



Wisconsin Department of Transportation

## Contract Modification

6/6/2014 9:11 AM

FieldManager 5.0a

**Contract: LFA1300-13-91, HOAN BRIDGE & LAKE FREEWAY BRIDGE REHABILITATION**

Cont. Mod. Number	Revision Number	Cont. Mod. Date	Net Change	Awarded Contract Amount
1		6/6/2014	\$98,754.75	\$103,185.00
<b>Route</b> 794				<b>Entered By</b> Nicholas Deming
<b>Contract Location</b> I 794				

### Short Description

Change to 3rd Ward Standard Lighting Poles within the 3rd Ward



## Contract Modification

### Description of Changes

There will be no modifications to interim or contract completion dates as a result of this change.

This contract modification encompasses the following with all work to be done according to the 2013 Edition State of Wisconsin Standard Specifications for Highway and Structure Construction, and the Supplemental Specifications and project Special Provisions as applicable.

The unit price for the original contract bid items contained in this contract modification has not been adjusted from the original cost because the character of the work for this item did not significantly change as per section 104.2.2.4 Change Orders for Significant Changes to the Character of the Work.

The modification encompasses the changes requested by the Third Ward within the City of Milwaukee to install lighting elements that match the existing 3rd Ward Street Lighting in lieu of installing standard black lantern style City of Milwaukee Street Lighting. Additional budget has been provided in FY2015, effective July 1, 2014. Payment on these new items will not occur until after July 1, 2014.

This change order increases the following items on the project:

Item 652.0610  
SPV.0060 SPECIAL 02.  
SPV.0060 SPECIAL 12.  
SPV.0060 SPECIAL 13.  
SPV.0090 SPECIAL 01.  
SPV.0090 SPECIAL 04.  
SPV.0090 SPECIAL 05.

This change order decreases the following items on the project:

SPV.0060 SPECIAL 01.  
SPV.0060 SPECIAL 03.  
SPV.0060 SPECIAL 04.  
SPV.0060 SPECIAL 06.  
SPV.0060 SPECIAL 07.  
SPV.0060 SPECIAL 08.  
SPV.0060 SPECIAL 10.  
SPV.0090 SPECIAL 03.

This contract modification adds the following new items and special provisions to the contract:

Item 652.0220  
Item 652.0230  
SPV.0060 SPECIAL 16.  
SPV.0060 SPECIAL 17.

33. Install Poles (17 ft. AL Third Ward Style) Includes Shroud, Twin Arm, Two LED Luminaires, and Riser Cables, Item SPV.0060.16.

#### A. Description

Furnish and install a 17 ft. Aluminum pole (Third Ward Style), with a decorative shroud, twin arm, and two LED luminaires in accordance with the City of Milwaukee Specifications, and all necessary miscellaneous hardware to complete the installation of the pole.

#### B. Materials

The pole, shroud, twin bracket arm and luminaire shall be in accordance with Drawing



## Contract Modification

Numbers: CS-5754 Rev.3, CS-2375 Rev.3, CS-4145, CS-2654, CS-2252 Rev.2, SBMTL-2567 of the details in the plan set.

### B.1.1 Light Pole

Provide 6" octagonal extruded from 6063 alloy aluminum. Shaft is heat treated to produce a T6 temper. Drawing: CS-2375 Rev.3.

### B.1.2.

Shaft provided with hand hole and cover, grounding lug provided inside base opposite hand hole.

### B.1.3.

Anchor base to be cast aluminum construction of 356 aluminum alloy, anchor base is circumferentially welded to shaft.

### B.1.4. Finish

The finish shall be polyester powder coat (Third Ward Green).

### B.2. Shroud

Provide a one piece corrosion resistant, durable cast aluminum construction, minimum .250 wall thickness. Shroud consists of a smooth, stepped bottom section with hand hole and a decorative fluted section consisting of evenly spaced, highly detailed raised vertical flutes.

In accordance with drawing CS-4145.

### B.2.1.

Provide hand hole cover with tamper resistant hardware.

### B.2.2.

Provide grounding lug inside shroud opposite hand hole.

### B.2.3.

Decorative shroud shall slide over pole.

### B.2.4.

Hand hole covers shall be interchangeable with any other shroud. Shrouds whose covers are matched to a single shroud are not acceptable.

### B.2.5.

Position the hand hole cover in the shroud so that the shroud has perfect alignment with the pole hand hole cover.

### B.2.6.

The hand hole cover shall provide ample room for a worker to reach into the shroud with hand tools, open the pole hand hole cover, splice wires, change fuses and read the identification tag on the pole.



## Contract Modification

### B.2.7. Finish

The finish shall be polyester powder coat (Third Ward Green).

### B.3. Twin Arm Assembly

Provide a durable corrosion resistant, cast and extruded aluminum construction.

Drawing Numbers: CS2654 & CS2252 Rev2.

#### B.3.1. Finish

The finish shall be polyester powder coat (Third Ward Green).

### B.4. Two LED Luminaires

Cast aluminum housing and decorative cage, durable corrosion resistance cast aluminum construction with entire assembly sealed with continuous neoprene gasket. One piece sandblasted polycarbonate lens encases clear prismatic glass refractor with (1) Type III (Asymmetric) light distribution, and (1) Type V (Symmetric) light distribution.

Drawing Number: SBMTL-2567

#### B.4.1. Reflector

Heavy wall spun aluminum construction. Bottom side finished with high gloss white enamel for maximum reflectivity.

#### B.4.2. Optical Tower

Tower consists of three-dimensional array of LED capsules on an extruded aluminum stem. Individual capsules are symmetrically assembled. The stem is mounted to a barrier plate that separates the driver(s) from the optical compartment.

#### B.4.3. LED Capsules

Capsules consist of emitters (LED's) mounted to a vented circuit board. The vents are to be copper-filled holes which conduct heat from the component side of the circuit board to the mounting side of the circuit board. Mounting screws are located between each emitter to secure the circuit board to an extruded heat-transfer backing plate which is mounted to a finned heat-sink. Each emitter has a specular, formed reflector optic to direct output downward through an etched acrylic diffused lens.

#### B.4.4. LED Emitters

36 luxeon rebel emitters (LED'S) driven at 500mA for 60 total input watts. High output, neutral white nominal 4100k CCT for the entire optical tower. 50,000 HRS. Emitter life, 130 Lumens / Emitter.

#### B.4.5. LED Driver

Driver – LED driver operates on input voltages from 120-277V, 50/60HZ and is mounted to an aluminum bracket secured to the barrier plate. Terminal blocks facilitate wiring between the driver and optical capsules, and between driver and incoming supply. Driver is independently sealed and UL listed for wet location.

#### B.4.6. Finish

The finish shall be polyester powder coat (Third Ward Green).



## Contract Modification

the minimum shall be polyester, polyester-coat (pink or white) green.

### C. Construction

Install the bolt down pole as specified in the plan and details. After razing the pole use normal pole shaft raking techniques to ensure the centerline of shaft appears vertical to the horizon.

### D. Measurement

The Department will measure 17 ft. Aluminum Pole with shroud, twin arm, two LED luminaires, and riser cables for each luminaire acceptably installed at the locations the plans show.

### E. Payment

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

#### ITEM NUMBER DESCRIPTION UNIT

SPV.0060.16. Install Poles (17 ft. AL. Third Ward Style) EACH

Includes Shroud, Twin Arm, Two-LED

Luminaires, Riser Cables

Payment is full compensation for the complete pole, luminaires, accessories, riser cables, and all connections and hardware. This bid price also includes for furnishing labor, equipment, coordination and all materials and incidentals necessary to complete the work.

34. Install Poles (17 ft AL Third Ward Style) Includes Shroud, Quad Arm, Four LED Luminaires, and Riser Cables, Item SPV.0060.17.

### A. Description

Furnish and install a 17 ft. Aluminum pole (Third Ward Style), with a decorative shroud, quad arm, and four LED luminaires in accordance with the City of Milwaukee Specifications, and all necessary miscellaneous hardware to complete the installation of the pole.

### B. Materials

The pole, shroud, quad bracket arm and luminaire shall be in accordance with Drawing Numbers: CS-5761 Rev.2, CS-2375 Rev.3, CS-4145, Similar to CS-2654, CS-2252 Rev.2, SBMTL-2567.

#### B.1. Light Pole

Provide 6" octagonal extruded from 6063 alloy aluminum. Shaft is heat treated to produce a T6 temper. Drawing: CS-2375 Rev.3.

##### B.1.1.

Shaft provided with hand hole and cover, grounding lug provided inside base opposite hand hole.



## Contract Modification

### B.1.2.

Anchor base to be cast aluminum construction of 356 aluminum alloy, anchor base is circumferentially welded to shaft.

### B.1.3. Finish

The finish shall be polyester powder coat (Third Ward Green).

### B.2. Shroud

Provide a one piece corrosion resistant, durable cast aluminum construction, minimum .250 wall thickness. Shroud consists of a smooth, stepped bottom section with hand hole and a decorative fluted section consisting of evenly spaced, highly detailed raised vertical flutes.

In accordance with drawing CS-4145.

### B.2.1.

Provide hand hole cover with tamper resistant hardware.

### B.2.2.

Provide grounding lug inside shroud opposite hand hole.

### B.2.3.

Decorative shroud shall slide over pole.

### B.2.4.

Hand hole covers shall be interchangeable with any other shroud. Shrouds whose covers are matched to a single shroud are not acceptable.

### B.2.5.

Position the hand hole cover in the shroud so that the shroud has perfect alignment with the pole hand hole cover.

### B.2.6.

The hand hole cover shall provide ample room for a worker to reach into the shroud with hand tools, open the pole hand hole cover, splice wires, change fuses and read the identification tag on the pole.

### B.2.7. Finish

The finish shall be polyester powder coat (Third Ward Green).

### B.3. Quad Arm Assembly

Provide a durable corrosion resistant, cast and extruded aluminum construction.

Similar Drawing Numbers: CS2654 & CS2252 Rev2.

### B.3.1. Finish

The finish shall be polyester powder coat (Third Ward Green).



## Contract Modification

### B.4. Four LED Luminaires

Cast aluminum housing and decorative cage, durable corrosion resistance cast aluminum construction with entire assembly sealed with continuous neoprene gasket. One piece sandblasted polycarbonate lens encases clear prismatic glass refractor with (2) Type III (Asymmetric) light distribution, and (2) Type V (Symmetric) light distribution.

Drawing Number: SBMTL-2567

#### B.4.1. Reflector

Heavy wall spun aluminum construction. Bottom side finished with high gloss white enamel for maximum reflectivity.

#### B.4.2. Optical Tower

Tower consists of three-dimensional array of LED capsules on an extruded aluminum stem. Individual capsules are symmetrically assembled. The stem is mounted to a barrier plate that separates the driver(s) from the optical compartment.

#### B.4.3. LED Capsules

Capsules consist of emitters (LED's) mounted to a vented circuit board. The vents are to be copper-filled holes which conduct heat from the component side of the circuit board to the mounting side of the circuit board. Mounting screws are located between each emitter to secure the circuit board to an extruded heat-transfer backing plate which is mounted to a finned heat-sink. Each emitter has a specular, formed reflector optic to direct output downward through an etched acrylic diffused lens.

#### B.4.4. LED Emitters

36 luxeon rebel emitters (LED'S) driven at 500mA for 60 total input watts. High output, neutral white nominal 4100k CCT for the entire optical tower. 50,000 HRS. Emitter life, 130 Lumens / Emitter.

#### B.4.5. LED Driver

Driver – LED driver operates on input voltages from 120-277V, 50/60HZ and is mounted to an aluminum bracket secured to the barrier plate. Terminal blocks facilitate wiring between the driver and optical capsules, and between driver and incoming supply. Driver is independently sealed and UL listed for wet location.

#### B.4.6. Finish

The finish shall be polyester powder coat (Third Ward Green).

### C. Construction

Install the bolt down pole as specified in the plan and details. After razing the pole use normal pole shaft raking techniques to ensure the centerline of shaft appears vertical to the horizon.

### D. Measurement

The Department will measure 17 ft. Aluminum Pole with shroud, quad arm, four-LED luminaires, and riser cables for each luminaire acceptably installed at the locations the plans show.



## Contract Modification

## E. Payment

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

## ITEM NUMBER DESCRIPTION UNIT

SPV.0060.17. Install Poles (17 ft. AL. Third Ward Style) EACH

Includes Shroud, Quad Arm, Four-LED

Luminaires, Riser Cables

Payment is full compensation for the complete pole, luminaires, accessories, riser cables, and all connections and hardware. This bid price also includes for furnishing labor, equipment, coordination and all materials and incidentals necessary to complete the work.

## Increases / Decreases

Project: 1300-13-91, HOAN BRIDGE AND LAKE FREEWAY BRIDGE REHABILITATION

PROJECT F

Category: 0010, STREET LIGHTING

Item Description	Item Code	Prop.Ln.	Item Type	Unit	Quantity Chg.	Unit Price	Dollar Value
CONDUIT SPECIAL 2 1/2-INCH	652.0610	0020	Original	LF	180.000	12.35000	\$2,223.00

Reason: PC - Add 3rd Ward Lighting

SPECIAL 01. METAL PEDESTAL CABINET	SPV.0060	0040	Original	EACH	-1.000	124.90000	\$-124.90
------------------------------------	----------	------	----------	------	--------	-----------	-----------

Reason: PC - Add 3rd Ward Lighting

SPECIAL 02. RECTANGULAR POLYMER CONCRETE VAULT 13X24X18-INCH (VAULT AND COVER)	SPV.0060	0050	Original	EACH	2.000	389.20000	\$778.40
--	----------	------	----------	------	-------	-----------	----------

Reason: PC - Add 3rd Ward Lighting

SPECIAL 03. INSTALL A31 CONCRETE POLE (BLACK) INCLUDES RISER CABLE	SPV.0060	0060	Original	EACH	-4.000	1,799.26000	\$-7,197.04
---	----------	------	----------	------	--------	-------------	-------------

Reason: PC - Add 3rd Ward Lighting

SPECIAL 04. 14.7' BLACK STEEL POLE WITH DECORATIVE BASE ON EXISTING CONCRETE BASE, 70W/	SPV.0060	0070	Original	EACH	-1.000	9,039.52000	\$-9,039.52
---	----------	------	----------	------	--------	-------------	-------------

Reason: PC - Add 3rd Ward Lighting





## Contract Modification

**Increases / Decreases****Project: 1300-13-91, HOAN BRIDGE AND LAKE FREEWAY BRIDGE REHABILITATION****PROJECT F****Category: 0010, STREET LIGHTING**

Item Description	Item Code	Prop.Ln.	Item Type	Unit	Quantity Chg.	Unit Price	Dollar Value
SPECIAL 06. INSTALL A31 BLACK MILWAUKEE LANTERN CLAMP	SPV.0060	0090	Original	EACH	-5.000	131.23000	\$-656.15

Reason: PC - Add 3rd Ward Lighting

SPECIAL 07. INSTALL 250W/240V BLACK MILWAUKEE LANTERN ARM	SPV.0060	0100	Original	EACH	-5.000	512.60000	\$-2,563.00
---	----------	------	----------	------	--------	-----------	-------------

Reason: PC - Add 3rd Ward Lighting

SPECIAL 08. REMOVE/REINSTALL BRACKET AND FIXTURE COMPLETE	SPV.0060	0110	Original	EACH	-3.000	54.26000	\$-162.78
---	----------	------	----------	------	--------	----------	-----------

Reason: PC - Add 3rd Ward Lighting

SPECIAL 10. INSTALL BLACK MILWAUKEE LANTERN FIXTURE & 250W HIGH PRESSURE SODIUM LAMP	SPV.0060	0130	Original	EACH	-5.000	508.76000	\$-2,543.80
--	----------	------	----------	------	--------	-----------	-------------

Reason: PC - Add 3rd Ward Lighting

SPECIAL 12. HAND HOLE OR PEDESTAL SPLICE	SPV.0060	0150	Original	EACH	13.000	73.00000	\$949.00
--	----------	------	----------	------	--------	----------	----------

Reason: PC - Add 3rd Ward Lighting

SPECIAL 13. 4"X4"X4" CAST IRON BOX (STEEL CHECKERED PLATE COVER)	SPV.0060	0160	Original	EACH	1.000	349.23000	\$349.23
--	----------	------	----------	------	-------	-----------	----------

Reason: PC - Add 3rd Ward Lighting

SPECIAL 01. 3#2/1#8 LTP UNDERGROUND CABLE	SPV.0090	0190	Original	LF	725.000	6.38000	\$4,625.50
---	----------	------	----------	----	---------	---------	------------

Reason: PC - Add 3rd Ward Lighting

SPECIAL 03. 3#6/1#8 LTP UNDERGROUND CABLE	SPV.0090	0210	Original	LF	-250.000	4.18000	\$-1,045.00
---	----------	------	----------	----	----------	---------	-------------

Reason: PC - Add 3rd Ward Lighting

SPECIAL 04. 3#8/1#8 LTP UNDERGROUND CABLE	SPV.0090	0220	Original	LF	535.000	3.61000	\$1,931.35
---	----------	------	----------	----	---------	---------	------------

Reason: PC - Add 3rd Ward Lighting



## Contract Modification

**Increases / Decreases****Project: 1300-13-91, HOAN BRIDGE AND LAKE FREEWAY BRIDGE REHABILITATION****PROJECT F****Category: 0010, STREET LIGHTING**

Item Description	Item Code	Prop.Ln.	Item Type	Unit	Quantity Chg.	Unit Price	Dollar Value
SPECIAL 05. 3#10 WITH GROUND UF UNDERGROUND CABLE	SPV.0090	0230	Original	LF	100.000	3.43000	\$343.00

Reason: PC - Add 3rd Ward Lighting

**Subtotal for Category 0010: \$-12,132.71****Subtotal for Project 1300-13-91: \$-12,132.71****New Items****Project: 1300-13-91, HOAN BRIDGE AND LAKE FREEWAY BRIDGE REHABILITATION****Category: 0010, STREET LIGHTING**

Item Description	Item Code	Prop.Ln.	Item Type	Unit	Proposed Qty.	Unit Price	Dollar Value
CONDUIT RIGID NONMETALLIC SCH 40 11/2-IN	652.0220	0285	Change Order	LF	60.000	3.60000	\$216.00

Reason: PC - Add 3rd Ward Lighting

CONDUIT RIGID NONMETALLIC SCH 40 21/2-IN	652.0230	0290	Change Order	LF	150.000	3.66000	\$549.00
--	----------	------	--------------	----	---------	---------	----------

Reason: PC - Add 3rd Ward Lighting

SPECIAL 16. INSTALL POLES (17-FT AL THIRD WARD S TYLE) W/ SHROUD, TWIN ARM, 2 LEDS, RISER	SPV.0060	0295	Change Order	EACH	10.000	9,857.06000	\$98,570.60
---	----------	------	--------------	------	--------	-------------	-------------

Reason: PC - Add 3rd Ward Lighting

SPECIAL 17. INSTALL POLES (17-FT AL THIRD WARD S TYLE) W/ SHROUD, QUAD ARM, 4 LEDS, RISER	SPV.0060	0300	Change Order	EACH	1.000	11,551.86000	\$11,551.86
---	----------	------	--------------	------	-------	--------------	-------------

Reason: PC - Add 3rd Ward Lighting

**Subtotal for Category 0010: \$110,887.46****Subtotal for Project 1300-13-91: \$110,887.46**



## Contract Modification

Prepared By		Authorized By	
_____	_____	_____	_____
Signature	Date	Signature	Date
Recommended By		Prime Contractor	
_____	_____	_____	_____
Signature	Date	Signature	Date
<b>FEDERAL PARTICIPATION - ACTION BY F.H.W.A.</b>			
___Approved ___Not Eligible		_____	
___See Letter Dated _____		(Signature)	(Date)