



Wisconsin Department of Transportation

May 8, 2026

Division of Transportation Systems Development

Bureau of Project Development
4822 Madison Yards Way, 4th Floor South
Madison, WI 53705

Telephone: (608) 266-1631
Facsimile (FAX): (608) 266-8459

NOTICE TO ALL CONTRACTORS:

Proposal #12: 6110-26-70
Wisconsin St, C Oshkosh
Fox River Bridge B-70-0247
STH 44
Winnebago County

Letting of May 8, 2026

This is Addendum No. 02, which provides for the following:

Special Provisions:

Revised Special Provisions	
Article No.	Description
26	Balance Bascule Bridge Leaves, Item SPV.0060.05

Schedule of Items:

Added Bid Item Quantities					
Bid Item	Item Description	Unit	Proposal Total Prior to Addendum	Quantity Added	Proposal Total After Addendum
SPV.0060.05	Balance Bascule Bridge Leaves	Each	1	1	1

The responsibility for notifying potential subcontractors and suppliers of these changes remains with the prime contractor.

Sincerely,

Mike Coleman

Proposal Development Specialist
Proposal Management Section

ADDENDUM NO. 02

6110-26-70

May 8, 2026

Special Provisions

26. Balance Bascule Bridge Leaves, Item SPV.0060.05.

A Description

This special provision describes preparing counterweight calculations for span-balance, balancing both bascule leaves, and balance-testing the leaves to ensure compliance with the design criteria listed on the plans and elsewhere herein. Included is all work required to provide the required balance condition for each bascule leaf after completion of all rehabilitation work on them. This includes placing, removing, or adjusting the location of balance plates and blocks.

The work includes performing balance testing prior to removal of existing bridge elements and after completing the bridge rehabilitation (initial and final as described below) using the dynamic hydraulic cylinder pressure measurements technique as described herein, the calculation and documentation of the span balance procedure and methods, measurement of the imbalance moment and determination of the location of the leaf center of gravity a minimum of three times as described below.

Take full responsibility for the correctness of balancing calculations and placement or adjustment of blocks and plates so that when completed the bridge will be in proper balance.

B Materials

Provide all necessary materials and equipment required to perform balance calculations, span balance adjustments and span balance measurement as described below.

Additional balance blocks are available at other bridges in the Northeast Region if needed. Work with WisDOT to coordinate pick-up or delivery of additional balance blocks.

C Construction

C.1 General

Perform all work according to the AASHTO LRFD Movable Highway Bridge Design Specifications, including interims.

Provide all necessary temporary shoring, supports and/or temporary balance material as required to ensure stability of the bascule leaves during the performing of all rehabilitation work on them. Coordinate work such that the bascule leaves are never in an unbalance condition that may be detrimental in any way to the structure, electrical/mechanical components, or the safety of the public and construction personnel.

C.2 Calculations

Prepare balance calculations prior to fabrication and construction based on approved shop drawings and material tests. Submit calculations to the engineer for review and approval. To permit timely and effective reviews of submitted balance calculations by the engineer, prepare them by grouping material and computing subtotals as directed by the engineer. A professional engineer licensed in the State of Wisconsin shall prepare the balance calculations.

Compute the quantity and location of required steel plates and concrete balance blocks to be added, removed and/or adjusted within the counterweight pockets and rear of counterweight based on the specified balance requirements and the weight and center of gravity of each bascule leaf. Base balance calculations on actual weights of approved shop details for material to be added to each leaf. Show the weights for new work on the shop drawings for each component. Accurately compute the weight accounting for all material, weld fillets, bolt heads, washers, nuts, paint, galvanizing, normal overruns on plate thickness, etc. Obtain actual scale weights of representative samples of existing major components to be removed and new

components to be added to the bascule leaves to most accurately depict these in calculations. This includes existing and new steel grid decks, and existing and new steel members.

Develop proposed summary balance tables and show them on the shop drawings. Develop summary tables for all phases of the balance and the proposed imbalances. Account for temporary balance material, if used, in the summary tables. Submit all summary tables and back-up materials for review by the engineer. Prepare a narrative of proposed construction phasing for rehabilitation of the bascule leaves. Include in the narrative a summary of the amount of bascule leaf imbalance during each proposed work phase.

Update the balance calculations and summary tables throughout construction and submit to the engineer periodically as required to meet the requirements in these special provisions and in the plans.

Review of the balance calculations, counterweight details, and quantity and location of balance material does not relieve the contractor of the requirement to make changes to the counterweights and adding or removing additional balance blocks as required to balance each leaf. Submit all changes for approval.

C.3 Making Adjustments to Span Balance

Add or remove the required number of steel plates and concrete blocks to or from the counterweight pockets or back of counterweight as shown on the plans. Perform steel plate removals first and perform test openings in the presence of the Engineer. Do not perform counterweight block adjustments until approval is given by the Engineer. An approximate potential number of steel plates and concrete blocks to be placed or removed in each of the counterweight pockets and attached or removed to the counterweight based on assumed and theoretical weights of components to be added and removed from each of the bascule leaves is provided in the plans for order of magnitude reference only. Base the actual number of blocks and plates to be added, removed, reinstalled, or relocated on span balance calculations and span balance testing.

Excess Blocks and Plates - Balance blocks removed from the counterweight and not used to balance the bridge are the property of the Department. Move excess balance blocks to storage on site as directed by the Engineer. Steel plates removed from the back of the counterweight and not used to balance the bridge are the property of the Department. Deliver excess steel plates to a location in the Northeast Region at the Department's direction.

C.4 Measurement of Span Balance

This item includes measurement of the imbalance moment and determination of the location of the leaf center of gravity a minimum of three times as follows for each leaf:

Pre Rehabilitation – Test the span balance prior to removal of existing bridge elements, to determine the existing balance condition prior to bridge rehabilitation. Use the results of this test to prepare balance calculations for each leaf.

Initial – Test the span balance after leaf rehabilitation is completed including changes to balance plates and blocks based on submitted span balance computations, to determine the balance condition and to determine any required additional adjustments by adding, removing, reinstalling, or relocating balance blocks or plates. Prior to performing initial balance testing, submit balance calculations and summary tables to the engineer for review. Subsequent to initial balance testing, compute the amount and location of weight adjustments required to achieve the final balance specified in the plans and as described herein and submit the computations to the engineer for review. After the engineer's review, make the approved adjustments.

Final – Test the span balance after balance block/plate adjustments, to determine if the revised imbalance is within the limits specified on the plans and as described herein. Perform leaf operation with the span drive machinery for final balance testing. If the second balance testing indicates that the revised imbalance is not within acceptable limits, perform further balance adjustments and balance measurements until the criteria specified on the plans and herein are met.

Measure the balance of each leaf of the movable span using the dynamic hydraulic cylinder pressure measurement technique. Furnish and install all equipment, materials, instruments, and labor necessary to determine the imbalance by these methods.

Employ the services of an established testing company experienced in dynamic hydraulic cylinder pressure measurement of movable bridge balance, subject to approval of the engineer. To demonstrate such experience, identify a minimum of six movable bridges, including at least three bascule bridges, for which the company has provided complete and satisfactory dynamic hydraulic cylinder pressure measurements and reporting. Make the measurements under the immediate direction of a professional engineer registered in the State of Wisconsin who has had hands-on-experience measuring movable span balance by the dynamic hydraulic cylinder pressure measurement procedure.

Furnish and install the required transducers, testing equipment, gauges, all cabling and transmission equipment, data acquisition equipment and strip chart recorders, and produce fully documented reports detailing the results of the measurements.

The following applies to the approved testing company: Submit the following items to the engineer for approval:

- Description of the procedure including type and method of installation of hydraulic pressure transducers, method of transmission of low level signals, data acquisition equipment and/or strip chart recorders
- Layout of span drive machinery showing proposed location of transducers, power supplies, cable or radio links, data acquisition equipment and all associated cabling.
- Wiring diagrams of interconnection of pressure transducers, power supplies, data acquisition equipment and strip chart recorders and sample computations of: hydraulic pressures to forces, span imbalance, curve fitting and basis for friction correction.

Connect 5000 pounds per square inch hydraulic pressure transducers to the blind and rod end test ports of both main hydraulic cylinders for a total of four transducers, per leaf. Use transducers with accuracies not less than 0.5 percent full-scale output. Use output voltage/current compatible with the data acquisition/strip chart recorder utilized. Use transducer power supply as recommended by the manufacturer.

Connect output leads from each transducer to either the computer-based data logger streaming the data to disk at a minimum 1000 hertz sample rate or a five channel minimum strip chart recorder with at least 10 inch wide chart paper. Provide an inclinometer to record continuous leaf angle to either the data logging equipment or the strip chart recorder. Use an adjustable chart speed with a setting of at least 10 inches per minute. Use a recorder capable of recording data from at least four channels if it is equipped with a dedicated event marker or five channels if a channel is used to record events.

Record simultaneously the blind and rod end pressures of both main hydraulic cylinders versus span opening angle to a suitable scale. Use the same scale and the chart speed for all transducers, if a strip chart recorder is used. Make at least three opening/closing runs, when the wind speed is less than five miles per hour and the bridge deck is visibly dry. Prior to taking measurements ensure that all air is bled from the system.

Convert cylinder pressures to force by applying fundamental hydraulic system relationship calculations for each plot for both opening and closing. Use the constant velocity region. Process the data to give leaf imbalance (kip-feet) versus opening angle, corrected for friction, about the center of roll. Prepare plots of total span imbalance.

Submit one copy of the report documenting the results of the dynamic hydraulic cylinder pressure measurements electronically. Separate reports are required for each leaf. Report the following:

Description of procedure and equipment used.

- Scans of a sample original strip chart for one complete run of each of the three sets in the case of strip chart recordings or data and chart files in Excel format if recorded by a data logger. They must be annotated with pressure scales, angle of opening, significant ordinates, etc.
- Description of relationships and sample calculations for obtaining force from pressure, span imbalance, curve fitting and basis for friction correction.
- Plots of the following parameters versus degree of opening during each opening/closing run and fitted balance curves corrected for friction:
 1. Individual cylinder imbalance moment
 2. Total imbalance (kip-feet) for each leaf
 3. Frictional moment (kip-feet) for each leaf.
- Tabulation of imbalance moment at seated position for each leaf/run including the average value for each leaf.
- The location of the leaf center of gravity

After final balance plate/block adjustment, submit one copy of the final report similar to the initial report electronically. Include an introductory section giving the name of the bridge, the date of the measurements, weather conditions during measurements and any other information requested by the Engineer.

Final balancing will be subject to the approval of the Engineer. All necessary adjustment and materials which may be required will be considered as part of the work.

C.5 Bascule Leaf Balance Acceptance Criteria

The final acceptable balance condition measured by the procedures described herein will be considered acceptable when the following conditions are met:

- There is a downward reaction at the tip of each bascule leaf (tip heavy) when in the closed position of no less than 2,000 pounds and no greater than 3,000 pounds.
- The composite center of gravity of each bascule leaf including its counterweight is between negative 20 degrees and positive 20 degrees from a horizontal line extending from the Center of Roll.
- Each leaf tends to drift closed at any angle of opening.

D Measurement

The department will measure Balance Bascule Bridge Leaves by each unit, acceptably completed.

E Payment

The department will pay for measured quantities at the contract unit price under the following bid item:

ITEM NUMBER	DESCRIPTION	UNIT
SPV. 0060.04	Balance Bascule Bridge Leaves	EACH

Payment is full compensation for all analyses, testing, professional engineer services and all other balance work described herein or shown on the plans; and transporting installing, removing, reinstalling, and/or adjusting the location of balance blocks or plates as many times as necessary to achieve an accepted final balance for both bascule bridge leaves.

Schedule of Items

Attached, dated May 8, 2026, are the revised Schedule of Items Page 2.

END OF ADDENDUM



Proposal Schedule of Items

Proposal ID: 20260512012 Project(s): 6110-26-70

Federal ID(s): N/A

SECTION: 0001 Contract Items

Alt Set ID: Alt Mbr ID:

Proposal Line Number	Item ID Description	Approximate Quantity and Units	Unit Price	Bid Amount
0032	643.1220 Traffic Control Connected Work Zone Start and End Location Markers	128.000 DAY	_____.	_____.
0034	643.3180 Temporary Marking Line Removable Tape 6-Inch	625.000 LF	_____.	_____.
0036	643.5000 Traffic Control	1.000 EACH	_____.	_____.
0038	644.1810 Temporary Pedestrian Barricade	204.000 LF	_____.	_____.
0040	644.1900.S Temporary Audible Message Devices	1,011.000 DAY	_____.	_____.
0042	646.2020 Marking Line Epoxy 6-Inch	625.000 LF	_____.	_____.
0044	646.9000 Marking Removal Line 4-Inch	625.000 LF	_____.	_____.
0046	SPV.0060 Special 01. Removing and Reinstall Camera Assembly	2.000 EACH	_____.	_____.
0048	SPV.0060 Special 02. Traffic Gate Replacement	4.000 EACH	_____.	_____.
0050	SPV.0060 Special 03. Traffic Gate Electrical Work	4.000 EACH	_____.	_____.
0052	SPV.0060 Special 04. Anchor Assemblies for Traffic Gates	4.000 EACH	_____.	_____.
0054	SPV.0060 Special 05. Balance Bascule Bridge Leaves	1.000 EACH	_____.	_____.
Section: 0001			Total:	_____.
			Total Bid:	_____.