FAYETTE County
Create Your Story!

Purchasing Department
140 Stonewall Avenue West, Ste 204
Fayetteville, GA 30214
Phone: 770-305-5420
www.fayettecountyga.gov

December 17, 2025

Subject: RFQ 26078-A: South Fayette WTP In-Line Flash Mixer Refurbishment
Addendum #1

Gentlemen/Ladies:

Below, please find responses to questions, clarification, or additional information for the above referenced **RFQ**. You will need to consider this information when preparing your quote.

1. **How long can the plant be down without the mixer in place? If time constraint is an issue, would it be best to replace the motor along with the gearbox? If we tear the gearbox down and then find it needs to be replaced, a new gearbox is roughly 8-10 weeks.**
   Plant operations will continue without the mixer after removal and blind flange installation. We are targeting no more than two weeks without the mixer in operation but we understand there are always unforeseen circumstances that may increase down time, within reason. Motor replacement is already part of the scope of the project.

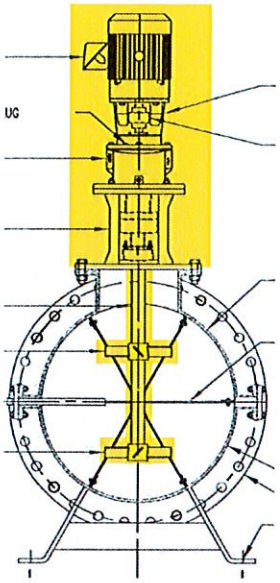
2. **Do we need to include the new shaft and 2 impellers?**
   Yes the new shaft and 2 impellers shall be included.

3. **Is World Wide Electric considered an equal to US Motors by Fayette County?**
   World Wide Electric will be considered an equal for the purposes of this project.

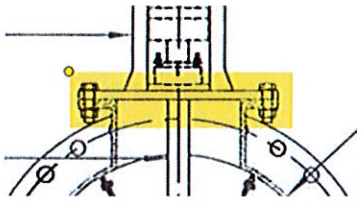
4. **Color Correction**
   Tnemec True Blue/Safety (Code - 11SF).

5. **How long does it take to isolate?**
   Isolation should take less than an hour and would be coordinated on the day of the work to ensure work can proceed promptly.

6. **What is the weight of the highlighted portion of the mixer?**
   The weight of the mixer drive (motor, gear reducer, coupling, shaft, and impeller) and base all together would be ~930 lbs. (highlighted below - Drive 580 lbs., base 275 lbs., shaft & impellers 75 lbs.).



7. **What are the details of the below highlighted flange (size, ANSI bolt pattern, bolt size, etc.)?**
   The flange is 16" diameter class 150 blind flange - see highlighted below. (Outside diameter of flange is 23.50", bolt circle pattern is 21.25".) There are (16) 1.00"-diameter by 4.50" long bolts attaching it to the pipe body.



Additional Information:

1. A custom blind flange will have to be fabricated to place onto the body while the mixer is rebuilt.
2. A Chesterton seal shall be used to replace the existing mechanical seal. To accomplish this the selected vendor will modify the existing pedestal base by providing an adapter plate to accept the appropriate Chesterton seal.

Received by (Name): _____ Company_____

Note: If this addendum is not returned to the Fayette County Purchasing Department or if it is returned not signed, responding individuals, companies or other organizations will still be responsible for the requirements of this addendum and the specifications or changes herein.

The opening date for this RFQ has not changed. **The opening time and date are 3:00p.m., Friday, December 19, 2024.** Quotes must be received by the Purchasing Department at the address above, Suite 204, at or before the opening date and time. **Please advise that quotes can also be emailed to ccobb@fayettecountyga.gov or faxed to (770) 719-5544.**

The deadline for inquiries has passed, so the Purchasing Department will not be able to accept any additional questions after this time.

If you have questions, please contact Colette Cobb, Contract Administrator at (770) 305-5115, fax (770) 719-5544 or email at ccobb@fayettecountyga.gov .

Sincerely,

Ted L. Burgess
Chief Procurement Officer

TLB/cc

Attachment

Mixer Specification Section:	11310
Equipment Item or Tag Number:	NA
Mixer Service:	IN-LINE FLASH MIXER
Mixer Model:	5036G-5
Quantity:	One (1)

Mixer Pipe Section Body:

The mixer body shall be supplied as a pipe section with both ends flanged. The flanged ends conform to AWWA specification C-207 class D size. The pipe body shall be a minimum of 3/8" wall tubing. The pipe body assembly shall be fabricated using carbon steel

The mixer body shall contain a vertical flange mounted mixer drive as described herein. The mixer pipe body shall have an integral mounting flange for connection to the mixer drive assembly. The mixer drive opening in the top of the mixer body shall be large enough to remove the mixer drive as a complete unit with the mixer shaft and impellers connected. The mixer drive mounting flange shall have a standard ANSI class 150# flange bolt pattern.

The mixer pipe body shall be supplied with 1/8" thick neoprene gaskets to match the pipe body flanges.

Chemical Feed Ports

Chemical feed ports shall be located on both sides of the mixer pipe body section. The ports shall be flanged connections extending from the side of the mixer pipe body. Two (2) primary chemical feed ports and two (2) secondary chemical feed ports shall be supplied. The primary ports shall be located on each side of the mixer pipe body and be located on the horizontal centerline of the mixer body and the vertical centerline of the mixer shaft. The secondary ports shall be located on the horizontal centerline of the mixer body and be on the effluent side of the primary chemical feed ports. All chemical feed ports shall be supplied with 3/4" NPT pipe adapters for connection to the chemical feed lines.

Mixer Drive Motor Mounting:

The mixer drive motor shall be mounted in a vertical position to a register fit NEMA C-face flanged connection with the C-face adapter being an integral component of the input side of the mixer drive gearbox. The motor is rigidly attached and automatically aligned with the precision register fit C-face adapter, and connects to the gearbox input shaft through a jaw type flexible coupling connection.

The mixer drive base assembly is fabricated using carbon steel material.

Mixer Drive Gear Reducer:

The mixer drive gearbox shall be a vertical in-line parallel helical gear type gear reducer.

The mixer drive submitted utilizes a heavy-duty gearbox designed for continuous duty, vertical shaft mixing applications in an outdoor environment.

The gearbox housing is manufactured of high strength close-grained cast iron according to ASTM A 48-64. The gearbox is designed to withstand all external radial and thrust loads and vibration resulting from operating conditions. All non-machined interior surfaces are painted to protect the unit against corrosion from regular or synthetic oils. The gear case is pressure tested to insure against leaks in the case. The gearbox is supplied with an AGMA nameplate.

All gearbox bearings are enclosed within the gearbox case and are seated in housings cast integral with the gearbox case. The integral gearbox bearing housings insure proper gear mesh and bearing alignment.

The gearbox gears, pinions and shafts are made of alloy steel. The gears are case carburized to a hardness of 58 to 62 Rockwell C, and finish ground to minimum AGMA class 11 quality level per AGMA standard 390.03 to assure minimum backlash, noise, heat buildup, and maximum gearbox efficiency. All helical and spiral bevel gearing is designed in accordance with AGMA standard 420.04

The overall gearbox efficiency is a minimum of 97%.

The minimum gearbox AGMA rating is 7.0 under moderate shock load, continuous duty service. The mixer service factor is based on the mixer drive motor nameplate horsepower rating. The gearbox thermal horsepower rating is well above the gearbox mechanical horsepower rating. No external cooling devices are required for normal operation. The actual calculated mixer drive service factor is listed in the engineering data submitted.

The gearbox will operate in either the clockwise or counterclockwise direction without any restriction.

The gearbox bearings are sized for a minimum AFBMA bearing L_{10} life of 100,000 hours. All gearbox bearings are anti-friction type and are either oil or grease lubricated. Oil lubricated bearings are submersed in oil. Gearbox bearings not submersed in oil are grease lubricated with provisions for regreasing.

The gearbox is equipped with oil level indication, ventilation, and oil fill and drain ports with the drain port extending from the side of the gearbox for easy access. The drain port is located at the lowest point in the gearbox housing. All general

mixer drive gearbox maintenance is easily accomplished without disturbing the gearbox or removing the gearbox from its foundation.

Mechanical Seal Assembly:

The mixer drive shall be supplied with a dry running mechanical seal assembly designed to seal the mixer shaft penetration through the mixer drive mounting flange. The mechanical seal assembly shall be register fit to the mixer drive mounting flange and shall be externally accessible.

Mixer Drive Output Shaft Coupling Assembly:

The mixer shaft shall couple directly with the drive output shaft through a solid flange type coupling assembly. The coupling assembly is designed to handle a minimum of 200% of the full mixer operating torque and 150% of the bending load transmitted by the mixer impeller shaft assembly.

Mixer Impeller Shaft:

The impeller shaft is designed for combined bending and torsion stresses of 8,000 psi.

The impeller shaft is factory straightened to within 1/8 inch of runnout for every 10 feet of overhang when turned over by hand.

The impeller shaft material is type 316 stainless steel.

Mixer Impeller Assembly:

The impellers shall be 4 blade axial flow impellers with the blades integral with the impeller hubs.

The turbine assembly material is type 316 stainless steel.

The impellers are designed to operate with all component stresses less than 11,000 psi.

MIXER ENGINEERING DATA

Mixer Body:

Pipe Body Diameter:	36 inches
Pipe Body Length:	42 inches
Number of Chemical Feed Ports:	Two (2) each side
Chemical Feed Port Location:	Horizontal centerline of pipe body
Mixer Body Mounting Orientation:	Horizontal

Mixer Drive Gear Reducer:

Gearbox Manufacturer:	SEW Eurodrive
Manufacturer Model Number:	RXF101LP184TC
Mixer Drive Service Factor:	3.4
Gear Ratio:	4.6:1
Drive Output Speed:	380.4 RPM
Calculated Required Impeller Hpt:	4.43

Mixer Data:

Pumping Capacity:	5,747 gpm
Velocity Gradient:	2502 sec^{-1}

Impeller - Mixer Shaft Data:

Impeller Type:	Dual opposing axial flow impellers
Impeller Diameter:	13.25 inches
Mixer Shaft Diameter:	1.5 inches
Impeller Speed:	380.4 RPM,
Percent Critical Speed:	28.5%
Impeller Tip Speed:	22.0 fps,
Mixer Shaft/Impeller Material:	Type 316 stainless steel

Mixer Weights:

Mixer Drive Assembly Weight:	650 lbs
Complete Mixer Assembly Weight:	1250 lbs

Additional Mixer Drive Notes:

Mixer Motor Data:

Motor Manufacturer:	US-Motors or Equal		
Model Number:	T410		
Motor HP:	5	Voltage:	460
Motor RPM:	1750	Frame Size:	184TC
Service Factor:	1.15	Amb. Temp. Rating:	40°C
Insulation:	Class F	NEMA Design B	3 Phase
Enclosure:	TEFC	Continuous Duty	60 Hertz

AMPS - 460 Volts		Torque - Pound Ft.		
Full Load	Locked	Full Load	Locked Rotor	Breakdown
6.4	43.0	15.0	250%	290%

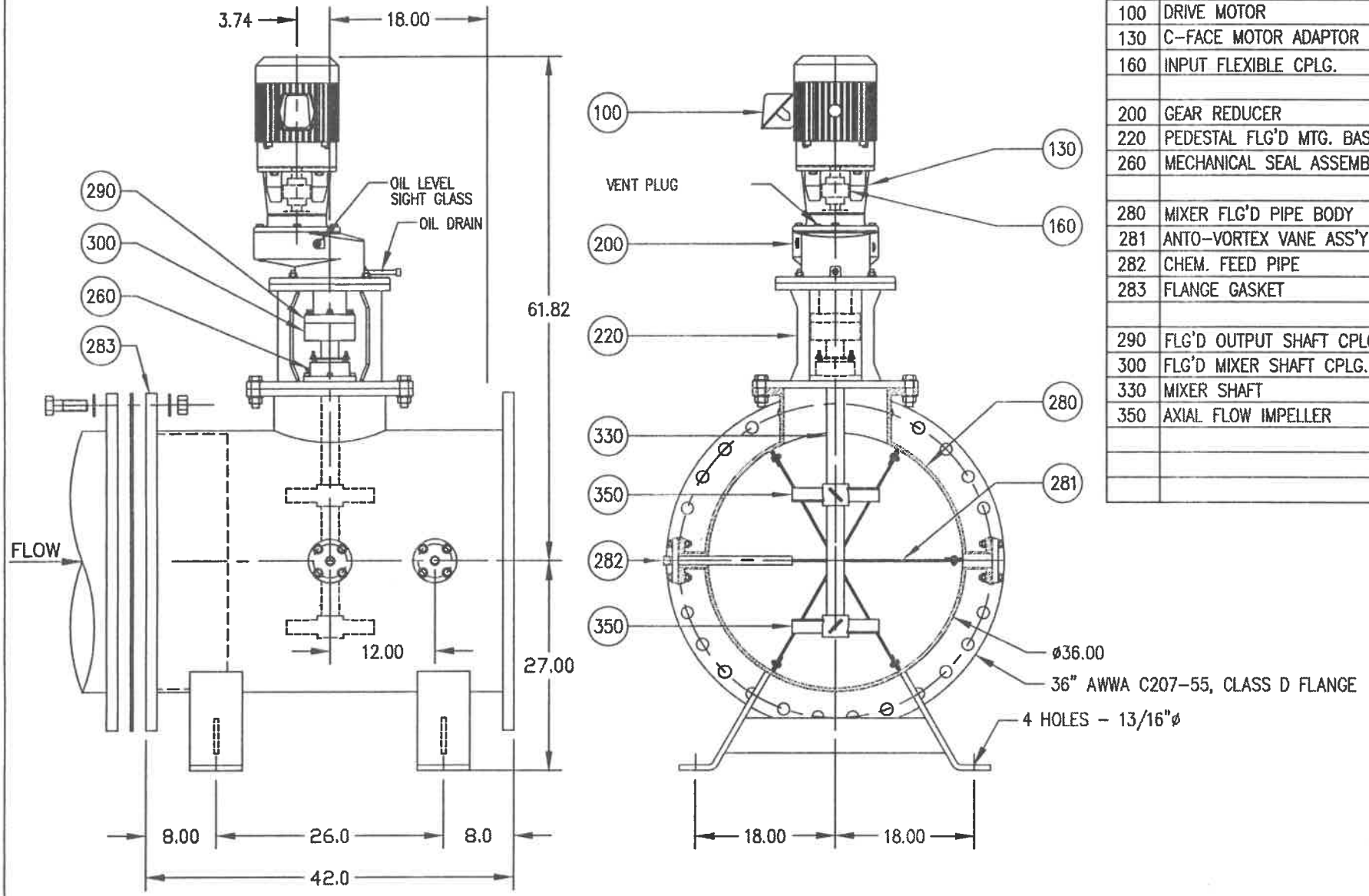
Nominal Motor Efficiency			Nominal Motor Power Factor		
Full Load	3/4 Load	1/2 Load	Full Load	3/4 Load	½ Load
87.5	89.1	88.6	83.6	78.9	69.0

Additional Motor Features:

Note: All motor data is taken from published motor manufacturer's literature.

MATERIALS OF CONSTRUCTION Model 5030G-5

Motor:	
Motor Frame:	Cast Iron
Motor End Bells:	Cast Iron
Nameplate:	Stainless Steel
Gear Reducer and Base:	
Gear Reducer:	Cast Iron
Extended Oil Drain:	Brass
Base:	Mild Steel
Assembly Bolts:	18-8 Stainless Steel
Anchor Bolts:	Zinc Plated
Output Shaft Coupling:	Painted Steel
Nameplate	Stainless Steel
In-line Body:	
Pipe body material:	Mild Steel
Flow vanes:	Mild Steel
Wetted Ends:	
Shaft Coupling:	316 Stainless Steel
Coupling Bolts:	18-8 Stainless Steel
Shaft:	316 Stainless Steel
Key:	316 Stainless Steel
Hub:	316 Stainless Steel
Impeller:	316 Stainless Steel
Impeller Assembly Bolts:	18-8 Stainless Steel
Paint:	
Motors and Gear Reducers:	Solvent cleaned
Mild Steel components:	Commercial blasted
Minimum Paint thickness:	7 mils Dry Film Thickness
Manufacturer:	TNEMEC
Exterior Type:	Series 161
Exterior Color:	ANSI 70 Lt. Gray
Interior Type:	Series 20 Pota-Pox
Interior Color:	White



ITEM	DESCRIPTION	QTY	MATERIAL
100	DRIVE MOTOR	1	
130	C-FACE MOTOR ADAPTOR	1	
160	INPUT FLEXIBLE CPLG.	1	
200	GEAR REDUCER	1	
220	PEDESTAL FLG'D MTG. BASE	1	
260	MECHANICAL SEAL ASSEMBLY	1	
280	MIXER FLG'D PIPE BODY	1	
281	ANTO-VORTEX VANE ASS'Y	1	
282	CHEM. FEED PIPE	2	
283	FLANGE GASKET	2	
290	FLG'D OUTPUT SHAFT CPLG.	1	
300	FLG'D MIXER SHAFT CPLG.	1	
330	MIXER SHAFT	1	
350	AXIAL FLOW IMPELLER	2	

DESCRIPTION: 36" - 5000 SERIES IN-LINE MIXER OUTLINE DIMENSIONS
GEARED MIXER DRIVE ASSEMBLY

DATE: 2/22/95 | MODEL NO.: 5036G-5 | TAG NO.:

DRAWING NUMBER 5036-01

REVISION | PAGE

REVISION	BY	DATE	NO.
			3
			2
			1

anco mixers

MANUFACTURED BY ENVIROPAX, INC. - SALT LAKE CITY, UTAH

ITEM	DESCRIPTION	QTY	MATERIAL
290	OUTPUT SHAFT CPLG HALF	1	
291	RETAINER WASHER	1	
300	MIXER SHAFT CPLG HALF	1	
330	MIXER SHAFT	1	
620	HEX CAPSCREW	SEE TABLE 1	
630	FLAT SOCKET HD. CAPSCREW	1	
650	OUTPUT SHAFT KEY	1	

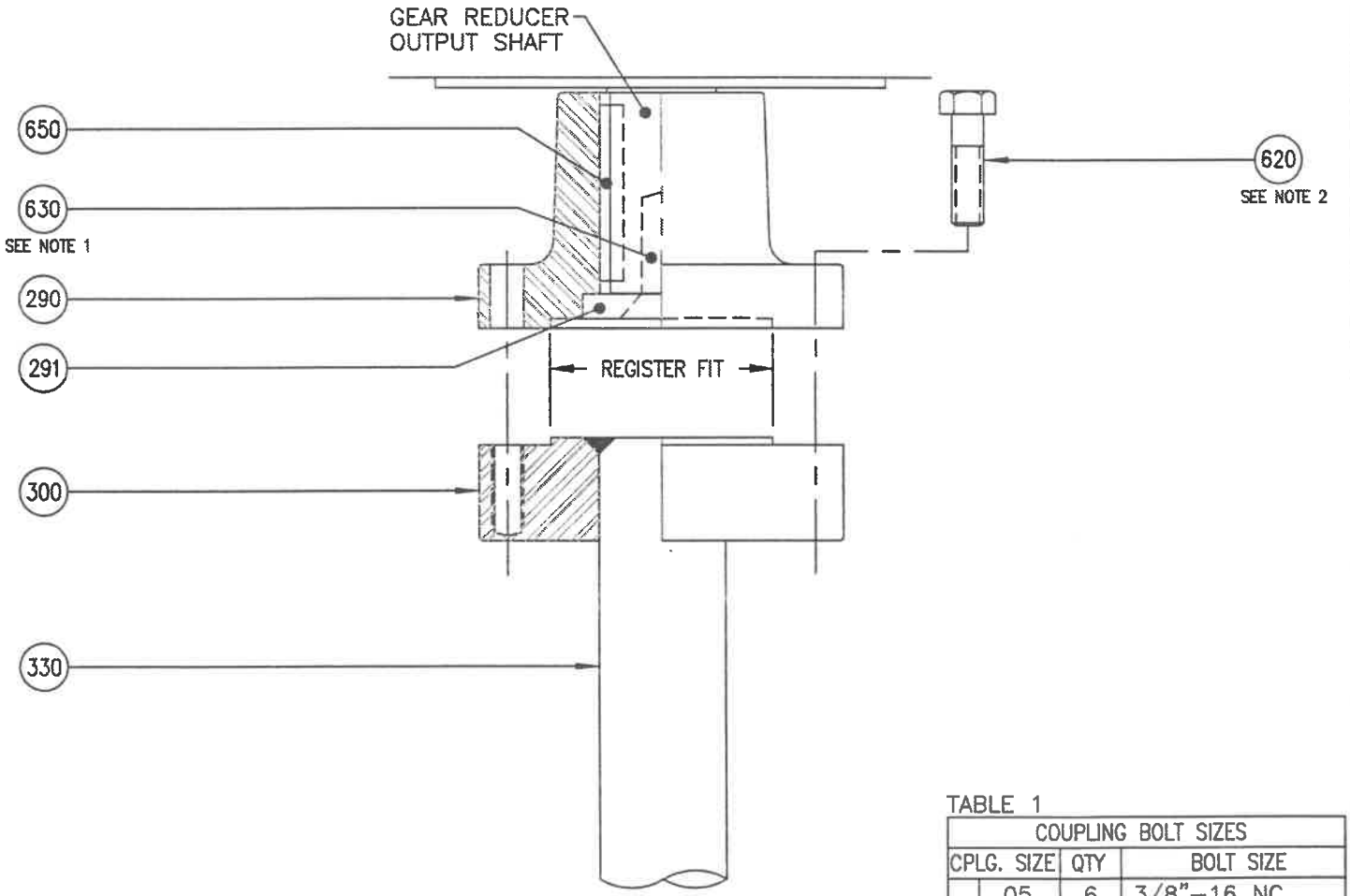


TABLE 1

COUPLING BOLT SIZES			
	CPLG. SIZE	QTY	BOLT SIZE
	05	6	3/8"–16 NC
X	1	6	1/2"–13 NC
	2	10	1/2"–13 NC
	3	10	5/8"–11 NC
	4	12	5/8"–11 NC
	5	16	5/8"–11 NC
	6	8	3/4"–10 NC
	7	10	3/4"–10 NC

NOTES:

① SCREW IS FACTORY INSTALLED USING PERMANENT "THREAD–LOCK".

② USE "ANTI–SEIZE" LUBRICANT ON SCREW THREADS FOR INSTALLATION.

DESCRIPTION: RIGID, FLANGED OUTPUT COUPLING ASSEMBLY

DATE: 1/20/95

DRAWING NUMBER CPLG01

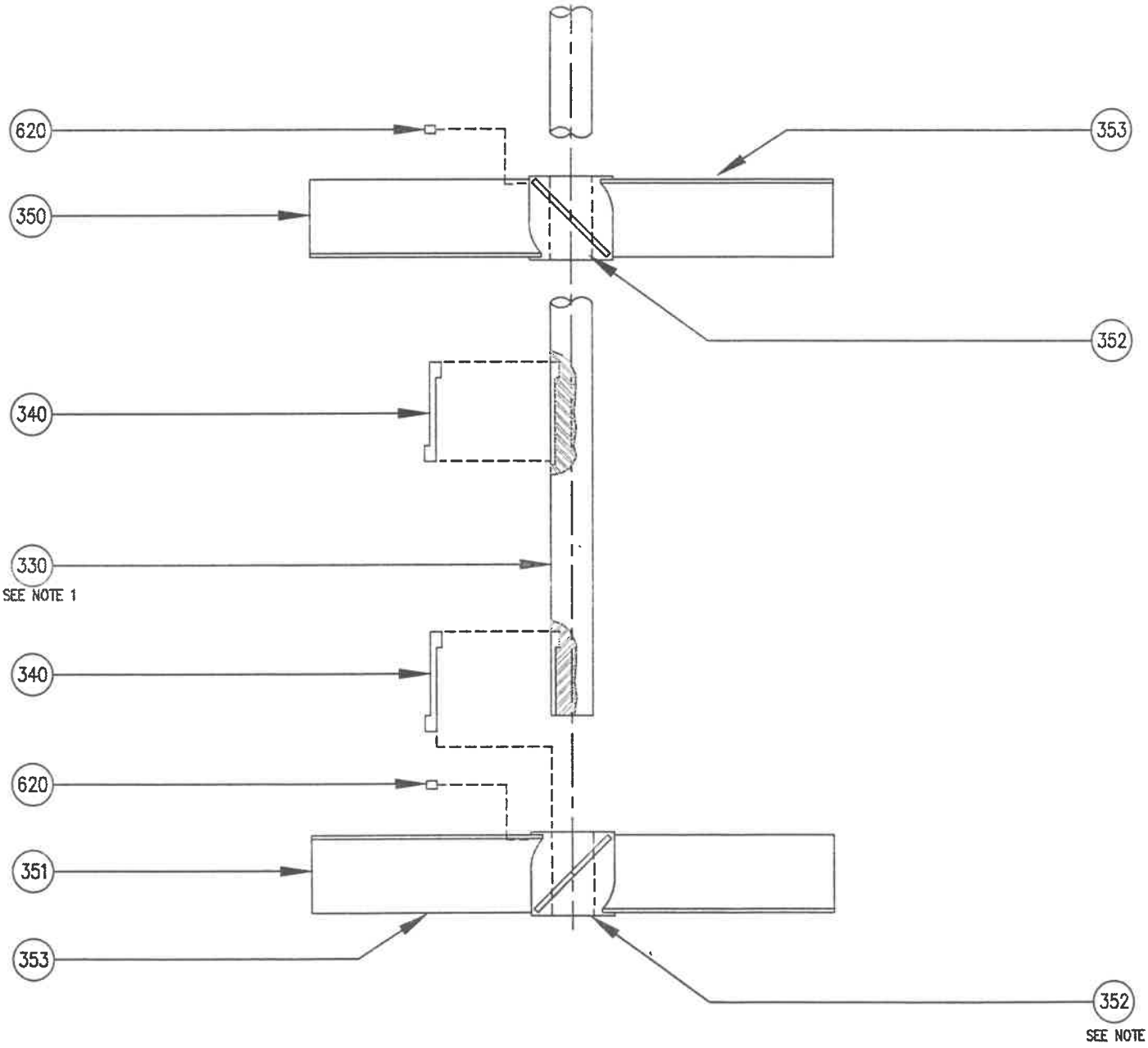
REVISION △ | PAGE

anco mixers

MANUFACTURED BY ENVIROPAX, INC. – SALT LAKE CITY, UTAH

REVISION	BY	DATE	NO.
			3
			2
			1

ITEM	DESCRIPTION	QTY	MATERIAL
330	MIXER SHAFT	1	
340	SAFETY HOOK KEY	2	
350	UPPER IMPELLER	1	
351	LOWER IMPELLER	1	
352	IMPELLER HUB	2	
353	IMPELLER BLADES	8	
620	3/8" SET SCREW	2	



NOTES:

① USE "ANTI-SEIZE" LUBRICANT ON MIXER SHAFT, IMPELLER HUB, AND ALL THREADED CONNECTIONS BEFORE ASSEMBLY.

DESCRIPTION: AXIAL FLOW IMPELLER ASSEMBLY

DATE: 7/28/94

DRAWING NUMBER AM20-02

REVISION △ | PAGE

anco mixers

MANUFACTURED BY ENVIROPAX, INC. – SALT LAKE CITY, UTAH

REVISION	BY	DATE	NO.
			3
			2
			1