



**City of Tacoma
Tacoma Water/Water Quality**

**North Fork Well #7 Vertical Turbine Pump
Specification No. WQ17-0364F**

QUESTIONS and ANSWERS

All interested parties had the opportunity to submit questions in writing to Doreen Klaaskate at dklaaskate@cityoftacoma.org, by 5:00 p.m. November 9, 2017. The answers to the questions received are provided below and posted to the City's website at www.TacomaPurchasing.org. This information IS NOT considered an addendum. Respondents should consider this information when submitting their proposals.

Question 1: We represent Goulds turbines, and after review of their offerings, I would like to propose their 24DMC per the attached performance curve. Reading through the specs, I can only see one minor exception we would need to take, and it is apparent on attached curve. At 1200 RPM, and using a single bowl in lieu of 2 bowls, this pump has a slightly "flatter" curve, causing it to exceed the high flow design point, but not able to meet the high head design point of 7000 GPM @ 140'. All other design criteria is met, including efficiency points.

Answer 1: Based on the pump curve, it appears that the pump being proposed has significantly less capacity at the high head design point than in the specification. Because of the decreased capacity we would deem this bid package non-responsive. If any other pumps have options that would meet the specifications, we would welcome the bid.

Question 2: I wanted to see if you would accept our National Pump Vertical Turbine Pump selection. I've attached our pump curve and as you can see we will not be able to meet the 220ft shut off head as we will be at 276ft. We will also be a little under the 86% min bowl efficiency for the design performance and will be at 301HP NOL. I have tried our other Vertical Pump manufacturers and this is the closest we could get to your design parameters.

Answer 2: Tacoma Water would not accept this pump. This pump curve does not meet the specifications. This pump would be operating in the motor service factor at 6,000 gpm. In the technical provision under 1B, it states that the minimum motor service factor is 1.15 and there is an asterisks by this. The asterisks states that the pump shall not require more than 300 hp when operating between 2,000 and 10,000 gpm.

Question 3: We are working directly with the manufacturer Flowserve to generate a quote for this request for bids. They have reviewed the associated documents and have the following comments / questions they would like to get addressed:

- Are we supplying a soleplate? If so, the drawing indicates 44" OD with the discharge head being 38.50" OD, both appear to have a rounded base (not square). Please confirm/advise.
- Drawing 2017-B in the Elevation view indicates 20" steel pipe and 'bevel for field welding'? What does that mean? We are providing a complete pump, right?
- Section D. – indicates the retainers to be bronze, stainless, or cast iron, with 20" column the retainers would be integral to the column pipe and therefore steel in lieu of bronze, stainless or cast iron.

Answer 3: If you take a look at drawing 2017-B, the intent of adding this drawing to the specifications was to show the bidders how the existing pump was constructed. The intent of the drawing is not to have the pump manufacturers bidding on this to provide what is in the drawing. With that being said, the proposed surface plate (discharge head) needs to be able to mate up with our existing base plate (sole plate). The proposed surface plate discharge elevation also needs to match the existing surface plate elevation.

The note for a 'bevel for field welding' is not applicable for the pump manufacturer because they will be providing flange pipe according to the specifications.

The pump manufacturers will be providing a complete pump motor, column pipe, shaft, etc. The pump manufacturer should refer to drawing 15-86-45 for more information.

The integral steel retainers are acceptable and will be added by addendum.