# Bidding Specifications and Guidelines
# 24’ x 20’ Mobile Stage

| ITEM | SPECIFICATIONS | YES | NO |
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| **1.0 STANDARD FEATURES** | | | |
| *1.1 Manufacturing Norms & standards* | Manufacturer shall state they are the owner of the Brand Name and trademark of the product and that the product is entirely fabricated and assembled at its manufacturing plant by its qualified personnel. Manufacturer must have a team of professional engineers specialized in the design and fabrication of that model.<br><br>The manufacturer shall state that no more than 20% of the product is fabricated by subcontractors.<br><br>Manufacturer shall have a quality control manual demonstrating each checkpoint inspected during the manufacturing process.<br><br>Manufacturer shall provide proof they are properly accredited by competent authorities and that all welders working on the manufacturing of the product have their CSA W47.1 and CSA W 47.2 welding certifications or equivalent. | | |
| *1.2 Track record* | Must be an established model and manufacturer shall have built a minimum of 20 units of the same model in its facilities.<br><br>Manufacturer shall provide a reference list of 10 buyers who have purchased the same model.<br><br>The manufacturer shall include a brochure depicting the serial product described in the quote. | | |
| **2.0 SAFETY DECLARATION** | | | |
| Manufacturer will supply a safety declaration which contains at least the following:<br><br>- Manufacturer attests to the safety of the staging environment that its mobile staging products provide for staff, for talent and for the public.<br>- Manufacturer attests that there are no ongoing or past lawsuits that are the result of past or recent accidents caused by any of its products. | | | |

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| **3.0 Sustainable Development** | | | |
| | Manufacturer shall be committed to society's need for environmental, recyclable and sustainable manufacturing procedures.<br><br>Manufacturer shall build products in state-of-the-art energy efficient facilities that adhere to strict environmental criteria. | | |
| **4.0 Mobile Stage Structure:** | | | |
| *4.1 Aluminum Structure* | Chassis and stage structure must be made of series 6000 aluminum shall be both designed and custom built by the manufacturer. No aluminum welding will be done on the chassis assembly. These components will be assembled with structural Huck type rivets. Strong, durable, and maintenance free. Exceptional life expectancy of the aluminum structure: 20 years when properly maintained. | | |
| *4.2 Testing* | Prototype shall be field-tested at twice the working load. All manufactured stages shall be quality tested at 1.2 times the working load. | | |
| **5.0 Hydraulics:** | | | |
| *5.1 Leveling and Set-Up (Hydraulic)* | Shall come complete with a fully hydraulic leveling and set up system and double mast lifting mechanism. This is to include the ability to raise the roof with up to 3,800 lb of balanced lighting and sound equipment from stage level to its highest point, in addition to leveling the stage floor. Set up time in less than 30 minutes. No tools required and no hand cranking necessary. | | |
| *5.2 Double Mast Lifting Mechanism* | Shall include one galvanized steel mast per side, for a complete hydraulic set up of stage, sound, lighting and scenic equipment. Masts must be galvanized steel & have minimum dimensions of 7" x 7". Masts must be designed to support combined rigging and wind loads. Each mast is made of three (3) sections and pads. Clearance between encased mast sections and pads must be a maximum of 1/32" according to both main flex axes. Equally, the flex strain caused by an unbalanced roof load of 1,550 lb must be properly compensated and controlled by the pads in order to maintain proper functioning of the lifting system. | | |
| *5.3 Hydraulic Stabilizers* | Shall include a minimum of four (4) hydraulic stabilizers designed to support up to 15,000 lb vertically and 2,000 lb laterally. | | |
| *5.4 Hydraulic Motor Power* | Built in, fuel powered engine for operating the hydraulic system must be provided. No other power source required. | | |

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| *5.5 Hydraulic Security and Safety* | Hydraulic system shall include a secondary locking mechanism composed of pins and posts when fully open. The main mast locking pins must be ¾'' in diameter. The system shall include safety valves on all hydraulic cylinders. Shall include flow control valves for precise calibration. | | |
| *5.6 Stage Height from Ground* | Hydraulically adjustable from 3'-6" to 4'-3''. | | |
| **6.0 Roof Structure:** | | | |
| *6.1 Trussing* | Unit shall be equipped with at least four (4) roof trusses. Trusses shall run the complete width of the stage roof (24'). Trusses to be 2" aluminum tubing for rigging industry standard sound and lighting equipment. Front and rear trusses shall extend at least 1'-10" past the edge of the stage floor. Each front/rear truss shall be able to hold up to 1,200 lb. Two (2) trusses shall be located at the central section of the roof, each capable of holding up to 750 lb balanced or unbalanced load. Shall not require tools, chain hoists or motors. | | |
| *6.2 Rigging Points* | Shall include 24 independent rigging points. Each rigging point shall be able to hold up to 1,500 lb. Four (4) additional points located in front of each corner post with a capacity up to 1,500 lb for rigging PA sound systems shall be available. | | |
| *6.3 Rigging Bar* | Shall include a 2'' tubing, aluminum rigging bar of 14' that joins 2 rigging points, close to the roof, at around 4". Rigging bars shall be able to hold 40 lb per linear foot. | | |
| *6.4 Side Overhang Rigging Beams* | Shall include two (2) 6' 6" Side Overhang Rigging Beams with a capacity of 1,500 lb each to hang sound equipment and video wall. | | |
| *6.5 Roof Structure* | Shall be an aluminum frame roof structure. Designed to support 11,400 lb of equipment or 20 psf. Shall not deflect beyond L/180 under live load. | | |
| *6.6 Roof Covering* | Shall consist of a waterproof, gel-coated, UV resistant 1/8" thick fiberglass roof. Fiberglass must be wrapped and molded around the roof structure. No other type of material for roof covering and no other method than that of wrapping fiberglass around the structure will be considered as equivalent. | | |
| *6.7 Secondary Roof Support (Corner Posts)* | Shall include four (4) corner posts 3" x 3" connecting the roof corners to the stage floor, providing additional safety factor. Designs with posts from roof to ground will be deemed unacceptable. | | |
| *6.8 Height from stage roof to floor* | Downstage clearance of 14'-6". Upstage clearance of 13'-4". | | |

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| *6.9 Roof exceeds Floor* | Roof shall overhang the floor surface by at least 42” width and 10” depth, providing protection for the performers and equipment against the elements. | | |
| **7.0 Stage:** | | | |
| *7.1 Stage Surface* | The floor shall be made of ¾" thick birch plywood sheets. Floor shall have a black non-skid surface with high wear resistance and be easy to maintain. | | |
| *7.2 Reinforced Deck Edges* | Shall include aluminum reinforced deck edges to protect entire perimeter of stage surface. | | |
| *7.3 Stage Width* | Shall be no less than 24’ from left to right. | | |
| *7.4 Stage Depth* | Shall be no less than 20’ from back to front. | | |
| *7.5 Stage Expandability* | Floor space shall be easily increased to 40’ x 32’, for example by adding optional 4’ x 8’ or 4’ x 4’ extension platforms. | | |
| *7.6 Platform Support Brackets* | Shall include support brackets integrated to stage frame for easy installation of optional 4’ x 8’ or 4’ x 4’ extension platforms and skirting. | | |
| *7.7 Quick Leveling Legs* | Stage legs and screw jacks shall be rated at a minimum of 10,000 lb. Adjustable height shall address irregular terrain and permit installing stage at 4’ 3’’ high. | | |
| *7.8 Adjustable Stairway* | Shall be aluminum, 6” adjustable and a minimum width of 3’. Shall include two (2) handrails. Shall have Teflon sliders for handling on deck surface. | | |
| *7.9 Stage Guardrails (removable)* | Lightweight, aluminum guardrails must mount to stage edge to protect the sides and back of the upstage area. Guardrails shall be tested at 400 lb | | |
| *7.10 Work Lighting* | Shall include at least four (4) LED work lights, with controls at stage level and powered by an integrated battery. | | |
| *7.11 Floor Structure* | Shall resist at least 150 psf. | | |
| *7.12 Complete Stage Set Up* | Shall not require hand tools. No chain hoists or motors and no hand cranking required. Average set up time approximately 45 minutes. | | |
| *7.13 Electrical system* | The electrical system shall be powered by a deep cycle battery, integrated into the stage. Three (3) methods of recharge shall be available: the towing vehicle’s alternator, an external AC power source and boosting terminals. | | |

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| **8.0 Trailer:** | | | |
| *8.1 Towing Vehicle* | Can be pulled with a pick up truck or a commercial tractor. | | |
| *8.2 Unit Weight* | Shall be under 10,000 lbs unladen. | | |
| *8.3 Extra Cargo Capacity* | In closed position the trailer shall have at least 766 cu. ft. of storage area where up to 5,000 lb of extra cargo can be stored for transport. | | |
| *8.4 Trailer Height* | Shall have a maximum height of 11'-1". | | |
| *8.5 Trailer Lights* | Must be fitted with LED lights. | | |
| *8.6 Hitch Mechanism* | Shall be equipped with drawbar and pintle eye or ball coupler as standard. | | |
| *8.7 Leaf Spring Axles* | Suspension shall be provided by two (2) leaf spring axles. Shall be easy to inspect - 16,000 lb capacity. | | |
| *8.8 Tires* | Four (4) 16" tires. | | |
| *8.9 Spare Tire* | Shall come with a full size spare tire on standard rim complete with integrated storage. | | |
| *8.10 Brakes* | Shall include electric brakes on all wheels and emergency breakaway system required by DOT. | | |
| *8.11 Tie Downs* | Shall include a minimum of ten (10) tie downs for fastening cargo. | | |
| **9.0 Standards:** | | | |
| *9.1 Full Conformity to Applicable Regulations* | Manufacturer shall comply with ICC, IBC, SAE, DOT, NFPA-701, NBC-2005, ULC S-109 and all welding must be CWB certified and inspected by an independent firm according to CSA 47.1 and 47.2 norms or equivalent. Manufacturer shall provide Engineering Certification for the State or the Province where the sale will take place. | | |
| *9.2 Wind Resistance* | Shall withstand sustained winds of no less than 115 mph without windwall and up to 77 mph with windwall installed. Inferior safety factor in resisting wind is deemed unacceptable. | | |
| *9.3 Vertical Load* | Floor: 150 psf. / Roof: 20 psf. | | |
| *9.4 Rigging Load* | Up to 11,400 lb net roof capacity with sound wings. | | |
| *9.5 Training / Certification* | Three (3) day Comprehensive Training Program | | |
| **10.0 Documentation:** | | | |
| *10.1 Operations* | Two (2) complete operations manuals. | | |

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| *Manuals* | | | |
| *10.2 Certification / Drawings* | Drawings shall be indicative of specifications. Shall include stamped certification from a licensed engineer, stating that the stage meets the required safety standards as per the International Building Code of 2018 and the National Building Code of 2010 for live loads, permanent loads, point loads and wind resistance. Certificate for the State or the Province from a licensed engineer shall be provided with the bid. | | |
| *10.3 Set up Video* | Video showing set up and operation shall be available upon request. | | |
| **11.0 Service:** | | | |
| *11.1 Warranty* | Warranty shall cover the stage for a minimum of one (1) year from the date of acceptance by the City, including all hydraulic components, mechanical devices, electric brakes, axles and hitch mechanism, and all items not considered under normal wear and tear. A sample of the warranty shall be included with bid proposal. | | |
| *11.2 After Sales Service* | 1-800 Hotline for 24-hour technical support. | | |
| *11.3 Parts & spares* | Shall stock all standard wear components and spare parts for a period of at least 10 years. | | |
| **12.0 OPTIONS:** | | | |
| *12.1 Vinyl Windwall* | Windwall shall be weatherproof and fire retardant to protect the sides and rear of the stage. It shall be made of 18 oz. black vinyl and be quick to install. Installation shall be keder and rail system and not require hand tools. Shall include two (2) standard size doors at least a 9'-10'' wide door at the back. NFPA.-701 and ULC S-109 approved. | | |
| *12.2 Vinyl Skirting* | Shall be weatherproof, fire retardant, skirting for front and sides of the stage. Shall be made of 18 oz. black vinyl and be quick to install. NFPA.-701 and ULC S-109 approved. | | |
| *12.3 Extension Platforms* | Shall provide 4 x 4' x 8' and easily attach to stage floor to extend stage size. Height shall be adjustable with screw jacks and legs. Extension platforms shall be made of ¾'' thick birch plywood coated with quality black non-skid finish and high wear resistance. No tools shall be required. | | |
| *12.4 Platform Guardrails (Removable)* | Shall provide 8 lightweight, removable aluminum guardrails, which easily mount to the edges of the extension platforms, capable of protecting the sides and back of the extended surfaces. | | |

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| *12.5 Reinforced flybays* | Shall include line array support, be 6' from the roof and provide ability to rig 1,500lb of equipment sound and video equipment | | |
| *12.6 Lateral Banner Supports* | Shall include lateral banner supports with a lower bar banner tie down on each side which accepts lateral banners of 6'-6'' x 15'-9''. Shall include pulley rigging points for retractable banner system. | | |
| *12.7 Rooftop Banner Support* | Shall include 7 vertical posts easily mounted to the roof edge and shall accept banners of 3'-10" x 24'-0" or 37'-0". No tools required. | | |
| *12.8 Banner Framing Bars* | Shall include a set of horizontal aluminum slide-in tracks which allows for straight and improved esthetic installation of rooftop banners. | | |
| *12.9 Handicapped Access Device* | Shall allow handicapped access to stage via a disability lift that can be installed anywhere on the perimeter for stage access locations that vary depending on the event. | | |
| *12.10 Storage Compartment* | Shall provide a compartment for storage within reach in closed position. Minimum dimensions of 14" x 16" x 36". | | |
| *12.11 Underfloor Storage* | Shall provide underfloor storage for line array supports, banner supports, legs, etc.. | | |
| *12.12 Power Distribution* | Portable power distribution - 50 amp for basic sound and lighting package | | |