QUESTIONS AND RESPONSES

FOR:

TOTEM LAKE CONNECTOR BRIDGE
JOB # 01-20-PW/NMC0861000

CITY OF KIRKLAND, WASHINGTON

QUESTIONS RECEIVED THRU FEBRUARY 13TH, 2020

(contains 20 pages total – excluding this cover)

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Question Submittal #1

Send To:
City of Kirkland
Aaron McDonald
(425) 587-3844

Message:

1. Please clarify the distance and frequency of each 3/4" flex conduit connecting CIP Curb Junction box and the railing lighting as shown on pg TLC-E-302 of plans.

RESPONSE: This conduit is at every junction box, as shown on the Line Diagram on Drawing TLC-E-304
Question Submittal #2

Send To:
City of Kirkland
Aaron McDonald
(425) 587-3844

Message:

2. Please clarify the size or location of the list of sizes for electrical handhole boxes as indicated in section 8-30.2(4) Pg 198 of specs.

Response: Handholes are WSDOT Type 1 as shown on Drawing TLC-E-300
Question Submittal #3

Send To:
City of Kirkland
Aaron McDonald
(425) 587-3844

Message:

3. Please confirm that the foundation of P4 qualifies as a "concrete base" as described in 8-30.3(9) on pg 201 which allows for manufactured conduit elbows.

Response: The foundation of P4 is not considered a concrete base for this purpose. A long sweep bend should be used to reduce conductor pulling tension, as shown on Sheet TLC-S-123.
RFI #1

Madeline Kuenzi

Hi Aaron,

This fax in regards to the Totem Lake Connector Bridge, City of Kirkland Project. According to specs section 2-03.5, ‘No separate payment will be made for excavation, handling, testing, and disposal of impacted soil and/or groundwater with pollutant levels below applicable Model Toxics Control Act cleanup levels. The unit Contract prices provided for each excavation and/or haul Contract item shall be full compensation for all costs incurred by the Contractor for excavating, handling, stockpiling, protection, loading, hauling, testing and documenting for waste profile and disposal requirements, and disposing of the impacted soil and/or groundwater.’ If any soil or groundwater is encountered that is above the Model Toxics Control Act cleanup levels, how will the contractor be paid for these additional costs to handle, test, dispose, etc? There Is no force account bid item to deal with this possibility.

Thank you,

Madeline Kuenzi
Estimator
T: 425.691.5514 | C: 425.499.2362
13555 SE 36th Street, Suite 120 | Bellevue, WA 98006

RESPONSE:

Testing of soils and groundwater in the project area did not reveal any samples testing above threshold clean-up levels.

If a changed condition is found during construction activities, the contractor shall follow the procedures outlined in the WSDOT Standard Specifications for a changed condition.
DATE: __2/11/2020_________________  
TOTAL PAGES: ___1__________  
TO: ___Aaron McDonald__________  
COMPANY: ___City of Kirkland______  
FAX NUMBER: ___425-587-3844____  
FROM: ___Tony Owen Poppe______  

GREENBERRY IND.  
CORPORATE HQ  
600 SEMaritimeAve  
SUITE 190  
VANCOUVER, WA.  
P: 360-567-0006  
Fax: 360-567-0007  

Totem Lake Connector Bridge – Job #01-20-PW  
Greenberry Ind. – RFI #2 – 24” Pipe API SL x52 Not Available  

On the 24” OD x ¾” wall tie-chord materials, are not available in API SL x52, or better. Standard grade or HSS with a ¾” wall thickness, are not available either. An alternate material would be a standard 24” OD API SL x52 Schedule 60 pipe with a 0.969” wall thickness.  

Please provide an acceptable size of 24” pipe and material grade, that is manufactured, and can be used for the tie-chords on this project.  

PS: The 24” OD xs ½” wall API SL x52 pipe is available.  

Thank you: Tony Owen Poppe – Project Estimator – Greenberry Industrial.  

Response: 24” OD x 3/4” wall can be manufactured. 24” Schedule 60 would be approved as an acceptable alternative if formally requested.
With regards to your question about RGB accent flood lighting, we provide the response below:

"The alternate product must meet or exceed the quality of the product specified and the alternate product will be subject to review and engineer approval after contract award."

This is consistent with specification 8-30.2(2) of the project special provisions.
From: TMFAB 02/7/2020 360-693-1017 fax TMFAB.COM
MAILING: P.O. Box 5276, Vancouver, WA 98668
PHYSICAL: 3000 SE Hidden Way, Bldg 40, Vancouver, WA 98661

Department of Public Works
123 Fifth Avenue
Kirkland, Washington 98033

Attn: Aaron McDonald

Reference: City of Kirkland – Totem Lake Connection Bridge

Subject: Request For Information

Dave Aaron,

I have a few questions that I need some clarification on in regards to some weldment callouts pertaining to the End Beams. Some of the weld callouts don’t seem feasible and or are not clearly represented on the drawings in a manner that is clear. Please provide feedback for the following:

1) Type 1 Section A
   a. The weld callout for the Diaphragm Plates shows ½” fillet on both sides at the top of the plate. If that a typo and to only be on one side similar to the bottom weldment?
   b. On the same Diaphragm Plate, please confirm if the side weldments are to be CJP’s or ½” Fillets similar to the top and bottom welds.
   c. Where the weldment is called out for the outer side of the End Beam Web Plate to the Tie-Chord, it shows a CJP (1/2”) with a Reinforcement Fillet (3/4”) and the word “OR”. What is the “OR” Option? I don’t see that noted anywhere in the drawing package.

2) Type 2 Section B
   a. The Bearing Stiffener shows that a double sided fillet (assumed 5/16”) if required on 3 sides of the plate however that is not feasible with the top flange on the built up member and the Diaphragm Plate already welded in. Could a knife bevel PJP be utilized in lieu of the double sided fillet? If so what weld size is acceptable?
      i. This would also be the case with the Jacking Stiffener and Restrainer Stiffener as well. Please advise the same solution as the Bearing Stiffener.

3) Does the bridge require shop trial assembly? I do not see that in the specs and just want to confirm that it is not required. If it is required, to what extent does the trial assembly need to be?
4) Note 4 on DWG TLC-S-138
   a. The material requirement calls out HPS grade steel for the End Beams. Please confirm if HPS-50W is acceptable for End Beams.
   b. For material types, does the HPS grade only apply to Plate, Angle, and Bar? Please clarify which material type is to be HPS.

Please review and respond to the above mentioned questions as soon as possible. I’ve attached the drawing red clouding the items for which I am requesting information on.

Regards,

Jason Chun  
Sales and Estimating

RESPONSE: (see three-page response following this page)
MEMORANDUM

To: Jason Chun, Sales and Estimating, Thompson Metal Fab

From: Aaron McDonald, P.E. – Senior Project Engineer

Date: February 12, 2020

Subject: Request for Information – Totem Lake Connector Bridge, Job No. 01-20-PW, Welds

Mr. Chun,

Please see the attached amended drawing (TLC-S-138), particularly sections A, B and C. We intend to make this part of an amendment to the contract to be issued this week. (See Addendum No. 1 for modified drawing TLC-S-138)

Additional responses keyed to your questions are shown below:

1a) The weld to the top flange should be single sided, same as the weld to the bottom flange. This will be revised via Addendum. (See Addendum No. 1 for modified drawing TLC-S-138)

1b) The welds between sides of diaphragm plate and webs of end beam are to be CJP as noted.

1c) The intent of the weld callout is that a ½” PJP + ¾” reinforcing fillet, or CJP weld is acceptable.

2a) The design intent is that the bearing stiffener would be installed prior to the diaphragm plate, and the bottom flange of the box would be welded on last. A PJP with 3/4” effective throat is an acceptable substitution for the double-sided 5/16” fillet weld shown. This solution is acceptable for this size weld on all stiffeners. Please note the restrainer stiffener shows single-sided welds in Section A.

3) Per section 6-03.3(28)A of the Special Provisions, “Progressive Arch (Truss) assembly - The superstructure shall be assembled span by span and shall include all elements above the bearings (End Beams, Floor Beams, Arches, Tie-Chords, Hangers, etc.). Each next span of the shop assembly shall be assembled to one of the previous assemblies, repositioned if necessary, and pinned to ensure accurate alignment.”
4a) HPS Grade 50W is acceptable.
4b) HPS applies to the flanges, webs, and stiffeners (diaphragm, bearing, jacking) of the end beams.

Please let us know if you have any questions or need clarification.

Sincerely,

PUBLIC WORKS DEPARTMENT

Aaron McDonald, Senior Project Engineer
4.16: The AWS tolerance for straightness in clause 7.22.1 is very similar for the struts. Both give approximately 0.13".

4.17: The note is regarding plumbness of the column, not directly covered by AWS. This note is intended to cover straightness of the column plus the as-erected position.

4.18: It is acceptable to use AWS tolerance per clause 7.22.1 in lieu of this requirement.

City of Kirkland
Invitation to Bid

Totem Lake Connector Bridge
CIP No. CNM 086 1000
Job No. 01-20-PW

Request for Information or Clarification to the IFB

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<td>Plan Set - Sheet TLC-S-101</td>
<td>General Structural Notes:</td>
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<td>4.16: The AWS tolerance for straightness in clause 7.22.1 is very similar for the struts. Both give approximately 0.13&quot;.</td>
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<td>General Notes</td>
<td>4. Structural Steel</td>
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<td>4.17: The note is regarding plumbness of the column, not directly covered by AWS. This note is intended to cover straightness of the column plus the as-erected position.</td>
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<td>4.16 - Struts of concrete Y-piers shall not deviate from straight by more than 1/1000 of the length between points of lateral support.</td>
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<td>4.18: It is acceptable to use AWS tolerance per clause 7.22.1 in lieu of this requirement.</td>
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<td>4.17 - Steel Y-piers column plumbness shall be within 1/500 of vertical.</td>
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<td>4.18 - Arch straightness within their plane shall be within 1/1500.</td>
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February 5, 2020

Re: Totem Lake Connection
    City of Kirkland
    Attn: Aaron McDonald

Re: Forming Question

Aaron,

What are the bending requirements for the pipe chords, being that this is fabricated in accordance with Fracture Critical? Will cold bending at ambient temperatures be acceptable?

Thank you Aaron

Casey Carver
Estimator
Jesse Co.
MEMORANDUM

To: Casey Carver, Estimator, Jesse Co.

From: Aaron McDonald, P.E. – Senior Project Engineer

Date: February 12, 2020

Subject: Request for Information – Totem Lake Connector Bridge, Job No. 01-20-PW, Forming Question – Bid No. 2020-011.

Mr. Carver,

Please see the attached amended specification 6-03 which responds to your question. We intend to make this part of an amendment to the contract to be issued this week.

The revisions are shown in red text.

Please let us know if you have any questions or need clarification.

Sincerely,

PUBLIC WORKS DEPARTMENT

Aaron McDonald, Senior Project Engineer
6-03  Steel Structures

6-03.2  Materials
Section 6-03.2 is supplemented with the following:

(**)
Tie-Chord and Arch pipes shall be manufactured according to API Specification 5L with Delivery Condition PSL2 including Annexes B and E, with the following adaptations for pipes not intended for pressure purposes:

- Minimum Charpy V-Notch (CVN) toughness after manufacture (including bending) for both Pipe Body Tests and Pipe Weld and HAZ Tests (API 5L #9.8) shall be at least 25 ft·lbs at 40°F. (Note that the CVN of the material before manufacture must be higher than the above minimum if cold forming/bending, as it reduces the CVN.) The method and procedures for bending the pipes to the final geometry as shown in the Plans and achieving the required toughness shall be submitted to the Engineer for review and approval prior to fabrication. The Contractor shall make allowance for testing on material after bending if necessary.

- The following tests in API 5L are not required:
  - Hydrostatic test #9.4
  - Flattening test #9.6
  - DWT test #9.9
  - Weighing #10.2.9

6-03.3  Construction Requirements
6-03.3(7)  Shop Plans
Section 6-03.3(7) is supplemented with the following:

(**)
The Contractor shall submit drawings and documents that identify interface items and maps out the fabrication process.

6-03.3(7)A  Erection Methods
Section 6-03.3(7)A is supplemented with the following:

(**)
The Contractor shall conduct a Pre-Pick Safety Meeting with the Engineer after addressing comments on the Type 2E Working Drawings, and prior to erecting any steel members, to review the erection plan and procedures on site. Representatives of the Contractor, the Owner, and Engineer must attend and participate in the Pre-Pick Safety Meeting to confirm the methods the Contractor intends to use are acceptable. Final review and approval of the Type 2E Working Drawings will not be completed until after this meeting.

6-03.3(25)  Welding and Repair Welding
Section 6-03.3(25) is supplemented with the following:
Welding and Repair Welding for Welded Tubular Members

All work for welded tubular members, connections, and appurtenances shall be in accordance with AWS D1.1/D1.1M:2015 Structural Welding Code (AWS D1.1). Additionally, the following requirements of AWS D1.5/D1.5M:2015 Bridge Welding Code (AWS D1.5) shall apply:

- Moisture and hydrogen control
- Minimum preheat and interpass temperatures
- Maximum electrode diameter
- Maximum fillet weld size
- Maximum weld layer thickness
- CVN testing requirements. Base metal CVNs shall meet a value of 15 ft-lbs at 40°F for non-Fracture Critical tension members and shall meet a value of 25 ft-lbs at 40°F for Fracture Critical Members (FCM).

Tubular members designated as FCM in the Plans shall also follow the provisions of AWS D1.5 Clause 12 with the following additions and modifications:

- For the purposes of determining preheat and interpass temperatures, the values for AASHTO M 270 (ASTM A 709) may be used
- For the purposes of determining CVN test values of weld metal, the values for AASTHO M270 (ASTM A 709) may be used.

All tubular members shall be considered cyclically loaded and weld details for cyclically loaded tubular members as specified in AWS D1.1 shall be used.

Backing for tubular member girth or butt welds shall be continuous.

All welds require Welding Procedure Specification (WPS) qualification. WPS Qualification shall be in accordance with AWS D1.1 Clause 4 or 9. For WPS parameter development, production welding heat input shall be maintained between 60 percent and 100 percent of the qualified maximum Procedure Qualification Record (PQR) heat input.

All welders shall be qualified in accordance with AWS D1.1 Clause 4.

6-03.3(28) Shop Assembly

6-03.3(28)A Method of Shop Assembly

Section 6-03.3(28)A is supplemented with the following:
(******)

Progressive Arch (Truss) assembly – The superstructure shall be assembled span by span and shall include all elements above the bearings (End Beams, Floor Beams, Arches, Tie-Chords, Hangers, etc.). Each next span of the shop assembly shall be assembled to one of the previous assemblies, repositioned if necessary, and pinned to ensure accurate alignment. Each assembled span shall be surveyed and submitted to the Engineer for review and acceptance prior to shipping. At a minimum, survey shall include bearing and field splice work points.

Contractor shall confirm that the pipe ovality of two adjoining members are not in opposite directions at all CJP field welded splice locations.

Anchor bolt templates shall be fabricated in the same shop in which the arch truss is assembled, and then shipped to site with anchor bolts attached to template plate.

6-03.3(28)B  Check of Shop Assembly
Section 6-03.3(28)B is supplemented with the following:

(August 3, 2015)
If an assembly or stage of assembly is not accepted by the Engineer, deficiencies shall be corrected and the assembly or stage of assembly shall be resubmitted to the Engineer for acceptance.

6-03.3(30)  Painting
Section 6-03.3(30) is supplemented with the following:

(******)
Paint for the new steel, excluding "strut" pipe at Piers 2-6, maintenance walkway in spans 2 and 4, and bridge railing shall be applied in accordance with Section 6-07.3(9). The color of the top coat, when dry, shall match Federal Standard 595 Paint Specification Color: "Medium Blue" FS 35177 (RGB Hex Code:436F94).

A color swatch shall be submitted for approval prior to ordering the paint top coat.

A mockup shall be submitted for approval, consisting of a painted 36" long section of the 20" diameter pipe section.

The interior surface of pipes and HSS members is not required to be painted. The Contractor shall ensure the inside of hollow members is kept dry.

(******)

6-03.3(44)  Slack Restrainer
Slack restrainers at Pier 4 shall be as specified in the Plans. The PT bars shall conform to ASTM A722, with associated nuts and washers per the manufacturer.

6-03.4  Measurement
Section 6-03.4 is supplemented with the following:
"Structural Low Alloy Steel – Substr." contains the following approximate quantities of materials and work as shown in the Plans for Piers 2-6 and Piers 7-11, but does not represent all work included in this item:

Rectangular HSS 11,720 LBS
Steel Plate 9,310 LBS
Round HSS 1,770 LBS
Anchor Rods 20 Each

"Structural Low Alloy Steel – Superstr." contains the following approximate quantities of materials and work as shown in the Plans for the superstructure, but does not represent all work included in this item:

Pipe 324,050 LBS
Steel Plate 75,500 LBS
Rolled W Sections 74,100 LBS
Round HSS 7,930 LBS
Rectangular HSS 340 LBS
Rolled L Sections 3,950 LBS
Rolled WT Sections 210 LBS
Shear Studs 2,606 Each
Bolts 696 Each
Threaded Rods 326 Each
Anchor Rods 52 Each
PT Bars 2 Each

The quantities are listed only for the convenience of the Contractor to assist in determining the volume of work involved and are not guaranteed to be accurate. The prospective bidders must verify these quantities before submitting a bid. No adjustments other than for approved changes will be made in the lump sum contract price for “Structural Low Alloy Steel – Substr.” And “Structural Low Alloy Steel – Superstr.” even though the actual quantities required may deviate from those listed.

6-03.5 Payment
Section 6-03.5 is supplemented with the following:

"Structural Low Alloy Steel – Substr.", lump sum.

"Structural Low Alloy Steel – Superstr.", lump sum.
February 13, 2020

Re: Totem Lake Connection
   City of Kirkland
   Attn: Aaron McDonald

Re: Questions

Aaron,

1. General Notes............. Item 4.2 End Beams shall use High Performance Steel (HPS). What grade of HPS is required? per General Note 4.2, ASTM A709 Grade 50 (ASTM A709 Grade HPS 50W).

2. Regarding testing of Tie-Chords & Arch pipes after bending, we will need to know how many tests and the what locations will be required. Will it be on each different radius, heat numbers, etc. of the various parts? see below

3. Progressive Arch(Truss) assembly..............can we assemble from A1 to P4, disassemble all those parts and then do a separate assembly setup from P4 to P6? At P4, the only attachments of those end bridge spans are the 'Slack Restrainers' and Shear Keys with one side field welded anyway. Yes

4. S-136.............just to the north of the Overlook there is a Field Splice Type 3 with a short piece(10' +/-) from there to the Overlook splice. Can that field splice be moved to the Overlook? Yes

Thank you Aaron

Estimator
Jesse Co.

2. Impact Testing shall be in accordance with ASTM A673. Per section 6-03.2 of the Special Provisions, the fabrication method and procedures are to be submitted to the Engineer for review. Anecdotally, performing one test on each pipe size (20"x1/2", 24"x1/2", 24"x3/4") for the tightest radius applicable to each would be sufficient if those lots fall within the frequency of testing requirements as outlined in part 5 of ASTM A673. The material under review would be the outside edge of the pipe within the bend radius.
February 13, 2020
Fax: (425) 587-3844

Attention: Aaron McDonald

Subject: Totem Lake Connector Bridge Job No. 01-20-PW

Dear Aaron

Reference is made to Special Provision Section 2-03.2 Hazardous Materials Existing Conditions; and Section 2-03.5 Payment. The payment section indicates that no separate payment will be made for excavation, handling, and disposal of impacted soil and/or groundwater with pollutant levels below applicable Model Toxics Control Act (MTCA - 70.105D RCW and Chapter 173-340 WAC) cleanup levels. The unit contract prices provided for each excavation and/or haul Contract Item shall be full compensation. 

It is not reasonable for contractors to engage the required expertise pre-bid to interpret the information provided and determine a quantity of material that will need special handling and disposal. We respectfully request one of the following:

1. Provide a separate bid item with a provisional sum to account for identifying, handling and disposal of hazardous material.
2. Provide a separate bid item with quantity to identify, handle and dispose of hazardous material.
3. Provide a quantity of hazardous materials expected to be encountered that contractors should base their bid upon.

RESPONSE:
Soil and groundwater on-site was characterized by testing, and found to be impacted at levels below MTCA cleanup levels and above test detection levels. Consequently, the disposal method(s) selected by the Contractor will need to accept exported material with that condition. As disposal method(s) are selected by the Contractor, the Contract Documents require the Contractor to include all costs associated with excavation, handling, and disposal necessary for the Contractor's disposal method.

No separate bid item is provided for clean soil or groundwater, as it is not expected to be practical to segregate potentially clean exported materials from those expected to be generally impacted as described in the Contract Documents.

Impacted soil and groundwater containing hazardous materials above MTCA cleanup levels are not expected to be encountered during this project. Consequently, no separate bid item is provided for excavation, handling, and disposal of these exported materials.