Wisconsin Department of Transportation

Division of Transportation Systems Development
Bureau of Project Development 4802 Sheboygan Avenue, Rm 601 P O Box 7916
Madison, WI 53707-7916
Telephone:
(608) 266-1631

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## NOTICE TO ALL CONTRACTORS:

Proposal \#21: 4996-01-58, WISC 2015144
Taylor Drive, City of Sheboygan
Kohler Memorial Dr - Crocker Ave
Local Street
Sheboygan County

## Letting of November 10, 2015

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

| Revised Special Provisions |  |
| :---: | :--- |
| Article <br> No. | Description |
| 4 | Traffic |
| 38 | Prefabricated Steel Truss Bridge B-59-188 LRFD, Item SPV.0105.07 |
| 39 | Prefabricated Steel Truss Bridge B-59-189 LRFD, Item SPV.0105.08 |

## Schedule of Items

| Revised Bid Item Quantities |  |  |  |  |  |
| :---: | :--- | :---: | :---: | :---: | :---: |
| Bid Item | Item Description | Unit | Old <br> Quantity | Revised <br> Quantity | Proposal <br> Total |
| 643.0300 | Traffic Control Drums | DAYS | 34920 | 700 | 35620 |
| 643.0420 | Traffic Control Barricades Type III | DAYS | 2820 | 70 | 2890 |
| 643.0705 | Traffic Control Warning Lights Type A | DAYS | 5640 | 112 | 5752 |
| 643.0715 | Traffic Control Warning Lights Type C | DAYS | 6700 | 140 | 6840 |
| 643.0900 | Traffic Control Signs | DAYS | 6320 | 350 | 6670 |
| 649.0300 | Temporary Pavement Marking Reflective <br> Tape 4-Inch | LF | 7380 | 7000 | 14380 |
| 652.0225 | Conduit Rigid Non-Metallic Schedule 40, 2- <br> Inch | LF | 350 | 8327 | 8677 |
| 655.0610 | Electrical Wire Lighting 12 AWG | LF | 8921 | -5171 | 3750 |
| 655.0615 | Electrical Wire Lighting 10 AWG | LF | 13372 | 1372 | 14744 |
| 655.0620 | Electrical Wire Lighting 8 AWG | LF | 6264 | 3754 | 10018 |


| Added Bid Item Quantities |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Bid Item | Item Description | Unit | Old <br> Quantity | Revised <br> Quantity | Proposal <br> Total |
| 643.0500 | Traffic control Flexible Tubular Marker Posts | EACH | 0 | 40 | 40 |
| 643.0600 | Traffic control Flexible Tubular Marker Bases | EACH | 0 | 40 | 40 |


| Deleted Bid Item Quantities |  |  |  |  |  |
| :---: | :--- | :---: | :---: | :---: | :---: |
| Bid Item | Item Description | Unit | Old <br> Quantity | Revised <br> Quantity | Proposal <br> Total |
| 652.0215 | Conduit Rigid Non-Metallic Schedule 40, 11/4- <br> Inch | LF | 8327 | -8327 | 0 |

Plan Sheets

| Revised Plan Sheets |  |
| :---: | :--- |
| Plan <br> Sheet | Plan Sheet Title (brief description of changes to sheet) |
| $59-66$ | Lighting Plans (changed ground wire size) |
| 119 | Miscellaneous Quantities (changed traffic control items) |
| 121 | Miscellaneous Quantities (changed conduit size from 1 $1 / 4$-inch to 2-inch, and ground wire <br> size) |
| 123 | Miscellaneous Quantities (noted additional quantity shown elsewhere for 2-inch conduit) |


| Added Plan Sheets |  |
| :---: | :---: |
| Plan <br> Sheet | Plan Sheet Title (brief description of changes to sheet) |
| 96A-96C | Traffic Control Bridge Erection Stage (3 sheets) |
| 218A | SDD15D6-3 Traffic Control, Two Lane Two Way Operation |

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

4996-01-58
November 3, 2015

## Special Provisions

## 4. Traffic

## Add the following:

## Bridge Erection:

All northbound Traffic will be shifted to the east southbound lane between University Avenue and New Jersey Avenue for the erection of the prefabricated truss bridges B-59-188 and B-59-189. The traffic can be shifted for no more than two consecutive calendar weeks.

The traffic signals at Indiana Avenue and New Jersey Avenue will be set to flashing red during the Bridge Erection traffic control stage. The City of Sheboygan will set the signals to flashing and restore the original setting. Contact Ryan Sazama at the City of Sheboygan Department of Public Works and Engineering, (920) 459-3485, at least 72 hours prior to the implementation of and at the completion of the Bridge Erection Traffic Control Stage.

The contractor will coordinate the traffic control during the Bridge Erection Stage with all other traffic control stages for the project.

## 38. Prefabricated Steel Truss Bridge B-59-188 LRFD, Item SPV.0105.07.

Replace entire article language with the following:

## A Description

Furnish a fully engineered, fabricated steel truss pedestrian bridge structure, including bearings, and transport and erect it as shown in the plans, according to Part 5 Structures of the standard specifications, and as hereinafter provided. These specifications shall be regarded as minimum standards for design and construction.

The steel rails, wood rub rail, and kickplate on the bridge are included with the Prefabricated Steel Truss Bridge.

## B Materials

## B. 1 Approved Manufacturers

The bridge shall be designed and manufactured by an approved designer and supplier selected from the department's approved products list.

To be eligible for this project, pre-fabricated bridges from other manufacturers must be pre-approved prior to the bid opening date. Applications for pre-approval may be submitted at any time. Prepare the application according to the department requirements. If needed, obtain information and assistance with the pre-approval process from the Structures Design Section in the Bureau of Structures, Room 601 of the Hill Farms State Transportation Building in Madison, or by calling (608) 266-8494.

## B. 2 Design Requirements

Structural design of the pedestrian bridge shall be by a professional engineer registered in the State of Wisconsin.

Design the bridge according to the most recent edition of the AASHTO LRFD Bridge Design Specifications, all current interims, and the AASHTO LRFD Guide Specifications for Design of Pedestrian Bridges, except as modified herein.

Design welded tubular connections according to the Structural Welding Code-Steel ANSI/AWS D1.1. The fracture critical requirements of ANSI/AWS D1.5 do not apply, and Charpy V-notch impact testing will not be required. Loading shall be as stated in Section 3 of the AASHTO LRFD Guide Specifications for Design of Pedestrian Bridges. The bridge shall be a half-through truss with profile as shown on the plans. With the exception of the one panel at the overlook, each truss panel will have one diagonal. Chords, diagonals, verticals, bracing, and floor beams may be tube steel. Tube steel shall have a minimum thickness of $1 / 4$-inch. All other steel shapes shall have a minimum thickness of 5/16-inch. Field splices shall be bolted with ASTM A325 high strength bolts according to the "Specifications for Structural Joints Using ASTM A325 or A490 Bolts". Type 3 bolts are required for weathering steel. For top and bottom chord field splices, splice plates are required on both the inside and outside surface of all four sides of the spliced tubing so that each bolt will be acting in double shear. Nuts may be welded to the splice plates to hold them in place during installation. When the collection of water inside a structural tube is a possibility, either during construction or during service, provide the tube with a drain hole at its lowest point.

If the profile grade line is on a crest vertical curve, camber the bridge to match the profile grade line shown on the plans plus the calculated dead load deflection. For a single span bridge, if the profile grade line has a constant slope (no vertical curve), camber the bridge to offset the calculated dead load deflection plus an amount equal to $1 \%$ of the bridge length. For a bridge with two or more spans, if the profile grade line has a constant slope (no vertical curve), camber the bridge to offset the calculated dead load deflection only. Douglas Fire Larch, select structural, S1S2E, azca treated, $3 " \times 10$ " or 12 " nominal decking shall be provided over the floor beams at a 45 degree angle as shown on the contract plans. Planks shall be placed rough side up. The deck shall be designed to hold a wheel load located 1 foot from the face of the curb or toe plate, or a pedestrian live load of 90 psf , whichever controls.

Use load factors of 1.25 for dead load and 1.75 for live load for the design of the wood decking. Design the bridge for expansion and contraction with a temperature range of $-30^{\circ} \mathrm{F}$ to $120^{\circ} \mathrm{F}$. Utilize Teflon slip pads or other approved material on the sliding surface of the expansion bearing assembly.

Provide handrails on bridge as shown on Plans. Provide cantilevered overlook to east side of bridge as shown on plans.

## B. 3 Plan Requirements and Submittals

Electronically submit the superstructure plans/shop drawings and design computations to the engineer for acceptance by the Structures Design Section. Make the submittal no later than 12 weeks after date of notice of contract approval. Allow the following time period in the construction schedule: 20 calendar days after the first receipt of plans by the Structures Design Section for a complete initial review of the design and plans submittal, and an additional 20 calendar days for any necessary revisions and/or corrections.

In the submittal, include the following:
Basic design criteria shown on the design plans.
Complete detailed drawings of all structural steel connections, sizes of members, span lengths between bearing points, skews, walkway widths, height of handrails and safety rails, bearing assembly details, anchor bolt locations, bridge deck material , design data, materials data, and dead and live load bearing reactions.
Engineer's certification. The plans shall be sealed, signed, and dated by a professional engineer registered in the State of Wisconsin.
One set of design calculations with independent checks.

The department will return plans (electronically) from this submittal, and any subsequent submittals, to the contractor, either indicating acceptance or marked with required revisions and/or corrections. Provide the engineer copies of final plans to be used in fabrication and construction.

## B. 4 Weld Testing

An independent agency shall perform nondestructive weld testing; the manufacturer shall pay for this testing. All welds are to be visually inspected except as noted below.

Ten percent of all fillet welds shall be magnetic particle tested.
All full penetration welds of chords shall be ultrasonically or radiographically tested.
Bottom chord welded tube splices for tube thicknesses less than 3/8-inches thick shall be radiographically tested or covered with fillet welded splice plates with non-intersecting welds which develop $75 \%$ of the spliced member strength.

Submit electronically a written testing report upon completion.

## B. 5 Steel Rails, Wood Rub Rail, and Kickplate, Wood Deck

Refer to Special Provision for Steel Railing Special B Materials, and the plans.

## C Construction

C. 1 Delivery and Erection

Construction equipment used to lift the truss bridge sections including cranes shall not be stationed on the existing Sheboygan River Bridge during the delivery or erection of the Prefabricated Steel Truss Bridge. It is assumed that the contractor will assemble the truss bridge on the existing river bridge prior to setting it in the designated location. Cribbing or other bracing used to support the truss bridge sections on the existing bridge during erection shall be positioned at or as near as possible to the existing river bridge piers and/or abutments. If the contractor elects to assemble/erect the truss bridge at a separate location and roll or move the truss bridge over the existing river bridge, the contractor must submit analysis that shows the existing river bridge has the structural capacity to support the process. The analysis shall be sealed, signed, and dated by a Wisconsin Professional Engineer.

Deliver the bridge by truck to the location that is nearest to the site and accessible by road. The contractor is responsible for unloading the bridge from the trucks at the time of arrival.

The manufacturer shall notify the contractor in advance of the expected arrival time. Information regarding delays after the trucks depart the plant such as inclement weather, delays in permits, rerouting by public agencies, or other circumstances shall be passed on to the contractor as soon as possible.

The manufacturer shall provide an erection procedure to the contractor and shall advise the contractor of the actual lifting weights, attachment points, and all other pertinent information needed to install the bridge. Unloading, splicing, bolting, and providing proper lifting equipment as well as all tools, equipment, labor, and miscellaneous items required to complete the work is the responsibility of the contractor. The procedure for bolting field splices shall be given to the contractor by the manufacturer.

## C. 2 Finishes

When unpainted steel is specified on the plans, all fabrications shall be produced from high strength, low alloy, atmospheric corrosion resistant ASTM A847 cold-formed welded square and rectangular tubing. ASTM A606 sheet, and/or ASTM A588, ASTM A242, or ASTM A709 Grade 50W plate and structural steel shapes ( $\mathrm{Fy}=50,000 \mathrm{psi}$ ) with a minimum corrosion index of 5.8 per ASTM G101.

Blast-clean all exposed surfaces of weathering steel according to Steel Structures Painting Council Surface Preparation Specifications No. 7 Brush-Off Blast Cleaning (SSPC-SP7), latest edition. Exposed surfaces of weathering steel shall be defined as those surfaces seen from the deck and from outside the structure. Stringers, floor beams, lower brace diagonals and the inside face of the truss below the deck, and bottom of the bottom chord do not need to be blasted.

## D Measurement

The department will measure Prefabricated Steel Truss Pedestrian Bridge B-59-188 LRFD, as a single lump sum unit of work for the bridge, 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.0105.07 | Prefabricated Steel Truss Bridge B-59-188 LRFD |  |

Payment is full compensation for designing, manufacturing, transporting, and erecting the pedestrian bridge including the steel rails, wood rub rail, and kickplate; furnishing bearing plates, pads, bolts, anchor bolts, and grout.

The railings on the bridge approaches are paid for as Steel Railing Special, B-59-188 as shown on the plans.

## 39. Prefabricated Steel Truss Bridge B-59-189 LRFD, Item SPV.0105.08.

Replace entire article language with the following:

## A Description

Furnish a fully engineered, fabricated steel truss pedestrian bridge structure, including bearings, and transport and erect it as shown in the plans, according to Part 5 Structures of the standard specifications, and as hereinafter provided. These specifications shall be regarded as minimum standards for design and construction.

The wood barrier rail and barrier fence, polymer coated on the bridge are included with the Prefabricated Steel Truss Bridge.

## B Materials

## B. 1 Approved Manufacturers

The bridge shall be designed and manufactured by an approved designer and supplier selected from the department's approved products list.

To be eligible for this project, pre-fabricated bridges from other manufacturers must be pre-approved prior to the bid opening date. Applications for pre-approval may be submitted at any time. Prepare the application according to the department requirements. If needed, obtain information and assistance with the pre-approval process from the Structures Design Section in the Bureau of Structures, Room 601 of the Hill Farms State Transportation Building in Madison, or by calling (608) 266-8494.

## B. 2 Design Requirements

Structural design of the pedestrian bridge shall be by a professional engineer registered in the State of Wisconsin.

Design the bridge according to the most recent edition of the AASHTO LRFD Bridge Design Specifications, all current interims, and the AASHTO LRFD Guide Specifications for Design of Pedestrian Bridges, except as modified herein.

Design welded tubular connections according to the Structural Welding Code-Steel ANSI/AWS D1.1. The fracture critical requirements of ANSI/AWS D1.5 do not apply, and Charpy V-notch impact testing will not be required. Loading shall be as stated in Section 3 of the AASHTO LRFD Guide Specifications for Design of Pedestrian Bridges. The bridge shall be a half-through truss with profile as shown on the plans with one diagonal per panel. Chords, diagonals, verticals, bracing, and floor beams may be tube steel. Tube steel shall have a minimum thickness of $1 / 4$-inch. All other steel shapes shall have a minimum thickness of $5 / 16$-inch. Field splices shall be bolted with ASTM A325 high strength bolts according to the "Specifications for Structural Joints Using ASTM A325 or A490 Bolts". Type 3 bolts are required for weathering steel. For top and bottom chord field splices, splice plates are required on both the inside and outside surface of all four sides of the spliced tubing so that each bolt will be acting in double shear. Nuts may be welded to the splice plates to hold them in place during installation. When the collection of water inside a structural tube is a possibility, either during construction or during service, provide the tube with a drain hole at its lowest point.

If the profile grade line is on a crest vertical curve, camber the bridge to match the profile grade line shown on the plans plus the calculated dead load deflection. For a single span bridge, if the profile grade line has a constant slope (no vertical curve), camber the bridge to offset the calculated dead load deflection plus an amount equal to 1\% of the bridge length. For a bridge with two or more spans, if the profile grade line has a constant slope (no vertical curve), camber the bridge to offset the calculated dead load deflection only. Douglas Fire Larch, select structural, S1S2E, azca treated, $3 " \times 10$ " or 12 " nominal decking shall be provided over the floor beams at a 45 degree angle as shown on the contract plans. Planks shall be placed rough side up. The deck shall be designed to hold a wheel load located 1 foot from the face of the curb or toe plate, or a pedestrian live load of 90 psf , whichever controls.

Use load factors of 1.25 for dead load and 1.75 for live load for the design of the wood decking. Design the bridge for expansion and contraction with a temperature range of $-30^{\circ} \mathrm{F}$ to $120^{\circ} \mathrm{F}$. Utilize Teflon slip pads or other approved material on the sliding surface of the expansion bearing assembly.

Provide Douglas Fire Larch 2" x6" nominal wooden rails back to back to 42" height as shown on plans. The purpose of these rails is to prevent snow and ice from falling onto railroad tracks. Install protective screening along bridge length as shown on the plans. Protective screening shall be 9gauge chain link fence with 2-inch mesh, polymer coated as shown on the plans.

## B. 3 Plan Requirements and Submittals

Electronically submit the superstructure plans/shop drawings and design computations to the engineer for acceptance by the Structures Design Section. Make the submittal no later than 12 weeks after date of notice of contract approval. Allow the following time period in the construction schedule: 20 calendar days after the first receipt of plans by the Structures Design Section for a complete initial review of the design and plans submittal, and an additional 20 calendar days for any necessary revisions and/or corrections.

In the submittal, include the following:
Basic design criteria shown on the design plans.
Complete detailed drawings of all structural steel connections, sizes of members, span lengths between bearing points, skews, walkway widths, height of handrails and safety rails, bearing assembly details, anchor bolt locations, bridge deck material , design data, materials data, and dead and live load bearing reactions.
Engineer's certification. The plans shall be sealed, signed, and dated by a professional engineer registered in the State of Wisconsin.
One set of design calculations with independent checks.
The department will return plans (electronically) from this submittal, and any subsequent submittals, to the contractor, either indicating acceptance or marked with required revisions and/or corrections. Provide the engineer copies of final plans to be used in fabrication and construction.

## B. 4 Weld Testing

An independent agency shall perform nondestructive weld testing; the manufacturer shall pay for this testing. All welds are to be visually inspected except as noted below.

Ten percent of all fillet welds shall be magnetic particle tested.
All full penetration welds of chords shall be ultrasonically or radiographically tested.
Bottom chord welded tube splices for tube thicknesses less than $3 / 8$-inches thick shall be radiographically tested or covered with fillet welded splice plates with non intersecting welds which develop $75 \%$ of the spliced member strength.

Submit electronically a written testing report upon completion.

## B. 5 Steel Rails, Wood Rub Rail, and Kickplate, Wood Deck

Refer to Special Provision for Steel Railing Special B Materials, and the plans.

## C Construction

## C. 1 Delivery and Erection

Construction equipment used to lift the truss bridge sections including cranes shall not be stationed on the existing railroad bridge during the delivery or erection of the Prefabricated Steel Truss Bridge. It is assumed that the contractor will assemble the truss bridge on the existing railroad bridge prior to setting it in the designated location. Cribbing or other bracing used to support the truss bridge sections on the existing bridge during erection shall be positioned at or as near as possible to the existing railroad bridge piers and/or abutments. If the contractor elects to assemble/erect the truss bridge at a separate location and roll or move the truss bridge over the existing railroad bridge, the contractor must submit analysis that shows the existing railroad bridge has the structural capacity to support the process. The analysis shall be sealed, signed, and dated by a Wisconsin Professional Engineer

Deliver the bridge by truck to the location that is nearest to the site and accessible by road. The contractor is responsible for unloading the bridge from the trucks at the time of arrival.

The manufacturer shall notify the contractor in advance of the expected arrival time. Information regarding delays after the trucks depart the plant such as inclement weather, delays in permits, rerouting by public agencies, or other circumstances shall be passed on to the contractor as soon as possible.

The manufacturer shall provide an erection procedure to the contractor and shall advise the contractor of the actual lifting weights, attachment points, and all other pertinent information needed to install the bridge. Unloading, splicing, bolting, and providing proper lifting equipment as well as all tools, equipment, labor, and miscellaneous items required to complete the work is the responsibility of the contractor. The procedure for bolting field splices shall be given to the contractor by the manufacturer.

## C. 2 Finishes

When unpainted steel is specified on the plans, all fabrications shall be produced from high strength, low alloy, atmospheric corrosion resistant ASTM A847 cold-formed welded square and rectangular tubing. ASTM A606 sheet, and/or ASTM A588, ASTM A242, or ASTM A709 Grade 50W plate and structural steel shapes ( $\mathrm{Fy}=50,000 \mathrm{psi}$ ) with a minimum corrosion index of 5.8 per ASTM G101.

Blast-clean all exposed surfaces of weathering steel according to Steel Structures Painting Council Surface Preparation Specifications No. 7 Brush-Off Blast Cleaning (SSPC-SP7), latest edition. Exposed surfaces of weathering steel shall be defined as those surfaces seen from the deck and
from outside the structure. Stringers, floor beams, lower brace diagonals and the inside face of the truss below the deck, and bottom of the the bottom chord do not need to be blasted.

## D Measurement

The department will measure Prefabricated Steel Truss Pedestrian Bridge B-59-189 LRFD, as a single lump sum unit of work for the bridge, 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.0105.08
DESCRIPTION UNIT
Prefabricated Steel Truss Pedestrian Bridge B-59-189 LRFD LS
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Payment is full compensation for designing, manufacturing, transporting, and erecting the pedestrian bridge including the wood barrier rail and barrier fence, polymer coated; furnishing bearing plates, pads, bolts, anchor bolts, and grout.

The railings on the bridge approaches are paid for as Steel Railing Special, B-59-189 as shown on the plans.

## Schedule of Items

Attached, dated November 3, 2015, is the revised Schedule of Item Pages 8 -10, and 12 - 21.

## Plan Sheets

The following $81 / 2 \times 11$-inch sheets are attached and made part of the plans for this proposal:
Revised: 59-66, 119, 121, 123,
Added: 96A - 96C and 218A


Addendum No. 02 ID 4996-01-58
Revised Sheet 61
November 3, 2015

Addendum No. 02 ID 4996-01-58
Revised Sheet 62
November 3, 2015

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COUNTY: SHEBOYGAN

HWY: TAYLOR DRIVE

Addendum No. 02 ID 4996-01-58 Revised Sheet 64 November 3, 2015

Addendum No. 02 ID 4996-01-58 Revised Sheet 65 November 3, 2015






GENERAL NOTES
all signs are 48 " $\times 48$ " unless others noted.
"WO" IS the same as "W" except the background is orange.

















