



Illinois Department of Transportation

2300 South Dirksen Parkway / Springfield, Illinois / 62764

September 1, 2009

SUBJECT: FAU Route 2843
Project BRM-2843 (008)
Section 3249 B-F
Cook County
Contract No. 60I19
Item No. 12, September 18, 2009 Letting
Addendum A

NOTICE TO PROSPECTIVE BIDDERS:

Attached is an addendum to the plans or proposal. This addendum involves revised and/or added material.

1. Revised the Table of Contents to the Special Provisions.
2. Added pages 27 - 31 to the Special Provisions.

Prime contractors must utilize the enclosed material when preparing their bid and must include any Schedule of Prices changes in their bidding proposal.

Bidders using computer-generated bids are cautioned to reflect any and all Schedule of Prices changes, if involved, into their computer programs.

Very truly yours,

Charles Ingersoll, Chief
Bureau of Design and Environment

A handwritten signature in cursive script, reading "Ted B. Walschleger P.E." with a small "P.E." to the right.

By: Ted B. Walschleger, P. E.
Engineer of Project Management

cc: Diane O'Keefe, Region 1, District 1; Bill Frey; R. E. Anderson; Estimates

TBW:MS:jc

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Revised 09/01/2009

WIDE-FLANGE ROLLED SECTIONS FOR BRIDGES

Effective: September 1, 2009

Description: This work consists of providing the primary wide flange structural steel beams of 50 ksi minimum yield strength for bridge superstructures according to Sections 505 and 506 of the Standard Specifications, except as modified herein for chemical composition.

Mechanical Properties: Steel specimens taken from the thickest portion of the wide flange shall be tested for mechanical properties in the longitudinal direction, including tensile and yield strength, percent elongation in either 2 inch or 8 inch gage length, and a Charpy V-notch (CVN) impact toughness test at 10°F. Impact and tensile specimens shall be taken from the wide flange by either the manufacturer or the service center in accordance with ASTM A673. Impact test specimens shall be machined and tested in accordance with ASTM A370. An impact toughness test shall consist of three test specimens, whereby the minimum required average of three test specimens shall meet or exceed the requirement of 30 ft-lbs. No more than one of the test specimens shall have a CVN impact toughness of less than 30 ft-lbs, and that test value cannot be less than 20 ft-lbs. If less than 20 ft-lbs, retests shall be taken, whereby all three or more retest specimens shall have impact toughness values of 30 ft-lbs or more.

Required minimum mechanical properties are as follows:

<i>Mechanical Property</i>	<i>Requirement</i>	<i>Temperature</i>	<i>2 inch Gage Length</i>	<i>8 inch Gage Length</i>
Yield strength, ksi	50	Ambient
Tensile strength, ksi	70	Ambient
Elongation, percent	...	Ambient	21	18
Impact toughness, ft-lbs	30	10°F

The manufacturer or supplier shall report and certify that the WF shapes furnished meet or exceed the above minimum mechanical properties.

Chemical Composition and Processing: The wide flanges shall be hot-rolled steel shapes. The rolling temperature shall not exceed 2060°F. If wide flanges are hot-rolled above this temperature, they shall be normalized by heating to 1600-1700°F, followed by cooling in still air to achieve optimum properties. If the yield strength does not meet the minimum requirement of 50 ksi, or the tensile strength of 70 ksi, the wide flanges can be precipitation hardened at 1000-1050°F for 20-60 minutes, depending on the amount of increase in strength required. The chemical composition of the steel shall be as follows:

Carbon	Manganese	Silicon	Copper	Nickel	Columbium	Titanium	Phosphorus	Sulfur
0.03-0.09%	0.85-1.10%	0.40% max	0.85-1.00%	0.40-0.50%	0.08% max	0.07-0.15%	0.015% max	0.015% max

The wide flanges shall be free of detrimental defects, such as scabs, slivers, large non-metallic inclusions, cold shuts or laps or other internal flaws. Wide flanges furnished shall have a surface roughness not exceeding 500 microinches after mill scale has been removed.

Added 09/01/2009

Potential Sources: The following steel mills produce 50 ksi yield strength wide flanges up to 36 inches in depth:

- (a) Steel Dynamics, Columbia City, Indiana
- (b) Gerdau Ameristeel, Midlothian, Texas
- (c) Nucor Yamato Steel, Blytheville, Arkansas

STEEL COST ADJUSTMENT (BDE) (RETURN FORM WITH BID)

Effective: April 2, 2004

Revised: April 1, 2009

Description. Steel cost adjustments will be made to provide additional compensation to the Contractor, or a credit to the Department, for fluctuations in steel prices when optioned by the Contractor. The bidder shall indicate on the attached form whether or not this special provision will be part of the contract and submit the completed form with his/her bid. Failure to submit the form or failure to indicate contract number, company name, and sign and date the form shall make this contract exempt of steel cost adjustments for all items of steel. Failure to indicate "Yes" for any item of work will make that item of steel exempt from steel cost adjustment.

Types of Steel Products. An adjustment will be made for fluctuations in the cost of steel used in the manufacture of the following items:

- Metal Piling (excluding temporary sheet piling)
- Structural Steel
- Reinforcing Steel

Other steel materials such as dowel bars, tie bars, mesh reinforcement, guardrail, steel traffic signal and light poles, towers and mast arms, metal railings (excluding wire fence), and frames and grates will be subject to a steel cost adjustment when the pay items they are used in has a contract value of \$10,000 or greater.

Documentation. Sufficient documentation shall be furnished to the Engineer to verify the following:

- (a) The dates and quantity of steel, in lb (kg), shipped from the mill to the fabricator.
- (b) The quantity of steel, in lb (kg), incorporated into the various items of work covered by this special provision. The Department reserves the right to verify submitted quantities.

Method of Adjustment. Steel cost adjustments will be computed as follows:

$$SCA = Q \times D$$

Where: SCA = steel cost adjustment, in dollars
Q = quantity of steel incorporated into the work, in lb (kg)
D = price factor, in dollars per lb (kg)

Added 09/01/2009

$$D = MPI_M - MPI_L$$

Where: MPI_M = The Materials Cost Index for steel as published by the Engineering News-Record for the month the steel is shipped from the mill. The indices will be converted from dollars per 100 lb to dollars per lb (kg).

MPI_L = The Materials Cost Index for steel as published by the Engineering News-Record for the month prior to the letting. The indices will be converted from dollars per 100 lb to dollars per lb (kg).

The unit weights (masses) of steel that will be used to calculate the steel cost adjustment for the various items are shown in the attached table.

No steel cost adjustment will be made for any products manufactured from steel having a mill shipping date prior to the letting date.

If the Contractor fails to provide the required documentation, the method of adjustment will be calculated as described above; however, the MPI_M will be based on the date the steel arrives at the job site. In this case, an adjustment will only be made when there is a decrease in steel costs.

Basis of Payment. Steel cost adjustments may be positive or negative but will only be made when there is a difference between the MPI_L and MPI_M in excess of five percent, as calculated by:

$$\text{Percent Difference} = \{(MPI_L - MPI_M) \div MPI_L\} \times 100$$

Steel cost adjustments will be calculated by the Engineer and will be paid or deducted when all other contract requirements for the items of work are satisfied. Adjustments will only be made for fluctuations in the cost of the steel as described herein. No adjustment will be made for changes in the cost of manufacturing, fabrication, shipping, storage, etc.

The adjustments shall not apply during contract time subject to liquidated damages for completion of the entire contract.

Added 09/01/2009

Attachment

Item	Unit Mass (Weight)
Metal Piling (excluding temporary sheet piling)	
Furnishing Metal Pile Shells 12 in. (305 mm), 0.179 in. (3.80 mm) wall thickness)	23 lb/ft (34 kg/m)
Furnishing Metal Pile Shells 12 in. (305 mm), 0.250 in. (6.35 mm) wall thickness)	32 lb/ft (48 kg/m)
Furnishing Metal Pile Shells 14 in. (356 mm), 0.250 in. (6.35 mm) wall thickness)	37 lb/ft (55 kg/m)
Other piling	See plans
Structural Steel	See plans for weights (masses)
Reinforcing Steel	See plans for weights (masses)
Dowel Bars and Tie Bars	6 lb (3 kg) each
Mesh Reinforcement	63 lb/100 sq ft (310 kg/sq m)
Guardrail	
Steel Plate Beam Guardrail, Type A w/steel posts	20 lb/ft (30 kg/m)
Steel Plate Beam Guardrail, Type B w/steel posts	30 lb/ft (45 kg/m)
Steel Plate Beam Guardrail, Types A and B w/wood posts	8 lb/ft (12 kg/m)
Steel Plate Beam Guardrail, Type 2	305 lb (140 kg) each
Steel Plate Beam Guardrail, Type 6	1260 lb (570 kg) each
Traffic Barrier Terminal, Type 1 Special (Tangent)	730 lb (330 kg) each
Traffic Barrier Terminal, Type 1 Special (Flared)	410 lb (185 kg) each
Steel Traffic Signal and Light Poles, Towers and Mast Arms	
Traffic Signal Post	11 lb/ft (16 kg/m)
Light Pole, Tenon Mount and Twin Mount, 30 - 40 ft (9 - 12 m)	14 lb/ft (21 kg/m)
Light Pole, Tenon Mount and Twin Mount, 45 - 55 ft (13.5 - 16.5 m)	21 lb/ft (31 kg/m)
Light Pole w/Mast Arm, 30 - 50 ft (9 - 15.2 m)	13 lb/ft (19 kg/m)
Light Pole w/Mast Arm, 55 - 60 ft (16.5 - 18 m)	19 lb/ft (28 kg/m)
Light Tower w/Luminaire Mount, 80 - 110 ft (24 - 33.5 m)	31 lb/ft (46 kg/m)
Light Tower w/Luminaire Mount, 120 - 140 ft (36.5 - 42.5 m)	65 lb/ft (97 kg/m)
Light Tower w/Luminaire Mount, 150 - 160 ft (45.5 - 48.5 m)	80 lb/ft (119 kg/m)
Metal Railings (excluding wire fence)	
Steel Railing, Type SM	64 lb/ft (95 kg/m)
Steel Railing, Type S-1	39 lb/ft (58 kg/m)
Steel Railing, Type T-1	53 lb/ft (79 kg/m)
Steel Bridge Rail	52 lb/ft (77 kg/m)
Frames and Grates	
Frame	250 lb (115 kg)
Lids and Grates	150 lb (70 kg)

Added 09/01/2009

RETURN WITH BID

ILLINOIS DEPARTMENT OF TRANSPORTATION

OPTION FOR STEEL COST ADJUSTMENT

The bidder shall submit this completed form with his/her bid. Failure to submit the form or properly complete contract number, company name, and sign and date the form shall make this contract exempt of steel cost adjustments for all items of steel. Failure to indicate "Yes" for any item of work will make that item of steel exempt from steel cost adjustment. After award, this form, when submitted shall become part of the contract.

Contract No.: _____

Company Name: _____

Contractor's Option:

Is your company opting to include this special provision as part of the contract plans for the following items of work?

Metal Piling	Yes	<input type="checkbox"/>
Structural Steel	Yes	<input type="checkbox"/>
Reinforcing Steel	Yes	<input type="checkbox"/>
Dowel Bars, Tie Bars and Mesh Reinforcement	Yes	<input type="checkbox"/>
Guardrail	Yes	<input type="checkbox"/>
Steel Traffic Signal and Light Poles, Towers and Mast Arms	Yes	<input type="checkbox"/>
Metal Railings (excluding wire fence)	Yes	<input type="checkbox"/>
Frames and Grates	Yes	<input type="checkbox"/>

Signature: _____ **Date:** _____

Added 09/01/2009