

<p align="center"><b>F. EXAMPLE PROJECTS WHICH BEST ILLUSTRATE PROPOSED TEAM'S QUALIFICATIONS FOR THIS CONTRACT</b>  <i>(Present as many projects as requested by the agency, or 10 projects, if not specified. Complete one Section F for each project.)</i></p>	<p align="center"><b>20. EXAMPLE PROJECT KEY NUMBER</b> <b>X of XX</b></p>
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<p>21. TITLE AND LOCATION <i>(City And State)</i>  <b>Secondary Treatment Facility Upgrades Enhanced Nitrogen Removal – North, DC Water, Washington, DC</b></p>	<p align="center">22. YEAR COMPLETED</p> <table border="1" style="width:100%; border-collapse: collapse;"> <tr> <td style="width:50%; padding: 5px;">PROFESSIONAL SERVICES <b>2016</b></td> <td style="width:50%; padding: 5px;">CONSTRUCTION <i>(if applicable)</i> <b>N/A</b></td> </tr> </table>	PROFESSIONAL SERVICES <b>2016</b>	CONSTRUCTION <i>(if applicable)</i> <b>N/A</b>
PROFESSIONAL SERVICES <b>2016</b>	CONSTRUCTION <i>(if applicable)</i> <b>N/A</b>		

**23. PROJECT OWNER'S INFORMATION**

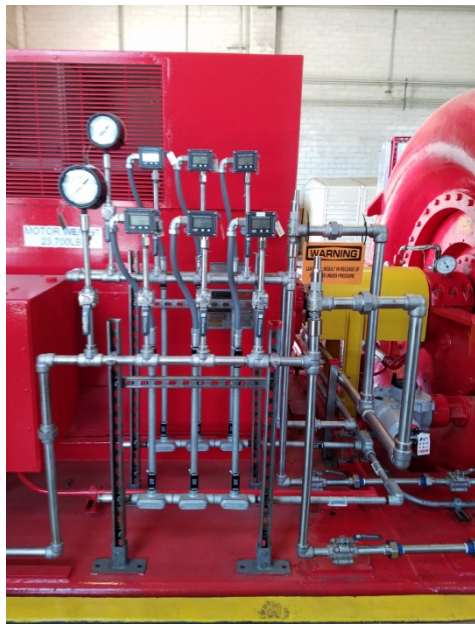
A. PROJECT OWNER <b>DC Water</b>	B. POINT OF CONTACT NAME	c. POINT OF CONTACT TELEPHONE NUMBER
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**24. BRIEF DESCRIPTION OF PROJECT AND RELEVANCE TO THIS CONTRACT *(Include scope, size, and cost)***

SZ PM Consultants, Inc. (SZPM) was retained by Ulliman Schutte Construction, LLC to provide hydraulic calculations for oil lube systems installed at the Blower Building at DC Water.

SZPM provided blower lube system hydraulic calculations for 3,500 HP blowers at the Blue Plains under this contract. The 3-K (Darby) Method was used to calculate head losses. The calculation was done by trial and error as the oil lube system has a number of variables, both flows and pressures at each of the five bearing housings. A computer computation model was developed in order to perform the trial and error calculation with these many variables. Corrections were also made to account for the differences between water and oil, when valve data provided was based on water.

SZPM staff performed numerous rounds of calculations. Because the oil lube system is a small and compact and there are many fittings with very short pipe runs, it has a high sensitivity. The accuracies of the field instruments, readings, recordings, and any variations between the drawings and actual installations will all impact the comparisons. Fittings, including those that have measuring instruments installed, were accounted for in the calculations.



**25. FIRMS FROM SECTION C INVOLVED WITH THIS PROJECT**

(1) FIRM NAME <b>a. SZ PM Consultants, Inc.</b>	(2) FIRM LOCATION <i>(City and State)</i> <b>Washington, DC</b>	(3) ROLE <b>Subconsultant</b>
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