412+67	See ItemSourceDocs \Spreadsheets\649.0150-3

- **Correction Postings:** Errors in posted quantities or source document references must be corrected.
 - Quantity error: Post +/- quantity and refer to the source document that shows the quantity correction.

Postings									
DWR Date	Inspector	Seq No	Project	Category	Auth Quantity	Quantity Posted	Station Location	Remarks	
7/1/2021	First.LastName	2	9180-31-60	0010	80.000	76.000	STA 325+10 - 325+25 LT	See ItemSourceDocs\Spreadsheets\204.0155-1	
7/18/2021	First.LastName	2	9180-31-60	0010	80.000	-1.000	STA 325+10 - 325+25 LT	Quantity correction for posting by FXL on 7/1/21. See ItemSourceDocs\Spreadsheets\204.0155-1	

- Source document reference error: Post zero quantity with Station Location N/A and refer to the correct source document.

Postings									
DWR Date	Inspector	Seq No	Project	Category	Auth Quantity	Quantity Posted	Station Location	Remarks	
7/1/2021	First.LastName	2	9180-31-60	0010	500.000	92.000	NE quadrant STH 22 & Cross Rd	See ItemSourceDocs\Spreadsheets\601.045-1	
7/18/2021	First.LastName	2	9180-31-60	0010	500.000	0.000	N/A	Reference correction for posting by FXL on 7/1/21. See ItemSourceDocs\Spreadsheets\601.0405-1	
7/18/2021	First.LastName	2	9180-31-60	0010	500.000	96.500	SE quadrant STH 22 & Cross Rd	See ItemSourceDocs\Spreadsheets\601.0405-2	

- **Tentative Intermediate Postings:** Quantities may be posted as tentative as the project progresses and only reference the source documentation in a final posting. These types of intermediate postings will no longer be referenced to as “Estimate Only.”

Examples of acceptable intermediate posting remarks:

- “Tentative Qty Based on Load Counts”
- “Tentative Qty Based on Tickets”
- “Tentative Qty Based on Plan Qty”
- “Tentative Qty Based on Measurements”

- **Reconciled Final Postings:** After quantity checks have been made, any tentative quantities must be reconciled. The following methods are acceptable:

- Clean Slate Quantity Posting: To negate intermediate quantities posted as tentative, post a negative quantity for the amount of all previously paid tentative quantities, and also post the total final quantity and reference the source document in the posting remarks.

Example posting remarks: “Delete all tentative quantities posted to date” and
“Final Qty. See ItemSouceDocs\Spreadsheets\XXX.XXXX-SUM”

Postings									
DWR Date	Inspector	Seq No	Project	Category	Auth Quantity	Quantity Posted	Station Location	Remarks	
7/1/2021	First.LastName	2	9180-31-60	0010	971.000	125.000	STA 640+53 LT	Tentative Qty Based on Load Counts	
7/18/2021	First.LastName	2	9180-31-60	0010	971.000	775.000	STA 433+24 LT & RT, 520+86 LT, 621+70 LT	Tentative Qty Based on Load Counts	
9/6/2021	First.LastName	1	9180-31-60	0010	971.000	373.000	STA520+ 86 RT, 621+70 RT, 640+53 RT	Tentative Qty Based on Load Counts	
10/25/2021	First.LastName	1	9180-31-60	0010	971.000	-1,273.000	Various	Delete all tentative quantities posted to date	
10/25/2021	First.LastName	1	9180-31-60	0010	971.000	1,364.000	STA 433+24, 520+86, 621+70, 640+53	Final Qty. See ItemSourceDocs\Spreadsheets\0018.SUM	

- Zero Quantity Posting: If all intermediate quantities posted as tentative are accurate and the total matches the quantity paid to date, post a zero quantity with Station Location N/A and reference the source document in the posting remarks.
Example posting remark: "See ItemSouceDocs\Spreadsheets\XXX.XXXX-SUM for Final Qty"

Postings								
DWR Date	Inspector	Seq No	Project	Category	Auth Quantity	Quantity Posted	Station Location	Remarks
8/1/2021	First.LastName	2	9180-31-60	0010	16,665.000	8,743.260	STA 312+88 - 668+23 NB	Tentative Qty Based on Tickets
9/13/2021	First.LastName	1	9180-31-60	0010	16,665.000	8,904.680	STA 312+88 - 668+23 SB	Tentative Qty Based on Tickets
10/25/2021	First.LastName	1	9180-31-60	0010	16,665.000	0.000	N/A	See ItemSourceDocs \Spreadsheets\460.5224-SUM for Final Qty

- Last Quantity Posting: If there is a +/- beyond the intermediate quantities posted as tentative, post an entry of the last quantity and reference the source document in the posting remarks.
Example posting remark: "Final post. See ItemSouceDocs\Spreadsheets\XXX.XXXX-SUM"

Postings								
DWR Date	Inspector	Seq No	Project	Category	Auth Quantity	Quantity Posted	Station Location	Remarks
7/18/2021	First.LastName	2	9180-31-60	0020	40.000	40.000	C-42-793 STA 621+70 LT & RT	Tentative Qty Based on Plan Qty
8/18/2021	First.LastName	2	9180-31-60	0020	40.000	2.500	C-42-793 STA 621+70 LT & RT	Final Post. See ItemSourceDocs \Spreadsheets\0094.SUM

Review of Source Documents

All source documents must be checked by an independent person for accuracy of data entry, computations, and page referencing. There must be evidence this occurred. Typing "Initials Date" in the Checked By cell of a spreadsheet or inserting a comment box with "Checked by Initials Date" in a PDF is acceptable. Once a source document has been checked, no additional edits shall be made.

ITEM:	Drilled Tie Bars	PROJECT I.D.	1003-10-80
ITEM #:	416.0610	ROADWAY	IH 39
CATEGORY:	1000	DESCRIPTION	Illinois State Line - Madison; IH 43 Interchange Core
ENTERED BY:	LAB	COUNTY	Rock
CHECKED BY:	ARB 2/15/22		

Source documents shall remain in the ItemSourceDocs folder in Excel format and may also be saved/printed to a PDF. Check with your WisDOT Project Manager or Region Construction QA Engineer for the acceptable format and process.

Verification of Final Item Documentation

The Item History to Date Report from AWP is the executive summary of item source documentation. Each item should be reviewed to verify the final quantity paid to date and all posting remarks match the source documentation. Explanations of variation for items with quantities that are >=5% over or under an authorized quantity should be entered in the Comments field. Entering "All postings checked as of MM/DD/YY Initials" in the Comments field and marking an item complete is the final step of verifying item

documentation. Refer to the Reviewing and Marking Items Complete section in AWPKB (<https://awpkb.dot.wi.gov/Content/constr/LETContract/ContractFinals/ItemReview.htm>).

Verified Item History to Date Report Example:

Contract: 20201110026, Oconto Falls-Oconto; Ush 141-Ush 41									
Item Description: Rubberized Membrane Waterproofing									
Suppl. Description:									
Item ID: 516.0500	Current Quantity: 28.000	Current Extended Amount: \$1,148.00							
Cont. Line: 0070	Bid Quantity: 28.000	Bid Extended Amount: \$1,148.00							
Unit: SY	Pending Change Order Quantity: 0.000	Pending Change Order Amount: \$0.00							
Unit Price: \$41.00	Quantity Posted to Date: 19.000	Amount Posted to Date: \$779.00							
Type: Original	Quantity Paid to Date: 19.000	Amount Paid to Date: \$779.00							
Item Completed: Yes	Quantity Unpaid: 0.000	Amount Unpaid: \$0.00							
	Quantity Variation: -9.000	Variation Amount: -\$369.00							
Comments: The contractor elected to pour the walls and the top slab of the structure extensions in one pour. This eliminated an anticipated construction joint and negated the need for membrane at the would be joint between the top of the wall and the top slab.									
All posting checked as of 10-29-21, LTH.									
Projects and Categories									
Project	Project Description	Category	Category Description	Proj Line	Bid Qty	Approved Qty	Pending Changes	Qty Posted to Date	Qty Paid to Date
9180-31-60	Oconto Falls-Oconto; Ush 141-Ush 41	0020	C-42-0793	0200	28.000	28.000	0.00	19.000	19.000
Postings									
DWR Date	Inspector	Seq No	Project	Category	Auth Quantity	Quantity Posted	Station Location	Remarks	
7/18/2021	First.LastName	2	9180-31-60	0020	28.000	9.000	C-42-793 Discharge STA 402+71 RT	Tentative Qty Based on Measurements	
8/1/2021	First.LastName	2	9180-31-60	0020	28.000	10.000	C-42-793 Inlet STA 402+71 LT	Tentative Qty Based on Measurements	
10/25/2021	First.LastName	1	9180-31-60	0020	28.000	0.000	N/A	Final Qty. See ItemSourceDocs \Spreadsheets \516.0500 RubberizedMembrane	

Materials Documentation

Materials documents are to be stored electronically in the project Box folder under Materials\FinalMaterialsArchive and Materials\MaterialsProjectRecords.

Refer to CMM 845.5, Materials Documentation Location Guide for additional guidance. <https://wisconsin.gov/rdwy/cmm/cm-08-45.pdf>

As-Built Documentation

As-Built Plans are to be submitted electronically in the project Box folder under Plan\Asbuilt.

Refer to CMM 165.12 for guidance. <https://wisconsin.gov/rdwy/cmm/cm-01-65.pdf>