

December 29, 2010

**ADDENDUM #1**

**11-012 Truck Mounted 220 Gallon Air Atomizing Application Striping Unit**

This Addendum No. 1 contains the following addition to the specifications and a revised bid form.

Item Number	Feature Description	Meets	Exceeds	Not available or does not meet spec
<b>Y. HYDRAULIC SUPPLY:</b>				
109)	Hydraulic power for the controlling the outrigger and paint agitators, shall be from a gear type hydraulic pump, direct driven by the air compressor engine (no belts allowed). This pump shall have a minimum capacity of 1.08 cubic inches per revolution.			
110)	Hydraulic system must be able to operate both outriggers and all the paint agitators at the same time.			
<b>AIR COMPRESSOR</b>				
<b>Z. AIR COMPRESSOR GENERAL:</b>				
111)	The air compressor shall be an Ingersoll-Rand unit capable of supplying at least 185 cubic feet of free air per minute at 100 psi.			
112)	All containers shall be A.S.M.E. approved for 100 psi working pressure. All necessary safety valves, piping and fittings shall be included.			
113)	The compressor engine shall be diesel powered, liquid-cooled, four-cycle, four cylinder, overhead valve construction, heavy duty industrial type. It shall include as standard equipment: a fin-tube type radiator, lubricating oil filter, 12 volt electrical system, pushbutton starting, and recommended air filter to be shared with the compressor air intake. The air compressor engine shall have its own 28 gallon fuel tank.			
114)	A heavy duty, high capacity filter/dryer <u>Laman #140</u> , capable of passing all air from the compressor, shall be installed in the air line.			
115)	An additional heavy duty, high capacity water separator shall be installed in the air line after a <u>16 ft. long finned after-cooler</u> .			
116)	A common skid base shall be provided under the engine and compressor so they may be handled and mounted as a package unit. The compressor shall be mounted to the platform longitudinal members. A complete cover with hinged or sliding access panels shall be supplied for weather protection.			
117)	The operating control panel shall be located at the end of the compressor unit and the unit mounted so that it is at the curb side of the vehicle and include, in addition to operating controls, gauges showing oil and air pressures, water temperature, and voltmeter and an electric hour meter.			

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118)	The unit shall be furnished with the following accessory items as a standard part of the package: hour meter, oil level gauge, automatic moisture trap for controls, automatic blowdown valve, minimum pressure valve and a hydraulic pump.			
<b>GUIDANCE SYSTEM</b>				
<b>AA. HYDRAULIC POINTER SYSTEM</b>				
119)	A front mount adjustable pointer guide shall be provided. The guide shall be constructed using a trailer ball and coupling type system.			
120)	The pointer shall have a "main" pivot point located near the center of the bumper. To this pivot shall be fixed the "main guide arm". The "main guide arm" will be able to swing out for either edgeline or centerline control. A second pivot point will be located at both outer bumper point locations. This pivot point will offer support for the "bracing arm". The "bracing arm" shall swing out and support the "main guide arm" at approximately its mid point. This process shall be reversible to permit the "main guide arm" to be used for either edgeline or centerline operation. An additional "telescoping section" shall be inserted into the "main guide arm" to allow a pointer extension from 10 ft to approximately 13 feet.			
121)	The unit shall be mounted directly on the front bumper, and attached to the truck frame, so designed that it can easily be swung and secured to brackets for easy transport. The guide shall be constructed of solid tubular steel and have a pneumatic rubber-tired caster wheel, and adjustable pointer guide and flag socket located at its forward end.			
122)	The pointer shall be equipped with a hydraulic lift capable of lifting the pointer off the ground approximately 45 degrees for transporting or maneuvering the striper. Hydraulic power take-off from chassis power steering shall not be acceptable. A remove electric switch shall be mounted in the chassis cab to activate a control valve for the pointer and shall be easily accessible to the driver.			
123)	The pointer shall require manual assist to locate in the transport position.			
<b>TRAFFIC CONTROL LIGHTING</b>				
<b>AB. LIGHT BAR</b>				
124)	The striping unit shall be equipped with an amber LED cab mounted light bar. This light bar shall be a Federal Signal JETSTREAM LED JLL5402-SB.			
125)	The control switch shall be a lighted rocker switch located in the truck cab.			
<b>AC. STROBE LIGHTS:</b>				

Item Number	Feature Description	Meets	Exceeds	Not available or does not meet spec
126)	Two (2) amber LED low mount strobe lights shall be mounted at the rear, on top of the canopy. They shall be Whelen model Super-LED L360 L32LAF.			
127)	The control switch shall be a lighted rocker switch located on the operators control center.			
<b>AD. MESSAGE BOARD:</b>				
128)	A LiteSys Inc model 1020A-4, two line LED message board with eight 10" characters per line, shall be provided and fixed mounted at the rear of the vehicle behind the operator's canopy.			
129)	The message board shall have dimensions of approximately 75 inches by 31 inches. It shall be 12 volt with solid state circuitry.			
130)	A key pad type control shall be provided.			
<b>AE. CARRIAGE MARKER LIGHTS:</b>				
131)	Flashing amber/red LED lights shall be mounted at each extreme extension of the outrigger carriage.			
132)	The control switch shall be a lighted rocker switch located on the operators control center.			
<b>AF. LIGHTING, PLATFORM LED:</b>				
133)	Marker and clearance lighting shall be LED and recessed flush mounted in grommets.			
<b>CONTROL AND ELECTRICAL SYSTEM</b>				
<b>AG. CONTROL CENTER:</b>				
134)	An all aluminum control center shall be provided. This shall consist of an integral sheet metal covered framework providing space for electrical controls, spray equipment connections, heater thermostat control, and any other auxiliary parts required by the spray equipment.			
135)	The control center shall be mounted in an inclined position so that it can be observed from either operator's position. This control center shall have mounted on it, all the necessary regulators, gauges, valves, switches, and indicators required for operation of the striping equipment. All parts shall be of the panel type and located behind the panel if at all possible. An easily removable back plate with four (4) recessed latches shall allow access to the interior for service. Both a 110 psi safety valve and a condensate drain shall be located on the panel air manifold. All of the gauges shall be of the liquid-filled type. All control center switches shall be lighted rocker or push button type.			

Item Number	Feature Description	Meets	Exceeds	Not available or does not meet spec
136)	The spray equipment shall be electrically controlled by means of toggle switches and solenoid valves. The switches shall be located in two separate control panels within easy reach of the rear equipment operators. The switch sections shall also house additional switches and indicator lights for the skipline mechanism control.			
137)	Each control panel shall be located within a non-metallic enclosure with a clear hinged and latched cover. Each enclosure shall be mounted to the canopy railing and friction hinged to "flip" out of the way when necessary.			
138)	All line pattern combinations, skipline mechanism actuation, and skipline mechanism reset shall be controlled by toggle switches. Pre-selected combinations shall be obtained by activating only on switch that also simultaneously actuates or resets the skipline mechanism. One toggle switch shall be an "OFF" switch connected in such a way that when activated, it will turn off and cancel any of the above selected patterns, as well as automatically reset the skipline mechanism to a ready position. Provision shall be made so that any glass sphere guns may be controlled from the same system for simultaneous spray gun and glass gun operation.			
139)	The entire switch assembly shall be removable for servicing and attached by a pin connector.			
140)	All electrical wiring shall be enclosed in conduit type protective case. Any wires passing through the deck shall have grommets around them. All electrical controls shall be 12 volt power only. All electrical wiring shall terminate in the operator control center.			
141)	Two air suspension high back operator seats, with armrests, shall be mounted on the vehicle platform. They shall be fitted with foam rubber cushions and backs. Covering shall be weather resistant plastic. Each shall be fitted with a seat belt in accordance with S.A.E. and Federal Standards. Water resistant covers shall be supplied for the control center and operator's seats.			
<b>AH. INTERCOM SYSTEM:</b>				
142)	The unit shall have a MASTER STATION David Clark U3800 or approved equal.			

Item Number	Feature Description	Meets	Exceeds	Not available or does not meet spec
143)	The unit shall have a 12 VDC power source in-truck electrical system. The unit shall contain controls, power input and remote outputs, plus two (2) headset jacks. The unit shall be of rugged heavy gauge polycarbonate (-80 to ± 212 F) housing with all controls, connectors and covers weather-tight. The unit shall have less than 300 milliamps current draw. The intercom system shall be for a four (4) station intercom system.			
144)	The remove head set station shall be a David Clark U3802 and U3801 via C38 Jumper Cord, or approved equal and have a headset jack with listen volume control. The remote headset shall have same housing and weather tight design as MASTER STATION.			
145)	Two (2) dual ear headsets for the rear operators shall be provided. They shall provide maximum noise attenuation for hearing protection and clear, isolated reception M-7A noise canceling microphone that provides clear transmission at normal voice levels. A single ear headset shall have microphone on/off switch that allows hands free communication for the driver. The headsets shall have a five foot (extended) coil cord with weather protected PJ051 plug.			
146)	The unit shall have two conductor shielded power cord, twenty feet. Connects David Clark U3800 or approved equal to power source. One end of the power cord shall be stripped and tinned for connection to truck battery or fuse rack.			
147)	The unit shall have one (1) David Clark (C38-12 jumper cord and one (1) C38-75 jumper cord or approved equal. Jumper cords shall have four conductor shielded with MS screw-on (pin) connectors. Connects MASTER STATION and MODULES.			
148)	Hangers shall be provided for all headsets in the cab.			
<b>SKIPLINE SYSTEM</b>				
<b>AI. SKIPLINE SYSTEM CONTROLLER:</b>				
149)	The skip-setting mechanism (Skipline Inc. SM-5) shall be all electronic and shall utilize solid-state components for all active internal functions. It must process electrical pulses derived from the vehicle motion sensor and must drive 12 volt 1 ampere solenoid valves.			
150)	A means of Inductive arc suppression shall be included. It shall require little or no maintenance. Clutches, cams, gears, or devices that require adjustment will not be allowed. All guns shall be operated by applying a ground signal to activate.			

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151)	The skip-setting mechanism must generate the selected repetitive pattern without utilizing any internal or external moving parts, except operator adjusted toggle switches for establishing pattern size, placement and calibration.			
152)	Switches shall be of the three position, spring loaded center off type, and there shall be one switch each for the CYCLE LENGTH adjustment, and the STRIPE LENGTH adjustment. Switches with thumb-wheel or push button types selector switches shall not be acceptable.			
153)	An alphanumeric display shall be provided to display advisory and warning messages as well as stripe and cycle settings.			
154)	Said display must be capable of concurrently displaying at least 40 characters of text or digits. The display must be a liquid crystal type, with industrial temperature range fluid, and must be compatible with electro-luminescent back-lighting devices.			
155)	All indicator lamps must be solid-state light-emitting diode types (without filaments which may burn out).			
156)	The skipsetting system shall not use or require use of internal or external electromechanical relays.			
157)	To conserve space and weight, each skip-setter shall be no larger than 7 ½" x 7 ½" x 3 ½" excluding dials, switches and connectors; and be of the die-cast metal type box, and weigh no more than 5 pounds. The skip-setter must have master pattern length controls with adjustable offset for paint and beads.			
158)	To conserve power, the skip-setter must draw less than 1 ampere at 12 volts for internal circuits, excluding gun solenoid current.			
159)	For ease of operation, the skip-setter must have direct reading digital dials and must provide pattern capability from 1 to 999.9 ft., adjustable by 0.1 ft. Increments at any time whether at rest or in motion, without generating spurious patterns. When changing patterns, simple dial changes must suffice without resorting to "data complete" or "enter data" type controls. Also "start" indexing (reset to zero) must be instantaneous.			
160)	To aid in registration of new paint with previous painted patterns, the "ADVANCE" or "RETARD" (phase correction) system must alter the pattern length no more than plus or minus 20% while activated (not more than every fifth motion sensor pulse shall be added or omitted), and the system MUST be provided with a means of AUTOMATICALLY adjusting the cycle length by .1 foot increments if the ADVANCE or RETARD control is invoked repeatedly.			

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161)	Basic electrical accuracy of the skip-setter (excluding response time of customer-supplied solenoids and paint guns) shall be within 0.2 ft. For any combination of the following factors: Speed from one to forty miles per hour.			
162)	Supply voltage from eleven to sixteen volts D.C. Temperature variations from 0 to 60 degrees Centigrade.			
163)	Calibration must be provided to ensure that control dials agree with actual electrical output patterns. Calibration shall be done by driving a known distance and adjusting the odometer to equal the distance that was driven.			
164)	To reduce glare, skip-setter shall be finished in flat black with a black front panel.			
165)	The motion sensor shall be an electromagnetic type which generates or modulates electrical pulses. The motion sensor will be located on the driveshaft of the vehicle and require no lubrication.			
166)	Built In Performance Measures The skip-setting mechanism must have the following built-in performance measures: Footage counters for each paint gun separated for SOLID and SKIP			
167)	All functions shall be individually reset-able.			
168)	All Performance Measures data shall be retained by means of non-volatile RAM to ensure indefinite retention of all programmed information regardless of power loss to the controller. RAM chips shall not require batteries to save information.			
<b>TECHNICAL SERVICES</b>				
<b>AJ. TECHNICAL INFORMATION</b>				
169)	For the purpose of determining the degree of standardization for units, the availability of replacement parts, and whether or not components meet the specifications, the bidder will provide parts manuals, wiring diagrams, and detailed specifications on the following components: A. Chassis B. Paint Handling Equipment C. Glass System D. Cleaner System E. Paint Fill Pumps F. Paint Heating System/Exchangers G. Skipline System H. Paint Guns I. Glass Guns J. Gun Carriage System K. Compressor Package L. Guidance System (s) M. Intercom System			

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170)	A computer generated engineer's detailed layout with weight distribution shall be provided with the bid submittal showing the location of paint equipment, air and glass supply equipment, and other equipment necessary for the successful construction of the traffic paint striping machine.			
171)	Failure to supply information as requested for the previous items with the bid will cause the bid to be irregular and it will not be considered.			
<b>AK. TECHNICAL MANUALS</b>				
172)	The successful bidder shall supply two sets of written or CD versions of operator's manuals, service manuals, parts books, wiring diagrams and applicable technical information for each machine.			
<b>AL. TECHNICAL SERVICES</b>				
173)	The services of at least one competent technician, trained in the use and operation of the striping machine, shall be furnished for a period of three consecutive days to be scheduled at the discretion of the agency for each machine purchased. This service shall be provided to instruct the purchaser's personnel in the use, operation and maintenance of the machine on acceptance.			
<b>REQUIRED OPTIONS</b>				
<b>AM. TILTING AND TELESCOPING COLUMNS:</b>				
174)	In lieu of the carriage steering specified, a tilting and telescopic steering column shall be conveniently located for each operator.			
175)	Each column shall include a steering wheel with knob. The power steering control unit and hydraulic hoses shall be located under the equipment platform, out of the way of the operators.			
<b>AN. REMOTE GUN ELEVATOR:</b>				
176)	Each paint gun shall be mounted on an electric elevator which will permit remote vertical adjustment for each individual gun to change line width anywhere from 4 inches to 8 inches. The control shall be mounted at the operator's station.			
<b>ALTERNATE BID OPTONS</b>				
<b>AO. OPTICAL SIGHT SYSTEM OPTION</b>				
177)	An optical sighting system shall be provided and mounted inside the chassis cab which projects a virtual image on a distant target. The pointer shall be mounted so the driver can view the centerline or other area to be striped with a minimum obstruction of view. The mount shall be fully adjustable and the pointer will measure 13" x 5".			
178)	An LED light source shall project an image through a lens and have a 17 ft. virtual image focal point.			



Item Number	Feature Description	Meets	Exceeds	Not available or does not meet spec
179)	A control box shall be provided to control the light intensity. The control box shall include a potentiometer which varies the light intensity from zero to nine.			
	<b>AP. PAINT HANDGUN TAKE-OFF ASSEMBLY OPTION</b>			
180)	Provisions shall be made in the paint and air plumbing for the use of both colors of paint to be applied with a handgun. Fifty feet of hose with reel and all required fittings shall be supplied. The hand gun and paint hose shall have cleaning capabilities as the other paint guns.			
181)	Fittings shall include a quick disconnect on the air hose and a full throated ball valve on the paint line at the paint take-off.			
182)	The hand gun shall be designed to apply road marking material for jobs requiring high productivity. The hand gun shall be a Kamber Model 8 (no clones or substitutes) and to standardize the use of spare maintenance components, it shall have incorporated an identical gun head and nozzle system as the standard pneumatic Kamber Model 38.			

**A revised bid form is attached and must be used to submit your bid price.**

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The Bidder shall sign this Addendum acknowledgment and return it with the bid.

**BID ADDENDUM**

**Addendum #1**

Dated \_\_\_\_\_

We, the undersigned, acknowledge the receipt of the above addendum(s) as dated.

By: \_\_\_\_\_

Title: \_\_\_\_\_

Company: \_\_\_\_\_

Date: \_\_\_\_\_

REVISED BID FORM

11-012

**Truck Mounted 220 Gallon Air Atomizing Application Striping Unit**

BID OPENING DATE: 1/19/2011 at 10:00 AM

\_\_\_\_\_  
(Bidder name)

Submits the following bid for this project:

Quantity – One (1)

Make Model and Year of Truck offered \_\_\_\_\_

Make Model and Year of Spraying Unit offered \_\_\_\_\_

Total price for One (1) Truck Mounted 220 Gallon  
Air Atomizing Application Striping Unit \$ \_\_\_\_\_

Less: Trade in allowance for:

County #243      1994 Ford w/220 Gal LDI Spraying Unit  
VIN # 1FDXH70C25VA14333 \$ \_\_\_\_\_

Net Price \$ \_\_\_\_\_

Optical Sight System Option: \$ \_\_\_\_\_

Paint Handgun Take-off Assembly Option: \$ \_\_\_\_\_

Other Options (list) \$ \_\_\_\_\_  
\_\_\_\_\_ \$ \_\_\_\_\_

\_\_\_\_\_ \$ \_\_\_\_\_

\_\_\_\_\_ \$ \_\_\_\_\_

\_\_\_\_\_  
Authorized signature Date \_\_\_\_\_