

31 January 2008

Request For Information

To: Mr. James X. Kelly, P.E., Utilities Manager
City of Arlington

From: Chris Kelsey

Subject: Information Needs To Facilitate 60 Percent Design
Wastewater Treatment Plant (WWTP)
Upgrade and Expansion Final Design

RFI No. 3: Information Needs to Facilitate 60 Percent Design

KJ Project No. 0597002*02

Requested Response Date: As Indicated For Individual Items
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During, and subsequent to, the 25% design period, many design issues have been presented and discussed between the K/J design team and City of Arlington (COA) public works staff. These identified issues necessitate the need for ongoing input from COA on the preferred direction for a number of design elements. Receiving direction on the items within this Request for Information (RFI #3) will serve towards finalizing the WWTP design criteria, and will allow our design team to continue progressing on the current project schedule.

The following list (with desired dates for receipt of information) is requested from COA:

BCF Issues:

1. **BCF Work Products.** In lieu of the stop work directive officially issued by the City at the 25% WWTP/60% BCF design review workshop, we have re-allocated the design staff for that facility to other projects. We remain interested in re-initiating design work at a future date, with a scope and direction that the City is comfortable with. We will await any request by the City to transmit desired design documentation through the current 60% development level. **Requested Response:** *KJ will respond upon receipt of any City requests.*

WWTP Issues:

2. **South Side Access to the Water Treatment Plant.** Design complexity for the headworks expansion is minimized if the expansion of the channels occurs to the east. An approximate 15-foot width between the WTP building and a retaining wall (necessary for grading in order to keep road access down the hill to the rest of the WWTP portion of the site) can be offered past the WTP entrance door to the control room, with a similar clearance to existing offered in front of the WTP filter roll-up door locations. Please review the current existing and proposed construction site plans that are a part of the 25% design package with WTP staff to determine if this space is adequate, or if relocation of the access road down the hill is necessary to increase this clearance (this latter approach would likely necessitate a higher level of site grading and fill material). **Requested Response:** On or before *Friday, 8 February 2008.*

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3. **Grit System Improvements.** The City has forwarded some general information to K/J on quotes received for the necessary improvements to the PistaGrit system at the headworks. Please forward all descriptive information received from the vendor, particularly any drawings that have been furnished, so that K/J can accurately incorporate the improvement details into design documents. Also please include contact information for the vendor that the City has been communicating with. **Requested Response:** On or before *Friday, 8 February 2008*.
4. **Aeration Blower Motors.** Please offer final confirmation that the 100 HP motors for all the existing blowers are rated for inverter duty, such that they can be retrofitted with adjustable frequency drives and incorporated into the plant expansion. **Requested Response:** On or before *Friday, 8 February 2008*.
5. **Permeate Pumping Redundancy.** Currently, design plans call for one spare permeate pump to be installed for backup purposes. Interties between adjacent train piping (such that one pump could draw simultaneously from two MBR tanks) are also currently incorporated into the design. Please verify that both features are desired. **Requested Response:** On or before *Friday, 8 February 2008*.
6. **Alum Dosing Pump.** Unless more stringent NPDES phosphorus limits than anticipated are indicated to be necessary by Ecology during design development, installation of an alum dosing pump will not be included within this construction contract. Space provisions will be accommodated in design. Please confirm. **Requested Response:** On or before *Friday, 8 February 2008*.
7. **Lab/Office Building.** Provide K/J with desired space allocation and layout information for the lab/office building. **Requested Response:** On or before *Friday, 8 February 2008*.
8. **Equipment Building.** The 25% design review workshop included interest expressed by the City in specifying the equipment building as a pre-engineered metal building type of construction. Other design criteria discussed included a suggested overall building dimension of 60' x 40', consisting of four 15' by 40' bays. Three of the four bays would be open and provide parking and storage for City-owned vehicular equipment. The fourth bay would be enclosed and serve as a shop area. Single phase 120V supply would be offered to each of the open bays, and 3-phase, 480V would be supplied to the shop area. Please confirm this design criteria. **Requested Response:** On or before *Friday, 8 February 2008*.
9. **Locations for the MBR Tanks and Support Building.** If the City has concluded that the property currently labeled on the site plan as "Reserved for Future Administration Building" will not be purchased by the City in the short term, then code issues might complicate the current design layout of the MBR support/office/lab locations shown. Under this scenario, shifting the MBR tanks and support building to the north might be a logical way to accommodate the space needed for the lab/office. However, shifting these facilities north would also diminish the "mirroring" capacity that could be achieved at some future date beyond year 2025. Please provide an update of the property acquisition status, and willingness to make these suggested building location

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modifications, if necessary to do so. **Requested Response:** On or before *Friday, 8 February 2008*.

10. **Gas Service.** If building heating or other gas supplied features are desired with this construction project by bring a new gas service to the site, please indicate preference to do so. **Requested Response:** On or before *Friday, 8 February 2008*.
11. **Building Materials.** After K/J furnishes the City with some conceptual cost savings information that might be offered by implementing methods of lighter construction in comparison to the full CMU course construction of other existing WWTP facilities, City to decide desired construction methods and materials to be used for the lab/office and MBR support buildings. **Requested Response:** On or before *Friday, 15 February 2008*.
12. **Emergency Power Generator.** Please discuss potential shared costs and/or ownership with Snohomish County PUD for the new emergency generator to be installed with plant expansion. Provide K/J with City preferred method for procurement and degree of ownership. Also indicate City's willingness to consider phasing of backup power facilities by initially installing a unit with less capacity than would ultimately be required for full load projections associated with 2025 peak demands. Would the City also wish to consider using the existing 250 kW generator to help offset the initial unit size? **Requested Response:** On or before *Friday, 15 February 2008*.
13. **Coliform Monitoring Data.** K/J would like to evaluate necessary pathogen reduction levels that would be required to achieve Class B biosolids standards at the WWTP. The ability to design the facility such that these reductions are substantially achieved through the plant or digestion processes would serve to minimize capital improvements which would be necessary through lime stabilization. Any plant data that the City has acquired on total or fecal coliform measurements in the WAS or dewatered sludge prior to lime addition, or within the plant influent or mixed liquor, would be helpful in facilitating this evaluation. **Requested Response:** On or before *Friday, 15 February 2008*.
14. **Plant Water Uses.** Please confirm/add to the following list of current and desired plant water uses: screen washing, foam/scum spray in aeration basin aerobic zones, foam/scum spray in MBR tanks, digester foam spray, membrane chemical cleaning solution makeup, sludge dewatering equipment washdown, polymer makeup, lime slurry makeup, and hose bibs throughout the site for general washdown. Any other uses to add or items above that are not needed? Any of the uses listed above to be supplied with potable water (e.g., polymer makeup)? **Requested Response:** On or before *Friday, 15 February 2008*.
15. **Dewatering Equipment.** In order to optimize design and establish required space for the solids handling building expansion, please indicate any information on City-preferred technology (screw versus fan) or manufacturer (FKC, Fournier, Prime Solutions, etc.) that could be utilized to design around. **Requested Response:** On or before *Friday, 15 February 2008, or after completion of final unit pilot testing*.

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Please call us with any questions or problems at (253) 874-0555. We appreciate the continued responsiveness of the City.