	SECTION V – REVISED SCOPE OF WORK **EQUIPMENT PROCESSING SYSTEM** **GROUP 1 (MANDATORY)**	**CITY OF PHOENIX**

1. INTRODUCTION

For GROUP 1 (MANDATORY)- EQUIPMENT PROCESSING SYSTEM the City is requesting proposals for the removal and replacement of the existing recycling equipment at the 27th Ave. Material Recovery Facility (MRF), located at 3060 South 27th Avenue. The City operates two (2) MRFs, one in south Phoenix and one in north Phoenix. These facilities process and sort recyclable material including glass, paper, metal, cardboard, and plastic. The sorted materials are baled for sale and shipped to third party customers. Both facilities operate within a municipal solid waste transfer station. All solid waste (refuse) collected by the city is disposed of at the SR85 landfill, that is also owned by the City of Phoenix.

The functionality and age of the existing recycling equipment at the 27th Ave. MRF has created challenges in managing the level of contamination and associated operational costs. The best recycling processes incorporate systems and equipment that respond to today's market material composition requirements (both inbound and outbound) while yielding a high-quality product with low operational costs (labor expenses and equipment maintenance costs). The City's objective is to begin deconstruction beginning in Q1 2022, with equipment installation starting in Q3 or Q4 of 2022. New equipment would be installed within the existing MRF area footprint. During construction, all incoming recyclables will be transported to an alternative location.

In addition, the City is looking to get an optional proposal for operating Proposer's equipment outlined in this Scope of Work. Optional operating requirements can be referenced in Section V Scope of Work- MRF OPERATIONS & MATERIALS MARKETING GROUP 2 (OPTIONAL). Offers will only be evaluated after GROUP 1 Offers have been determined to be within the Competitive Range. The City reserves the right to not award Group 2 proposals.

The City will **require all** Proposers to submit offers for Group 1 – EQUIPMENT PROCESSING SYSTEM. GROUP 2 Section V Scope of Work- MRF OPERATIONS & MATERIALS MARKETING is optional and will cover proposals for operating, maintaining, and materials marketing.

2. SCOPE OF SERVICES

The Contractor shall, except as may be otherwise provided herein, furnish all labor, materials, supplies, equipment, installation, and supervision necessary, useful, or required to perform the services. The Contractor's obligation shall be to remove and replace the existing recycling equipment and acquire new equipment with technology to both increase efficiency and improve the quality of the recovered products. New recycling equipment procured and installed must improve upon the City's current operational costs such as reduced maintenance and reduced labor requirements.

In addition to the Contractor's primary obligation to procure, and install, new equipment, the Contractor shall be obligated to coordinate with the City's Engineering contractor and ensure all electrical, mechanical, fire and life safety system meet building code and pass all required

building permits. The existing MRF tipping floor and bale storage area of approximately 17,900 square feet and 11,700 square feet, respectively, will remain the same.

The goal of this project is to be fully satisfied by the Contractor to provide the City a state-of-the-art single stream recyclables processing system (herein referred to as the "Equipment Processing System") that will ensure cost-effective recycling services for the residents of the City for the next twenty-five (25) years with the highest reliability, lowest operating costs, highest material recovery rates and highly marketable commodities.

The Equipment Processing System shall be designed to maximize automation and flexibility in order to be able to adapt to a changing material stream on an ongoing basis in the future.

The Equipment Processing System shall be robust, reliable, easy to maintain and access, proven and capable of easily meeting all the minimum performance requirements over the full range of materials. The Equipment Processing System shall be provided with a two (2) year warranty inclusive of parts, labor and freight for any defects, errors, or omissions after Acceptance.

Any and all parts for servicing shall be readily available for the twenty-five (25) year life of the equipment, and qualified service technicians must be available on call 24/7 to support the operations such that City's goals and objectives are always met or exceeded.

A design that maximizes the use of technology for cost-justified automation and separation:

(1) to reduce the number of operating personnel required,
(2) to provide redundancy and diagnostics that minimizes the amount of unscheduled downtime,
(3) to include quality control provisions reducing the need for added labor to achieve market grades,
(4) to compile data automatically for easy and complete understanding of Equipment Processing System performance,
(5) to provide a safe and fully code compliant working environment for the Operator,
(6) to have highly reliable equipment, and when maintained in accordance with the manufacturer's instructions, the amount of unscheduled downtime is minimized and
(7) to anticipate future needs through a flexible and adaptable design.

3. Project Summary Requirements

3.1. The Equipment Contractor shall design, manufacture, ship, install, field wire, provide required fire protection, start-up, train, and test the Equipment Processing System. The Equipment Processing System shall be designed and constructed by the Equipment Contractor in accordance with the minimum performance guarantees as stated in these Contract Documents.

3.2. The Equipment Processing System shall be capable of processing single stream recyclable at a minimum average processing rate not less than 30 TPH while

simultaneously meeting all other performance requirements. The Equipment Contractor is responsible for guaranteeing that the performance of the Equipment Processing System meets or exceeds the requirements of these Contract Documents.

3.3. The Equipment Processing System shall be designed to regularly operate on two (2), eight (8) hour shift days, five (5) days per week at or better than the minimum performance requirements stipulated herein. Predictive and preventative maintenance are to be scheduled and performed during non-operating hours and days.

3.4. The Equipment Contractor shall complete all aspects of the design of the Equipment Processing System and all associated engineering work necessary for the delivery of the Equipment Processing System in accordance with the Contract Documents.

3.5. The Equipment Contractor shall provide all process equipment and related components that are specified in the Equipment Contractor's design subject to the approval of the Engineer that the process equipment meets or exceeds the requirements of the Contract Documents. This may include, but is not limited to conveyors, drum feeder, sort stations, material bunkers, storage bins, OCC screens, fiber screens, fines/glass breaker screens, drum magnet, optical sorters, ballistic separators, robotic sorters, blowers, eddy current separators, balers, glass cleanup system, compressors and controls.

3.6. The Equipment Contractor shall provide all mechanical equipment required for proper operation, including but not limited to, complete drive units, transition chutes/hoppers, access platforms, stairs, ladders, electrical controls, and all other accessories specified herein, and any additional materials and fabrication required by the original equipment manufacturer for proper operation of the systems.

3.7. The Equipment Processing System shall utilize state of the art proven equipment, optical sorting, robotic sorting, screening configurations and process layouts. All references to "state of the art" shall be interpreted to mean the latest models and features from the manufacturers to meet or exceed all requirements specified in the Contract Documents. The Equipment Processing System shall incorporate automatic and manual technologies and include the latest innovations and automations available in the industry. The design shall emphasize automation to minimize manual sorting and material double-handling.

3.8. The Equipment Processing System shall prevent material spillage to the greatest extent possible throughout the facility such that material accumulation from spillage does not occur on electrical raceways, steel framing, equipment surfaces, building wall surfaces and floor surfaces. To the extent any spillage occurs anywhere, the Equipment Contractor shall provide and install all necessary chutes, diverters, hoppers, seals, enclosures, skirts, hoods, covers and bins to minimize the time required for clean-up, eliminate odors, eliminate fire hazards, eliminate hazards to employees and to provide a clean and modern facility that has is ready for tour or visitation at any time.

3.9. The Equipment Processing System shall be well integrated so that the entire system operates as a completely interconnected system. Control features shall include automatic sequential start/stop, lockout of parallel equipment when selected equipment is operating, start/stop interlocking of related equipment, data logging and diagnostics. The control equipment shall consist of a motor control panel with main disconnect, motor starters, VFD's, PLC controller, input/output (I/O) racks, and a central control console with a graphic display touch screen. Equipment shall be controlled using an Integrated Control System that shall be engineered, designed, supplied, and installed and tested by the Equipment Contractor, in accordance with the Contract Documents.

3.10. The Equipment Processing System shall be mechanically installed by the Equipment Contractor including but not limited to equipment assembly, erection, alignment, and grouting.

3.11. Except for normal wear items, all processing equipment and components shall be designed for a minimum service life of twenty-five (25) years and shall fully comply with all applicable MRF industry code and standards applicable at the time Equipment Contractor's proposal is submitted. Normal wear items are considered those components of the equipment that are normally replaced during the service life such as gaskets, belts, baler liners, fuses, bulbs, and screen discs.

3.12. The design shall include integrated, efficient receiving, loading, and processing systems. The design shall be such that the tipping area is emptied of all material on a daily basis during normal operations; it would be the Operator's sole discretion to leave some material on the tipping floor.

3.13. The Equipment Processing System shall include integrated access platforms with stairways and hand railing that provide maximum connectivity to limit personnel walking on the floor and maximize access for equipment maintenance. Designs that do not include platforms with access to each component more than seven (7) feet of reach requiring routine maintenance, inspection or repair will not be accepted.

3.14. The Equipment Processing System shall be electrically field wired by the Equipment Contractor including but not limited to connecting all equipment to electrical panels to be provided by the Equipment Contractor. City shall provide power drops to each electrical panel identified in the Equipment Contractor's design.

3.15. The Equipment Processing System shall be capable of adapting to changes in the inbound material stream and the various commodities markets to allow for the system to remain financially sustainable for City throughout the system's entire lifespan.

3.16. The Equipment Processing System shall be designed and constructed by the Equipment Contractor in accordance with the performance guarantees as stated in these Contract Documents.

4. HISTORICAL DATA

The City anticipates only slight growth-related annual increases in inbound recyclable material tons. The City is developing landfill diversion goals and plans for its facilities and hopes to significantly increase diversion of materials away from the landfill. Dependent on the rate of overall growth in the City reaching these goals could significantly increase the quantity of recyclable material delivered to the facility.

In addition, the City is planning to install a Trommel within the City's transfer station refuse side tip floor. The use of this Trommel will pre-process 40,000 tons of the most contaminated single stream and remove any valuable recyclable material. The "unders" that are recovered from the Trommel will be weighed and delivered to the MRF tip floor for processing by the MRF. Of the 87,000 tons delivered to the 27th Avenue MRF, the Trommel will process all but 47,000 tons. It is estimated 12,000 tons of recoverable recycle commodity will be extracted by the Trommel. It is expected the new MRF will end up processing approximately 59,000 tons annually. This helps maintain the life of the equipment until further advancement to reduce inbound contamination occurs.

Below is a breakdown of material processed and shipped at the 27th Ave. MRF.

27th Ave. MRF: Processed Materials

Commodity	2017		2018		2019		2020	
	Tons	% of Total	Tons	% of Total	Tons	% of Total	Tons	% of Total
Aluminum	344	0.8%	303	0.9%	309	1.1%	455	1.5%
Ferrous Metals	814	1.8%	947	2.7%	384	1.4%	500	1.7%
HDPE Colored	902	2.0%	833	2.4%	698	2.5%	731	2.4%
HDPE Natural	697	1.6%	674	1.9%	549	2.0%	590	2.0%
Mixed Glass	2,381	5.4%	3,108	9.0%	2,753	9.9%	3,138	10.4%
Cardboard (OCC)	12,322	27.7%	9,998	28.9%	8,665	31.2%	10,360	34.5%
Polyethylene #1	2,326	5.2%	2,277	6.6%	1,816	6.5%	2,223	7.4%
Plastics 3-7	265	0.6%	-	0.0%	-	0.0%	-	0.0%
Mixed Rigid	60	0.1%	127	0.4%	119	0.4%	36	0.1%
Polypropylene #5	675	1.5%	537	1.5%	386	1.4%	252	0.8%
Scrap Metal	1,323	3.0%	977	2.8%	1,014	3.7%	1,047	3.5%
Special News Mix #56	22,323	50.2%	14,868	42.9%	11,054	39.8%	10,700	35.6%
TOTAL	**44,432**	**100.0%**	**34,650**	**100.0%**	**27,747**	**100.0%**	**30,032**	**100.0%**

5. MINIMUM SYSTEM REQUIREMENTS

The following are the minimum required to be included by the Equipment Contractor as part of the Equipment Processing System and the Work:

(1) In accordance with MRF industry standards, the Equipment Processing System shall consist of a single stream processing line.
(2) The Equipment Processing System shall be capable of processing single stream recyclable at a minimum average rate not less than 30 TPH while simultaneously meeting all other performance requirements.
(3) An OCC separator for automatic separation of OCC from other fiber material. Size openings shall be designed for minimizing loss of OCC. Width and number of decks shall be capable of processing not less than 30 TPH.
(4) A minimum of five (5) optical sorters each with NIR sensors as follows:
   a. Two (2) for paper
   b. Three (3) for containers
   c. Each optical sorter shall be capable of changing target material through software adjustments.
   d. Each optical sorter shall be fitted with a safety closure plate at entry to the splitter chute.
(5) A minimum of one (1) Eddy Current Separator (ECS).
(6) A minimum of one (1) Magnetic system for ferrous metals and steel cans.
(7) A minimum of two (2) balers with a system of reversible conveyors to allow for baling of any material stream by either baler, for full and complete redundancy.
(8) A minimum of three (3) compressors to supply compressed air to optical sorters and other equipment. Air compressors shall be sized so to allow for normal operation of the Equipment Processing System with full redundancy.
(9) A minimum of one (1) metering storage conveyor with drum feeder and bag breaking feature.
(10) Glass clean-up system.
(11) Residue conveyor length needs to be shortened when compared to the existing system.

5.1. HEADCOUNT

System must be capable of using the least number of labor sorters to produce ISRI specification for quality commodities. The optimal solution and design parameter will be recycling equipment and automation that requires less than fifteen (15) labor sorters per shift to effectively run the system strategically located along the processing line; this quantity does not include mechanics, supervisors, equipment operators or other required staff to effectively operate the facility. It is expected that the recycling system will incorporate fiber removal and optical sort mechanisms to minimize the number of sorters and efficiently produce a high-quality ISRI specification product while minimizing maintenance costs.

5.2. MAINTENANCE

Provide highly reliable equipment, and when maintained in accordance with the manufacturer's instructions, the amount of unscheduled downtime shall be minimized by providing redundancy, bypass or other methods to permit continued operation.

5.3. BALE STORAGE

The existing covered bale storage area will continue to accommodate both existing and projected future growth. This will also ensure that all recycling activities and material storage will be housed inside a structure and not exposed to the elements. Height requirements of stacked bales should be considered when designing this area to ensure fire code requirements are met.

5.4. MATERIAL CAPTURE

New MRF equipment is expected to capture, sort and bale the following grades of recyclable materials. In addition, the City requires one (1) additional spare bunker to be able to capture a future grade of plastic. System components must have a minimum recovery rate of 95%.

Recycle Equipment Requirements for Commodities	
Material Group	**Material Grade**
Fiber	1. SRPN – Special news mix or #56 grade 2. OCC – Old Corrugated Cardboard
Metals	3. UBC – Used Beverage Containers 4. Ferrous Metals – Steel Cans 5. Scrap Metal
Plastics	6. PET – Polyethylene Terephthalate 7. HDPE – Natural 8. HDPE – Color 9. PP – Polypropylene 10. Mixed Rigid Plastics (#1-7) 11. TBD – Spare Bunker
Glass	12. GLASS- 3 mix

6. MINIMUM EQUIPMENT COMPONENT REQUIREMENTS

6.1. CONVEYORS

All conveyors shall have construction features as commonly found in MRF industry single stream processing systems except as otherwise specified in these Contract Documents.

The design and supply shall accomplish zero spillage and litter by fully enclosing, sealing, overlapping, and containing all transfer points. All carry back under belt returns and tail pulleys shall be contained by drip pans that are easily accessible for cleaning and that will discharge its contents to a forklift or skidsteer accessible receptacle.

6.2. METERING CONVEYOR WITH DRUM FEEDER

A metering storage conveyor equipped with a drum feeder (system referred to herein as “drum feeder”) which shall be located on the tipping floor. The drum feeder shall provide the ability for bulk feeding of material from the front-end loader and shall provide metered feed of materials to the system’s inclined infeed conveyors.

The metering storage conveyor shall provide sufficient surge capacity and shall efficiently feed a continuous level that meets or exceeds the minimum throughout requirements.

Drum feeders shall be equipped with a drum height level adjustment system to allow for the manual adjustment of burden depth.

The drum feeder transition to the incline conveyor shall feature access for direct feed by the loader in case the drum feeder is inoperable.

The drum feeder shall be designed to prevent wrapping around the shaft and references are to be included demonstrating the reliability of the unit.

The drum feeder shall be designed with bag breaking features.

6.3. SCREENS

The design, configuration, speed and angle adjustability, operational features, automated lubrication, maintenance access platforms and doors, arrangement, and specifications for all screens (including fiber, fines, OCC, polishing, and glass breaker screens) in the Equipment Processing System shall be designed in accordance with the latest industry standards for screening devices to provide the highest degree of automated materials separation efficiency and flexibility of operations. Maximizing the ease and simplicity of maintenance for all screens, as well as all Equipment Processing System equipment, is mandatory.

All screens shall be self-cleaning and anti-wrapping to the greatest extent possible. Access doors (with proper lock-out) shall be provided for each screen so that maintenance personnel can access and clean the screens.

6.4. SORTING STATIONS AND STAFFING

The Equipment Processing System shall emphasize automation over manual sorting as much as reasonably possible. The primary purpose of any manual sort station provided shall be for quality control.

Quality Control (QC) stations shall be provided to ensure the quality of all material sorted by automated means, including but not limited to optical sorting, robotic sorting, and eddy current separation (ECS) except as otherwise approved by the Engineer.

Sorting stations shall be provided throughout the Equipment Processing System for manual and quality control sorting purposes. All sorting stations shall be designed in accordance with all OSHA, ANSI and MRF industry standards. The placement and quantity of sorting stations provided in the Equipment Contractor's design shall be reviewed closely with City and the Engineer.

Each sorting station shall be provided with the capability to positively sort a minimum of two (2) target materials. Target materials include the specified commodities and trash.

The Equipment Contractor shall identify the quantity and locations of sorting staff. The quantity of staff should be based on sorter productivity equal to industry standards, the amount of trash (non-recyclable materials) present in the stream and the desire and obligation to manufacture quality material for sale. The staffing recommendations will be provided by the Equipment Contractor to the Engineer for review and approval. The proposed staffing will be considered in the evaluation of the proposal and will be the staffing levels for the Acceptance Test.

A Sorter Training Plan will be provided by the Equipment Contractor to the Engineer for review and approval.

All sorting stations shall be accessible to other sorting stations without using stairs to go the concrete floor level, meaning once personnel have reached the sorting level, they can travel along walkways to any sort station.

The use of barrels, carts or containers for sorting the designated recyclables will not be permitted. All manual QC sorting stations shall be provided with chutes to bins or conveyors below the sorting location.

6.5. OPTICAL SORTERS

Optical Sorters shall be followed by QC sort stations that will perform the following tasks:

a) Remove trash and transfer trash into the residue system
b) Remove any material that is not the target material and convey it / them to the appropriate system.

All optical sorters shall be capable of changing target material through software adjustments.

The Optical Sorters shall be capable of recovering a minimum 95% of HDPE at not less than 95% purity, 95% of the targeted Fiber type at not less than 95% purity and 95% of PET at not less than 98% purity. These specified recovery rates shall be achieved and demonstrated while processing at the rate of 30 TPH and must be accomplished solely by the Optical Sorter(s), excluding any quality control manual sorting.

The Equipment Contractor shall properly size a redundant set of the minimum of number of air compressor systems required for the operation of the Optical Sorter units at the specified recovery rates. The air compressor system shall include a storage tank, dryer, particulate filtering system and compressed air lines with branch take-off lines for maintenance drops at each optical sorter and other locations needing compressed air for operations or maintenance. Provide additional receiver tanks near each bank of optical

sorters to provide surge capacity and to level off variations in the air flow and pressure delivered to the optical sorters during material surges.

The Air Compressors shall be located in an enclosed conditioned/vented room to prevent overheating, damage, and ensure clean intake air.

6.6. ROBOTIC SORTERS

Robotic Sorters are optional however they may utilize artificial intelligence in the Equipment Processing System where the Equipment Contractor can demonstrate and prove their inclusion to be advantageous operationally and/or financially.

Robotic Sorters may be capable of positively sorting a minimum of two (2) target commodities.

Robotic sorters may be capable of changing their target materials through software adjustments.

Robotic Sorters can include continuous improvement features such as access to a dynamic library of material features and characteristics that will improve each Robotic Sorter's effectiveness over time.

Robotic Sorters may be connected to the internet to allow for software updates from the Original Equipment Manufacturer and remote monitoring by the Operator.

All Robotic Sorters included in the Equipment Processing System may be integrated into a single system that provides the Operator with robust and comprehensive analytics and tools in real time, allowing for efficient operation of the Equipment Processing System.

6.7. EDDY CURRENT SEPARATOR

An Eddy Current Separator shall be provided to separate and recover non-ferrous metals.

The Eddy Current Separator shall be of an eccentric rotor design to ensure an extended service life.

The Eddy Current Separator shall be fed by a vibratory feeder that provides metered burden depth.

A quality control station shall be located after the Eddy Current Separator for the purposes of quality control to achieve a UBC grade and to sort and recover aluminum alloys. This QC station will manually sort non-UBC and trash where each will be conveyed to their respective storage bin or disposal location.

6.8. FERROUS PROCESSING EQUIPMENT

A drum magnet shall be provided for automatic separation of ferrous containers from the stream. Ferrous containers shall be transferred to the FE storage bin.

Magnetic head pulleys shall be provided for automatic removal of tramp ferrous materials from the streams feeding the ECS unit.

6.9. STORAGE BINS

All storage bins for containers are to be complete, self-emptying sloped floor style bins with rising guillotine door/bin gates operated by individual gate lifting winches or by hydraulic actuated hinged gates.

Each storage bin shall be sized to store not less than 2 bales of material.

6.10. TRASH/RESIDUE HANDLING EQUIPMENT

Residue shall be collected from throughout the Equipment Processing System and conveyed into a single residue handling system for the entire facility. The existing residue conveyor directly feeds to the residential side tip floor of the transfer station. Contractor must have a shorter belt that will feed to the commercial side tip floor.

6.11. BALERS AND BALER FEED CONVEYORS

The Equipment Processing System shall have a minimum of two (2) automatic balers.

In the event either baler requires shut down for maintenance or is otherwise offline, baling redundancy shall be provided utilizing a system of reversible conveyors.

Material storage bins and bunkers will feed directly into the baler infeed conveyor system, using walking floor type bunker conveyors and rising guillotine gates, operated by individual gate lifting winches or swing hinged gates operated by hydraulic actuators.

6.12. ACCESS PLATFORMS

Integrated, elevated steel platforms, with stairways and hand railing shall be provided as required to permit personnel access and egress to all sorting stations and to maximize maintenance access for screening and all other processing equipment.

All employee workstations must be accessed from elevated platforms provided by the Equipment Contractor. Designs that require employees to walk on the operating floor to change workstations are not permitted.

All platforms, stairways, ladders and hand railing shall be designed in accordance with all federal, state and local codes.

6.13. PROCESSING SYSTEM CONTROLS

All equipment shall be well integrated so that the entire system operates as one interconnected system. Control features shall include sequential starts/stops, lockout of

parallel equipment when selected equipment is operating, and start/stop interlocking of related equipment. The control equipment shall consist of a motor control panel with main disconnects, motor starters, VFD's, a PLC controller, input/output racks, and central consoles with touch screens.

6.14. WARRANTY

The entire system supplied must be unconditionally guaranteed by the Equipment Contractor against errors, omissions, non-conformance to the Contract Documents or defective design, parts or components and workmanship for a period of two (2) years beginning on the date of Acceptance. Any parts replaced under warranty shall be extended with not less than one (1) year warranty after the warranty defect has been fully corrected. Any expense from the correction of any or all defects occurring during the warranty period and the extended warranty period (as applicable), including parts, labor, and mileage shall be borne by the Equipment Contractor. Warranties of longer duration or broader scope shall be identified and will be considered.

7. CONSTRUCTION AND INSTALLATION REQUIREMENTS

Contractor will be required to provide information related to management qualifications, cost and technical aspects that demonstrate the Contractor's ability to successfully meet the City's needs and objectives. The Contractor shall be responsible for demolition and dismantling of all unused existing equipment and the City will be responsible for providing containers and trailers for disposing obsolete equipment off-site from the MRF. Contractor is responsible for installing and testing equipment. Contractor is responsible for coordinating and processing any warranty claims for two years beginning after installation and testing of all equipment.

7.1. PROJECT MANAGEMENT

Contractor will plan, lead and report work from all team members that meets the City's goals and objectives.

7.2. SCHEDULE AND MILESTONES

Contractor is required to provide a projected timeline and milestones of project start and completion date.

7.3. MECHANICAL

Contractor will provide mechanical installation of all equipment that is included in their proposal. This includes assembly and erection of all equipment necessary to process recyclables to a sellable commodity (including, but not limited to, compressors, conveyors, steel platforms/structures, etc.). The City will work with the Contractor to design and build a room to keep compressors in a controlled environment.

7.4. CIVIL WORK

Contractor is responsible for any civil work that is required, such items include, but are not limited to, building modifications, excavation, concrete work, and demolition, or dismantling of any structures.

7.5. ELECTRICAL

Contractor will be required to coordinate electrical engineering, design and installation relative to all equipment and controls power requirements. Also, provide a recommended enclosure or enclosed area to allow for conditioned air for compressors. The City will provide HVAC to the compressor "room."

7.6. START-UP AND TRAINING

Contractor will manage the system functionality and process commissioning, as well as training staff on the operation and maintenance of equipment.

8. AREAS FOR THE CONTRACTOR'S USE

8.1. The Contractor's personnel shall always remain in designated Contractor use areas and only those personnel engaged in Service activities shall be in Contractor use areas. Further, the Contractor's personnel shall not interfere with refuse operations or other functions being performed or activities being carried out at City Facilities that are not under the direct purview of the Contractor as herein provided.

8.2. The City shall provide the following areas at the 27th Ave. Transfer Station for use by the Contractor:

8.2.1 MRF Building. The Contractor shall be provided access to the MRF building, bale storage area and recycle tip floor.

9. MEETINGS AND COMMUNICATIONS

In order to reduce potential problems and to provide a forum for discussing and resolving any operational questions or issues that may arise, the Parties shall meet on a regular basis and shall adopt certain communication procedures as follows:

9.1. The Contractor and the City shall each designate a person (the "Service Coordinator") for the purpose of overseeing the Services and coordinating communication between the City and the Contractor. Either Party may change its designate Service Coordinator by notifying the other Party, in writing, of the change. To the maximum extent possible, communications between the City and the Contractor concerning the Contract shall be directed through the Service Coordinators. The Service Coordinator shall have the authority, on behalf of the Party represented, to discuss and resolve service-related matters such as operational problems, customer complaints, and public relations.

9.2. The Contractor shall have a responsible person in charge during and after facility operating hours with the authority to make decisions relevant to Services. The Contractor shall always have representatives available who are responsible for responding to emergency situations. The names and phone numbers of emergency representatives shall be given to the City ten (10) days prior to the Commencement Date and shall be updated as soon as any changes are made.

9. FACILITY HOURS

The general operating hours for the 27th Ave. Transfer Station is from 4:30 a.m. through 5:00 p.m., Monday through Friday, and 5:30 a.m. through 4:00 p.m., Saturdays and most holidays. The facility is closed on Sundays. The City observes the following legal holidays: New Year's Day, Thanksgiving Day, and Christmas Day.

10. EVALUATION CRITERIA

In accordance with Administrative Regulation, 3.10, Competitive Sealed Proposal awards shall be made to the responsible proposer(s) whose proposal is determined to be the most advantageous to the City based upon the evaluation criteria listed below. The evaluation factors are listed in the relative order of importance and more details provided. The total available points equal to 1,000.

Group 1 and Group 2 proposals will be evaluated independently.

	Category- GROUP 1 (MANDATORY)	Points
1	Price	325
2	Design Layout and Maintenance Flexibility	200
3	Proposed Equipment and Impact on Labor	150
4	Warranty Provided Above Minimum Requirement	50
5	Experience/Past Performance Training and Startup Plan Implementation Schedule References	275
	TOTAL	**1000**

10.1. MINIMUM QUALIFICATION CRITERIA

The Minimum Qualification Criteria that each Proposer is required to meet are set forth below. Proposals that do not meet the Minimum Qualification Criteria will not be further evaluated by the evaluation team. Each Proposer or Proposal, as applicable, must satisfy the following Minimum Qualification Criteria:

1. The Proposer and all Participating Firms must be registered or authorized to do business in the State of Arizona.
2. The Proposer must have successfully developed, permitted, designed and/or constructed no less than three (3) projects similar in scope, size, use, and function completed. Examples of completed projects under a design-build delivery model are required.
3. The Proposer must have at least five (5) years of successful experience in the design and manufacture of similar equipment.
4. The Proposer must be able to provide references for at least five (5) successfully completed projects.

5. Proposers must commit to provide qualified service persons at the site for crucial repairs and must ensure that in the event of the need for an emergency repair, the Equipment Contractor will provide a qualified representative will be sent to the MRF no later than 48 hours.

10.2. QUALIFICATIONS AND RELEVANT EXPERIENCE

The Proposer must have the requisite capabilities, licensing and certification, and experience to perform the Work. Proposers must have qualifications and previous experience in similar projects and in performing services similar to the Work required under this RFP. City will evaluate the experience of key personnel on the Proposer's team, including project management, project engineers/design contractors, construction contractors, and other key personnel. City will also evaluate the adequacy of staffing and the training/experience of key management and technical personnel based on its review of the resumes submitted by the Proposer.

a) City will consider the number of completed projects of similar size, purpose, and use, as well as any projects completed under a design-build delivery model.
b) City will consider the experience of key design-build team members in satisfactorily completing similar projects based upon number, size, and scope of projects.

10.3. VIABILITY OF TECHNICAL PROPOSAL

The technical viability of the design-build elements of the Proposal. The preliminary design and construction concept required to be submitted pursuant to this RFP will be evaluated to determine their reliability, operability, and flexibility in the context of City's goals and objectives for the Project. City will consider:

a) Proposer's understanding of City's project objectives and scope of services, as exhibited in its Proposal.
b) Practicality, suitability, and innovation contained in the Proposer's technical approach to the Project.
c) The Proposer's proposed schedule for Project completion.

10.4. PROJECT ORGANIZATION

City will evaluate the appropriateness, adequacy, and flexibility of the Proposer's organizational structure for managing the Project and will also determine whether the Proposal demonstrates the Proposer's ability to procure necessary equipment and provide services by the dates shown in the Proposer's proposed schedule.

10.5. REFERENCES

City will evaluate the strength and character from each of the Proposer's project references provided. Such evaluation will consider the Proposer's history of compliance with project schedules, as well as the quality of its completed work. It should be noted, City has the right to conduct independent reference checks, and as such, may contact other entities for

which the Proposer has completed a project but who have not been listed as references. City will consider:

1. Proposer's record for regulatory compliance, including permitting, in prior projects.
2. Proposer's record of contractual compliance on prior projects based upon recorded contract disputes, record of payment of actual or liquidated damages and record of litigation.
3. Proposer's history of schedule compliance, completion within the required contract time for prior projects and whether the Proposer has paid actual or liquidated damages for untimely completion.

10.6. FINANCIAL CAPACITY

City will evaluate the financial strengths of the Proposer. The financial capacity assessment will consider the adequacy of the Proposer to assure full and timely performance of the Equipment Contractor's obligations under this Agreement and the overall financial stability of the Equipment Contractor.

11. GENERAL INFORMATION

11.1. INTENT OF CONTRACT DOCUMENTS

These Contract Documents include Scope of Work and its Attachments, Contract Drawings and other information that are intended to be complementary for the Equipment Contractor to provide for the proper and complete furnishing and execution of the Work presented herein. Reference to standard specifications, Contract Drawings, manuals or codes shall mean the latest version in effect at the time of the issuance of this document.

It is the responsibility of the Equipment Contractor to include any additional work to result in a complete and fully integrated project. Any work not specifically specified but implied by the descriptions shall be deemed included if necessary to provide a complete project, as set forth in the Request For Proposals (the "RFP").

The Equipment Contractor shall include all costs to fully execute, deliver and complete all Work associated with providing a complete Equipment Processing System. The costs include, but are not limited to the following: materials, labor, tools, equipment, utilities, transportation, supervision, temporary construction, and other items to complete this Project within the specified time. The Equipment Contractor shall also include in the cost of the Project all costs relating to the costs of design, submittals, coordination, manufacturing, fabrication, shop testing, shipping, receiving, unloading, storing, protecting, assembly, erecting, rigging, aligning, wiring, painting, sealing, inspecting, quality control, performance testing, training, commissioning and demonstrating as a fully functional and operating system in full compliance and adherence to the Contract Documents, all

applicable codes and standards and good engineering practices and standards applied in the recycling industry.

12. WORK BY OTHERS

This section describes Facility Improvements that will be performed by others under contract with the City in preparation for the Equipment Processing System. Note, the work described in this section is outside the Work of the Equipment Contractor and is provided for informational purposes to the Equipment Contractor, however the Equipment Contractor is responsible to provide on a timely basis all information needed for this work to be engineered, designed, procured, permitted, and constructed without delay to support the Project Schedule.

City's goal for the Facility Improvements is to prepare its facility to house a state-of-the-art Equipment Processing System. In that goal, City recognizes that collaboration with the Equipment Contractor is paramount to the long-term success of the Equipment Processing System.

The scope and details of these Facility Improvements shall be determined through a collaborative effort between City, Engineer, the Equipment Contractor, and other parties at City's discretion.

Facility Improvements to be completed by the City include but may not be limited to:

1. Upgrading the existing electrical service to provide power for the Equipment Processing System.
2. Provide electrical power service drops to the Equipment Contractor's electrical panels (load centers).

The Equipment Contractor's role in the Facility Improvements will be to provide City with accurate specifications and all interface requirements in a timely manner that will ensure that all Facility Improvements will accommodate the Equipment Contractor's Equipment Processing System design. Failure to provide accurate or timely information will be the sole fault of the Equipment Contractor and any costs to correct or adjust the deficiency will be to the Equipment Contractor's account. The following are examples of information (but not limited) to be provided by the Equipment Contractor as required by the Equipment Processing System, subject to the approval of the Engineer.

1. The location/dimensions of any pits and sumps.
2. The model and details of the compressors so a room enclosure can be provided.
3. Electrical load requirements and locations for the requirements.

4. Building outline dimensions for any building additions requested.
5. Floor loading conditions that do not exceed the capacity of the existing floor.
6. Egress plans per state Life Safety requirements.
7. Wall opening locations and sizes.

All Facility Improvements shall be made at City's sole discretion and shall be engineered/designed and procured separately by City. The Equipment Processing System Equipment Contractor will be required to coordinate their installation work with the City and plan to work together in a cooperative and cohesive manner without any labor relation issues or unreasonable interference or interruption to each other.

13. Qualifications

Manufacturer Qualifications: Equipment manufacturers shall be experienced in manufacturing equipment of types and capacities similar to those indicated for this Project and with a service center capable of providing training, parts, and emergency maintenance and on-site repairs at the Project site within 48 hours' maximum response time. Manufacturers shall have at least five (5) years successful experience in the design and manufacture of similar equipment and fully integrated processing systems equal to our greater than the minimum requirements of this Project.

Equipment Contractor Qualifications: Equipment Contractor shall have verifiable experience in the installation and maintenance of all equipment in included in their design. Equipment Contractor shall have experience working with municipalities and public authorities.

Source Limitations: Equipment Contractor shall obtain recycling process systems and auxiliary components from a single systems supplier with responsibility for the entire system. Equipment Contractor shall furnish a system built from components that have proven to be reliable and compatible with each other and are coordinated to operate as a system as evidenced by test reports from existing recycling operations of the system supplier.

City will not permit any unproven technology to be used in the Equipment Processing System. However, the Equipment Contractor may submit a design that utilizes unproven technology to be considered as an alternate to the Equipment Contractor's primary design. It will be at City's sole discretion to consider an Equipment Contractor's alternate design.

The Equipment Contractor shall provide in its Proposal and subsequently during Contract Execution data supporting whatever technology or equipment is included in the Equipment Processing System that substantiates that all technology or equipment has been utilized and accepted in this industry with a successful operating history. This can be in the form of a list of reference contacts to be verified by the Engineer.

The Equipment Processing System shall be designed and constructed in accordance with all federal, state, and local building, safety, electrical and fire codes, as well as to current MRF industry standards, including but not limited to:

1. American Gear Manufacturer's Association (AGMA)
2. American Institute of Steel Construction (AISC)
3. American National Standards Institute Z245.4 (ANSI)
4. American Society of Mechanical Engineers (ASME)
5. American Welding Society (AWS)
6. Anti-Friction Bearing Manufacturer's Association (AFBMA)
7. Conveyor Equipment Manufacturer's Association (CEMA)
8. Mechanical Power Transmission Association (MPTA)
9. National Electric Code (NEC)
10. Institute of Electrical and Electronic Engineers (IEEE)
11. National Fire Protection Association (NFPA)
12. National Standard Plumbing Code (NCPC)
13. National Electrical Manufacturer's Association (NEMA)
14. Occupational Safety and Health Act (OSHA)
15. Rubber Manufacturer's Association (RMA)
16. Steel Structures Painting Council (SPC)
17. Underwriters Laboratory (UL)

14. RESIDUE/RECOVERY RATE REQUIREMENTS

The Equipment Processing System shall have a minimum recovery rate of 95% for each of the following material product types:

Recycle Commodities	
Material Group	**Material Grade**
Fiber	1. SRPN – Special news mix or #56 grade 2. OCC – Old Corrugated Cardboard
Metals	3. UBC – Used Beverage Containers 4. Ferrous Metals – Steel Cans 5. Scrap Metal
Plastics	6. PET – Polyethylene Terephthalate 7. HDPE – Natural 8. HDPE – Color 9. PP – Polypropylene 10. Mixed Rigid Plastics (#1-7) 11. TBD – Spare Bunker
Glass	12. GLASS- 3 mix

The Equipment Contractor shall be responsible for guaranteeing the Equipment Processing System meets or exceeds each of the required recovery rates for each commodity. This includes all aspects of the Equipment Processing System, including manual sorting. The Equipment Contractor shall submit a training plan for approval of the Engineer. The productivity of sorters shall be stipulated in the training plan in accordance with industry standards. The Equipment Contractor is not responsible for the Equipment Processing System being unable to meet the required recovery rates of a particular material type if the Engineer determines that it is the sole fault of the sorters.