



Technical Memorandum

Date: January 14, 2025

To: Eulogio Vera– City of San Luis

From: Duong Do, PE – PACE

Exp. 12-31-26

Re: City of San Luis West WWTP – Dewatering Process Recommendations

#B777

At the direction of the City of San Luis, PACE has prepared the following evaluation to assist the City in the selection of the new complete sludge dewatering system as part of the City of San Luis West Wastewater Treatment Plant (WWTP) Phase 1 MBR Upgrades. PACE prepared a performance specification and sent Requests for Proposals (RFPs) to manufacturers for a new, complete sludge dewatering system to include mechanical sludge pumping; processing; and dewatering equipment, a processed/dewatered sludge conveyor, and a prepackaged electrical control system for the control of the supplied sludge feed pumps, polymer feed system, main sludge dewatering unit (SDU), and the processed/dewatered sludge conveyor. The stated equipment design parameters are based on the following criteria.

WWTP Conditions:

Project Location	San Luis West WWTP, San Luis, AZ
Treatment Facility Design Flow	3.0 MGD (MMADF)
Wastewater Type	Domestic
Treatment Process:	BNR Activated Sludge with MBR Secondary Treatment
Site Elevation:	Approximately 100 ft.
Ambient Temperature:	35°F – 120°F
Equipment Exposure:	Outdoor with Shade Cover and Odor Control
Flush/Spray Water Source:	Potable Water or Class A+ Effluent

Feed Sludge Conditions:

Type of Sludge:	Secondary Waste Activated (with minimal digestion)
Estimated WAS (3 MGD):	7,945 lbs/day TS Maximum
Estimated Sludge Volume:	95,256 gal/day @ 1% solids
Feed Concentration:	1% (or greater)
Temperature:	13°C - 30°C
pH:	6-8

Performance Requirements:

Days of Operation:	5 days per week (Monday – Friday)
Max Hours of Operation:	8 hours – Daily Production
SDU Min Solids Loading Capacity:	994 lbs/hr (8 – hour operation)
SDU Min Hydraulic Capacity:	200 gpm @ 1% solids (8 – hour operation)
SDU Min Cake Solids Conc.:	15% @ 1% solids feed concentration
SDU Min Solids Capture:	95% by weight
SDU Max Polymer Usage:	20 lbs/dry ton
Screw Press Min Drum Diameter:	1.2 m

The following manufacturers provided proposals:

- **FKC** – BHX-1250x6500L (Screw Press)
- **Schwing** – FSP 903 (Screw Press)
- **PWTech** – ES-354 (Volute Press)

NOTE: FKC provided two different Alternatives (A & B). After consideration of the options, only Alternative B will be included within the estimate/recommendation as Alternative B is cheaper and meets the performance specified within the RFP.

Proposing manufacturers/vendors were tasked with provided a complete sludge dewatering system with mechanical sludge pump, polymer feed and conveying system; which is to be designed, fabricated, and supplied based on the following general requirements:

- A. The two separate sludge feed pumps shall be capable of pumping 30,000 mg/L (3%) sludge concentration. Hydraulic capacity 20% higher than the units max HLR, a minimum operating pressure of 30 ft, controlled by VFD & control system.
- B. Polymer feed system to supply the required polymer dosage to the sludge dewatering equipment. Shall include PLC controls with microprocessor, variable speed polymer feed/mixing equipment, NEMA 4x control panel for polymer skid, polymer pump with positive-displacement type. Vendor shall state the water demand and pressure required for the polymer system.
- C. Dewatering equipment shall be ready to plumb to new sludge feed piping, polymer feed system, WAS polymer feed system, wash/flush water, and pneumatic lines (where applicable) with a majority of the equipment factory plumbed.
- D. Cake Conveyer will include: closed tube, shaftless screw-type conveying system, limit of safety switches, shock relays, motion sensors, flushing ports and drains. Horizontal, inclined, and vertical, configurations, with a sludge cake disposal bin of 5 ft. Conveyer must be able to max discharge capacity. Control shall be automatic and manual and will send feedback to PLC.
- E. Primary sludge dewatering shall be screw press or volute press technology. Operating properties include: all equipment dimensions must be provided, and press must be capable of handling the operating conditions specified within the RFP.
- F. Electrical equipment will be connected with 480 volt/ 3 phase/ 60 Hz. Equipment shall be accommodating of servicing all components and meet NFPA 820 classification.
- G. All necessary control for operation will be included in a single enclosure. Dewatering controls and instrumentation shall be properly sized and functional. UL listed control panels and local control stations for automatic control. All control requirements listed in RFP will be met.
- H. The main control panel shall meet NFPA 820 classifications, and constructed from 304 SSTL. Control panel will be climate controlled and ventilated or air conditioned if in a hazardous or corrosive environment. The control panel will be designed with a SCCR rating of 18KA at 480 VAC minimum. All terminals will be 600V rated and with 20% spare space. Shall be equipped with IEC starter and drives, and all other components listed in RFP.
- I. All local control push button stations will be provided for all major equipment. Enclosure must meet NFPA 820 classification for installation area. It shall be mounted 10 feet from equipment and wired by electrical subcontractor to main control panel. The remote pushbutton station shall include hand/off/auto switch.

Evaluation:

In order to compare each manufacturer's proposal, evaluation criteria were established and assigned a weight; the higher the weight, the more important the aspect is to the project. Each equipment solution proposed was rated on a scale, with the highest score indicating the most competitive or best. For each criterion, the score and the weight were multiplied together. The sum of the multiplied numbers for each equipment/process system solution was used to arrive at the total score for each manufacturer's proposed

system. The equipment with the highest total score shall be the recommended selection. The criteria definitions are listed below, with the Evaluation Criteria Scoring following in Table 1. **Recommendation of a vendor or equipment system does not guarantee the selection or purchase of the equipment, but serves as a decision tool for the City staff to make the final purchase determination.**

Criteria Definitions

Capital Cost: The cost to purchase and deliver the complete equipment F.O.B. jobsite. Each Vendor with proposal costs within 5% of the lowest is scored the same. The evaluation of capital costs will also be associated with the evaluation of the installation requirements, as this criterion considers equipment footprint. Structural components (shade structure) which are not included in the vendor's scope but are necessary for the process and equipment will be added to the capital cost by the Owner (if not included in the vendor's scope of supply).

10-Year Life Cycle Cost: Evaluation of capital cost, power; O&M over 10-year period in today's value based on an 5% interest rate. The O&M cost shall be derived from the *Full Maintenance & Repair Contract*, power cost, and estimated cost of consumables (polymer).

***Full Maintenance & Repair Service Contract**

Ranking will be tied into the 10-Year Life Cycle Cost Ranking. The Contract shall cover a period of the first 5-years with the City's option to extend for an additional 5-year period. The contract shall include site visits by Vendor's certified service technicians to perform all repairs, replacements, and maintenance services, including but not limited to seal replacements, bearing services, equipment replacement, electrical and controls components, etc., as well as any repairs that results from operating the dewatering system under site operation conditions defined within these specifications; any repairs that results from the installation environment at the WWTP, including temperature, moisture, etc.; and any repairs or upgrades needed to maintain system performance guarantee. The Contract shall include parts, labor, travel and any other expenses required to perform the work. The service shall include a minimum of one annual site visit by a certified service technician for inspection and service.

Each Vendor shall provide a detailed approach in their proposal to address technical support and service calls. The approach should include a step-by-step procedure on the actions the City should take during an alarm or equipment malfunction.

Each Vendor shall propose a guaranteed onsite response time once it is determined that a technician will be required to be onsite to address the problem. The service contract shall include language stating that if the technician is not onsite within the guaranteed onsite response time period, the Vendor will pay liquidated damages of \$500 for each day of delay.

Each Vendor shall provide a list of incidental maintenance items that the city can perform to minimize the need for the Vendor's service technician to be onsite. An example of incidental maintenance is performing a greasing or lubrication. All equipment parts for incidental maintenance shall still be provided by the Vendor.

The cost of the 5-year and 5-year options will be based on present-day cost and shall be tied to an inflation rate of no more than 1% increase per quarter or to the inflation rate stated by the Phoenix Tender Price Index determined by Rider Levett Bucknall – whichever of the two is lower.

The City shall have the option to accept the Maintenance and Repair Service Contract.

Performance:

Meets the performance requirements identified in the General Design Requirements. Where applicable, the City, at their discretion, may request shop/factory, or field testing, or referenced party site visits to verify stated performance of equipment. The manufacturer shall assist in coordinating requested site visits/testing for the City.

Reference List:

List of similar equipment installations, including WWTP capacity, type of units, number of units, and reference contact information (WWTP name, location, person, phone number). Each vendor shall provide an installation list with contact information for a minimum of 3 systems in operation for a minimum of 3 years in the United States of America. Installations shall be of comparable model and design requirements. The term "installations" shall mean individual projects/contracts. Multiple equipment units for a project will be considered as one (1) installation toward meeting the experience requirements. Installations shall be only those in the United States (fifty states). Confirmation that the installed equipment is in good standing with the customer and customer feedback will be used as part of the proposal scoring process. The City will require a minimum of three references' feedback and will make a good faith attempt to contact a maximum of five references in order to obtain the feedbacks.

Each successful reference shall be asked to rank their overall experiences from 1-10 (10 being the best). Scores will be based on average ranking from the responsive references. At a minimum, 3 references will be scored. If there are less than 3 responsive references, non-responses will be given a ranking of 1. For example, if only 2 references responded, then a score of 1 will be given to the missing third reference. The average of the three scores will be used in the evaluation. The City reserves the right to contact additional references. If additional references are contacted by the City, those references will be averaged into the score.

Reference installations within the State of Arizona are preferred in order to provide the City/WWTP Operators with ease in coordinating

site visits and corresponding with other relatively local Cities and WWTP Operators regarding equipment performance, service, etc. See also Performance and Fabrication definitions.

Bids from Vendors lacking the U.S. installation requirements, but meeting all technical and performance requirements of these specifications, may be considered by the City if the Vendor provides a satisfactory seven (7) year performance bond in lieu of evidence of experience and operation. The performance bond shall be for 100 percent of the replacement value of the equipment. The bonding company shall have a policy-holder rating of A+ and a financial rating of "Class XV" in the most recent edition of "Best Key Rating Guide". The bonding company shall be licensed to do business in the State of Arizona. The cost of such bonding shall be included in the Base Bid price at the time of proposal.

Fabrication: Proposals will be reviewed and graded by the City to determine the quality of materials used in the fabrication of the complete system as stated in the vendor's provided CSI specifications. The City, at their discretion, may request site visits of existing installations to view completed and operational systems, which are representative of the quality the Vendor is proposing. The Vendor shall assist in coordinating requested site visits for the City. Refer also to the Reference List Definition.

Delivery Schedule: Proposed equipment will be at the job site when needed. Submittals shall include a schedule outlining the anticipated time to develop submittals, and construct equipment and deliver to the job site. The schedule shall be broken down into submittal preparation period, fabrication time, and delivery time. The total time required from notice of selection to arrival of equipment on site shall be clearly indicated

Service: Location of nearest service center, availability of spare parts; quality of service provided. Each vendor shall list the nearest service and support center to the project location. Distance from the project site shall be included along with the services provided by the location. Due to the geographic location of the project, equipment service may be an issue for the City in the past. Vendors with relatively "local", and/or expeditious Service Supply and Part Center's fully stocked with equipment consumables and spare part inventory will be scored higher under this Criterion.

Completeness of Supply: The completeness of the proposal in terms of supplying all requested information within the RFP. Proposals, at the determination of the City, not providing all requested information within the RFP may be eliminated from further consideration. The City reserves the right to reject any and all proposals.

Completeness of Response: The completeness of the proposal to include all the necessary equipment and ancillaries that will be required to meet the performance requirements as stated herein. Proposals, at the

determination of the City, not conforming to the requirements of these specifications maybe be eliminated from further consideration. The City reserves the right to reject any and all proposals.

Performance Bond:

Willingness to agree to terms of the Performance Bond (*Exhibit B*) and to provide a performance guarantee for a minimum of 2 years on the equipment, with the ability to extend the Bond to match the lifetime of the extended Warranty (if chosen). The costs associated with extending the Performance Bond will be provided as a separate line item. Proposals not accepting the terms of the bond will not be considered. The Performance bond shall be for 100 percent of the replacement value of the equipment. The bonding company shall have a policy-holder rating of A+ and a financial rating of “Class XV” in the most recent edition of “Best Key Rating Guide”. The bonding company shall be licensed to do business in the State of Arizona.

Recommendation:

All of the equipment package proposals for a complete sludge dewatering system with mechanical sludge pump, polymer feed, and conveying system met the requirements of the Performance-based specifications. The City has expressed the importance of lower capital and O&M costs, equipment performance, and service. Based on the Criteria Ranking developed as part of the Performance-based specifications, Table 1 tabulated the results of the criteria ranking:

Table 1 – Evaluation Criteria Scoring

Criteria	Weight	FKC	Schwing	PWTECH
		Scoring Scale 1-3		
Capital Cost	10	1.5	1.5	3
10-Year Life Cycle Cost	8	1.5	1.5	3
Performance	10	3	1.5	1.5
Reference List	9	3	2	1
Fabrication	9	3	2	1
Delivery Schedule	3	2	1	3
Service	4	3	1	2
Completeness of Supply	Y/N	Yes	Yes	Yes
Completeness of Response	Y/N	Yes	Yes	Yes
Performance Bond	Y/N	Yes	No	Yes
Summary		129.0	85.0	104.0
Rank		1	3	2

NOTE: Total combined score for each criteria equals 6.

FKC Co., LTD scored the highest with a total score of 129 and is the recommended manufacturer to supply the complete sludge dewatering system for the City of San Luis West WWTP Phase 1 MBR Upgrades. The following sections discuss the evaluation criteria and weighing parameters used for the scoring and the overall recommendation.

Capital Cost (Weight = 10):

The proposals were scored based on overall capital cost, which includes the overall costs of the combined dewatering system, FOB jobsite delivery, spare parts, and manufacturer installation/start-up services. As shown in Table 2, the capital cost criterion favors PWTech with a cost difference of \$144,887 (19% difference) from the next lowest capital cost proposal from FKC. No proposal costs were within 5% of the costs from PWTech; as such, PWTech was scored the highest for this criterion. As the cost difference between FKC and Schwing was \$10,613 (1% difference), which is less than a 5% difference, FKC and Schwing will be scored the same; both lower than PWTech.

Table 2 - Capital Cost Analysis

	FKC	Schwing	PWTech
Total Primary Dewatering Unit Equipment Cost	\$636,677.00	\$682,300	\$577,000.00
Total Conveyance System Equipment Cost	\$69,250.00	\$44,000	\$62,000.00
Total Sludge Pumping Equipment Cost	\$44,100.00	\$53,900	\$36,000.00
Total Polymer System Equipment Cost	\$71,500.00	\$43,800	\$35,000.00
Price of spare parts	Included	\$800	Included
Start-up/ Training Cost	Included	\$42,100	Included
Total Freight (FOB to Jobsite)	\$48,360.00	\$13,600	\$15,000.00
Equipment System Capital Cost (\$)	\$869,887.00	\$880,500	\$725,000.00
Score	1.5	1.5	3
BABA Compliance Adder	Not Available	\$326,300	Included

It is not included within the Capital Cost Analysis, but there would be no cost for the PWTech system to reach BABA compliance, there would be a cost increase of \$326,300 for the Schwing system to reach BABA compliance, and BABA compliance is not offered/available for the FKC system.

10-Year Life Cycle Cost (Weight = 8):

The 10-year life cycle cost (LCC) includes capital cost, power cost, chemical cost, and O&M cost (estimated from each vendor’s 10-year Maintenance and Repair Contract cost). PWTech offered the lowest 10-year LCC, followed by FKC and Schwing. The LCC cost difference between PWTech and FKC was \$108,274 (~ 7% difference), as the difference in cost was greater than 5%, PWTech will be scored the highest. The cost difference between FKC and Schwing was \$18,907 (roughly 2% difference), as the difference in cost was less than 5%, FKC and Schwing will be provided the same score.

Table 3 – 10 Year LCC Analysis

	FKC	Schwing	PWTech
Capital Cost	\$869,887	\$880,500	\$725,000
Power Cost (\$ / year) ¹	\$2,300	\$3,594	\$5,241
Chemical Cost (\$ / year) ²	\$82,700	\$80,680	\$82,700
Maintenance (\$ / year) ³	\$7,500	\$9,300	\$9,300
10-Year Life Cycle Cost (\$)⁴	\$1,584,148	\$1,603,055	\$1,475,874
Score	1.5	1.5	3

¹Power consumption is calculated using the power loading information provided by vendors in Exhibit C, Power usage is assumed 8 hours per day, 5 days per week at a rate of \$0.12/kW-h

²Chemical consumption is calculated based on polymer usage rates by vendors, vendors not providing polymer activation values were estimated at 40% activity, vendor polymer usage was estimated at 20 lbs/dry-ton.

³Maintenance costs are estimated from vendor provided Full Maintenance and Repair Contracts, vendors who failed to provide the contract have an assumed 10-year contract cost of \$93,000.

⁴10-Year Life Cycle Cost is the sum of power, chemical, and Maintenance and Repair Contract costs, labor is not included. 10-Year Life Cycle Cost is based on 10-year present value at 5% interest.

Performance (Weight = 10):

The Performance Specifications required the following minimum performance requirements from the complete sludge dewatering system; inclusive of mechanical sludge pumping, polymer feed equipment, and conveyance equipment.

Days of Operation:	5 days per week (Monday – Friday)
Max Hours of Operation:	8 hours – Daily Production
SDU Min Solids Loading Capacity:	994 lbs/hr (8 – hour operation)
SDU Min Hydraulic Capacity:	200 gpm @ 1% solids (8 – hour operation)
SDU Min Cake Solids Conc.:	15% @ 1% solids feed concentration
SDU Min Solids Capture:	95% by weight
SDU Max Polymer Usage:	20 lbs/dry ton
Screw Press Min Drum Diameter:	1.2 m

The performance required was based on the following parameters:

Type of Sludge:	Secondary Waste Activated (with minimal digestion)
Estimated WAS (3 MGD):	7,945 lbs/day TS Maximum
Estimated Sludge Volume:	95,256 gal/day @ 1% solids
Feed Concentration:	1% (or greater)
Temperature:	13°C - 30°C
pH:	6-8

In addition to meeting the minimum performance requirements, the evaluation ranking was also based on the following equipment capabilities:

- Maximum hydraulic loading rate.
- Maximum solids loading rate
- Estimated polymer usage (neat and active, lb/dry-ton)
- All other performance parameters and information included in Exhibit C.

Table 4 - Dewatering Performance Analysis

	FKC	Schwing	PWTech
# of Units	One	One	One
Model Info.	BHX-1250x6500I	FSP 903	ES-354
Max Hydraulic Capacity (gpm @ 1% solids)	TBD ¹	290	260

Max Solids Loading Capacity (dry lbs/hr)	TBD ¹	1455	2600
Hydraulic Capacity @ 1% DS (gpm)	200	200	200
Max Hydraulic Capacity @ 1% DS Feed with Final Sludge Concentration of 15% DS (gpm)	170	Not Provided	Not Provided
Solids Loading Capacity @ 1% DS (lbs/hr)	1000	994	1000
Dry Solids (cake – assume 1% DS feed) (%)	15 (or higher)	15-20	15
Minimum Solids Capture Rate (assume 1% DS feed) (%)	95	95	95
Wash Water Requirement (gpm, psi)	55 gpm @ 35 psi	43 gpm @ 60-90 psi	18 gpm @ 40 psi
Polymer Used at Design Dry Solids of 1% Feed (lbs active polymer per ton DS)	20-40	20-40	20
Drum Diameter (mm)	1250	900	N/A
Performance Bonds and Guarantees			
Performance Bond Offered (y/n, duration)	Yes, 2-Year only	No	Yes, 2 or 3-Year
Performance Guarantee Offered for Lifetime of Warranty (y/n)	Yes	No	No
Maintenance and Repair Contract Offered (y/n, duration)	Yes, 10-Year only	No	Yes, 5 or 10-Year
Score	3	1.5	1.5

¹Vendor will provide values following startup.

The performance of each proposed system was based on the previously stated parameters, which are provided in Table 4, above. Each of the dewatering system suppliers stated that they were capable of meeting the minimum performance criteria. However, only FKC provided a guarantee performance of their offering. In addition to the stated performance criteria, it was a requirement within the RFP that each vendor provided a Performance Bond, a Performance Guarantee for the lifetime of the warranty period, and agree to the terms of the Full Maintenance and Repair Contract. Only FKC was willing to provide a Performance Guarantee that their supplied equipment would meet/exceed the stated values that were provided within their submittal.

As FKC met the performance requirements specified within the RFP, provided a full Performance Guarantee, provided written willingness to provide a Performance Bond, and took no exception to the 10-year Full Maintenance and Repair Contract, they were scored the highest under this criterion. Both Schwing and PWTech stated that they will meet the required performance criteria; however, neither vendor provided Performance Guarantees for the lifetime of their warranty periods; and as such, were scored lower under this criterion.

Reference List (Weight = 8):

The proposals were ranked on the references provided from previous projects. Each vendor was required to provide a minimum of 3 references for systems that have been in operation in the United States of America for a minimum of 3 years. The references were called at random until a minimum of 3 responses were obtained. Each of the vendors provided more than 3 references and communication was established



with a minimum of 3 references from each vendor. In general, each of the references had positive feedback pertaining to the system they were supplied with, but one of the references from PWTech stated that the performance was poor and they were only able to reach a dewatered concentration of 12% with the use of an expensive polymer. They stated that PWTech would not respond in a timely manner when problems did arise. As FKC was ranked the best according to their references, they will be scored the highest, followed by Schwing and PWTech, respectively.

Table 5 - Reference Response Analysis

Three Randomly Selected Reference Scores	FKC	Schwing	PWTech
	Scoring Scale 1 – 10		
Reference #1	9	8.5	10
Reference #2	8.5	8	8
Reference #3	8.5	8	4
Summary	8.7	8.2	7.3
Score	3	2	1

Fabrication (Weight = 7):

The proposals were scored based on fabrication, including the quality and materials of construction of both major and ancillary equipment for each of the proposed complete sludge dewatering systems. It was requested within the RFP that each of the manufacturers provided CSI specifications of their major pieces of equipment as well as layout views.

Both the FKC screw press and Schwing screw press are constructed of stainless steel wetted parts, have automated washdown cycles, and are enclosed systems. Unlike Schwing, FKC provides a screw press that is constructed with a tight tolerance between the screw flight and perforated screen which removes the need for wearable parts. The FKC press is constructed without wearable components such as brushes, squeegees, or sealing lips. Between all vendors, FKC provided the lowest Full Maintenance and Repair Contract without exceptions, and FKC was the only vendor to provide a Performance Guarantee during the lifetime of their warranty. FKC was scored the highest under this criterion.

Schwing is known to produce high quality equipment and they did provide full CSI specifications and layout drawings, but due to the fact that they include wearable parts within their screw press, they have a smaller drum diameter compared to FKC, they failed to produce a Full Maintenance and Repair Contract, and they do not guarantee performance for the lifetime of their warranty period they will be scored lower than FKC under this criterion. However, Schwing has positive references that verified the quality of their equipment.

PWTech was scored lower than both FKC and Schwing because PWTech failed to provide full formal CSI specifications for all of their provided equipment and failed to provide a performance guarantee for the lifetime of their warranty period. In addition, Schwing had a negative reference that disputed the quality of their equipment. As a result, they were scored the lowest.

Table 6 - Fabrication Scoring

Fabrication	FKC	Schwing	PWtech
Score	3	2	1

Delivery Schedule (Weight = 3):

Delivery schedule was based on three durations provided in the proposals: time required to develop submittals, time required to fabricate equipment, and time required to deliver the fabricated equipment. The time required to develop submittals is the amount of time it would take to finalize the drawings. Fabrication time is the amount of time it would take to manufacture the equipment/system. Delivery time is the amount of time required to deliver the equipment to the site once it is manufactured. Timeframes were requested in values of months but some submittals provided time periods in terms of weeks; in order to standardize the timeframes, each week is converted to 0.23 months (4.0 weeks equals approximately 1 month) and rounded to 2 significant digits.

Table 7 - Delivery Schedule Analysis

Delivery Schedule	FKC	Schwing	PWtech
Submittal Period (months)	1.8	4	1.5
Fabrication Period (months)	-	-	4.2
Delivery Period (months)	7 ¹	11 ¹	0.5
Total (months)	8.8	15	6.2
Score	2	1	3

¹ Fabrication Period is included within Delivery Period.

Both FKC and PWTech provided statements indicating their willingness to accept the liquidated damages due to schedule delay, Schwing indicated that no liquidated damages due to schedule delay will be provided. Due to the drastic difference between schedules, PWTech will be scored the highest, followed by FKC, and lastly by Schwing. Should Schwing be required to provide a BABA compliant system, they estimate the delivery of the system will require an additional 26 weeks (6 months).

Service (Weight = 4):

The proposals were scored based on equipment service capability and the location of the nearest parts distribution center for each of the manufacturers. Both FKC and PWTech provided an offering of a Maintenance and Repair contract without exclusions to the terms stated within the RFP. FKC provided a guaranteed response time of 48-hours with their Maintenance and Repair contract (with a liquidated damages agreement) and PWTech provided a guaranteed response time of 5 business days (with a liquidated damages statement).

As FKC provided a Maintenance and Repair contract, provided the fastest guaranteed response time, and have the closest service center, FKC will be scored the highest. PWTech will be scored below FKC as they have a slower response time and a service center that is located the furthest away from the City of San Luis. Schwing will be scored the lowest as they failed to provide a Maintenance and Repair contract, they provided no guaranteed response time, and they took exception to all liquidated damages due to delay.

- FKC: Port Angeles, Washington (1,550 miles)
- Schwing: Somerset, Wisconsin (1,870 miles)
- PWTech: Rosedale, Maryland (2,500 miles)

Table 8 - Service Scoring

Service	FKC	Schwing	PWtech
Score	3	1	2

Completeness of Supply (Weight = Y/N):

Each proposal was evaluated for completeness of supply based on the manufacturer’s proposals including all necessary equipment and ancillaries that would be required to meet the performance requirements of the RFP. The proposals of FKC, Schwing, and PWTech all met the stated requirements of the RFP.

Completeness of Response (Weight = Y/N):

Each proposal was evaluated for completeness of response based on the manufacturer’s proposals meeting the proposal requirements as provided in the “Proposal Requirements” section of the RFP. This includes providing sufficient information so that no outside inferences are required. Each of the vendors was missing at least one piece of information from their proposals, but the majority of requested information was provided to allow PACE to form an accurate analysis of each system. Each vendor will be marked as “Yes”.

Performance Bond (Weight = Y/N):

The proposals were considered based on manufacturer’s willingness to agree to the terms of the Performance Bond and to provide a performance guarantee for a minimum of 2 years on the equipment. Schwing refused to provide a Performance Bond in any duration on their equipment. Both FKC and PWTech provided the costs to provide a bond. PWTech offered both a 24-month or 36-month Performance Bond on their systems but failed to provide details pertaining to the bond. FKC offered only a 24-month Performance Bond, and included written confirmation from a bonding company that FKC will be backed.

Both FKC and PWTech will be recorded as “Yes”, but it is important to note that only FKC provided additional information from a bonding company. Schwing will be marked as “No” as they declined the offering of any bond within their proposal.