CITY OF BRUNSWICK GEORGIA

February 2021

Storm Drainage System Inspection Camera Vehicle

REQUEST FOR PROPOSAL

CITY OF BRUNSWICK GEORGIA
Engineering & Public Works
City of Brunswick
525 Lakewood Ave
Brunswick, Georgia 31520
galberson@cityofbrunswick-ga.gov

STORM DRAINAGE SYSTEM INSPECTION CAMERA VEHICLE
FOR
THE CITY OF BRUNSWICK

INVITATION TO PROPOSERS

The City of Brunswick, Georgia (the City) will receive proposals for a Storm Drainage System Camera Vehicle until Thursday, March 11, 2021, at 2:00 p.m. EST. The City invites vendors to submit proposals responsive to the specific requirements set forth in this request for proposals (RFP). The envelopes containing the proposal **must be sealed**, and addressed to:

Garrow Alberson
Director of Engineering & Public Works
City of Brunswick
525 Lakewood Ave
Brunswick, Georgia 31520
galberson@cityofbrunswick-ga.gov

All proposals must be marked "Storm Drainage System Inspection Camera Vehicle" **RFP.** The envelope must bear on the outside the name and address of the vendor. No proposal may be withdrawn or modified in any way after the deadline for proposal openings, and no faxed proposals will be accepted. Proposals received after the scheduled opening time and date will remain unopened and will not be considered.

Questions regarding this request for proposals should be submitted in writing to Garrow Alberson, Director of Engineering & Public Works, at galberson@cityofbrunswick-ga.gov, prior to 12:00 noon on Friday, February 26, 2021. Responses to any questions will be posted to the City of Brunswick's website by Tuesday, March 2, 2021.

The City of Brunswick provides equal opportunity for all businesses and does not discriminate against any person or business because of race, color, religion, sex, national origin, and handicap or veteran's status. This policy ensures all segments of the business community have access to supplying the goods and services needed by The City of Brunswick.

THE BOARD OF COMMISSIONERS, CITY OF BRUNSWICK, GEORGIA RESERVES THE RIGHT TO REJECT ANY OR ALL PROPOSALS, WAIVE TECHNICALITIES AND MAKE THE AWARD IN THE BEST INTEREST OF THE CITY.

-End of This Section-

STORM DRAINAGE SYSTEM INSPECTION CAMERA VEHICLE
FOR
THE CITY OF BRUNSWICK

1. **Project Description:** The City is interested in purchasing a Storm Drainage System Inspection Camera Vehicle to assist the City in maintenance and repairs of the storm drainage pipes and inlets through viewing and recording visual images inside the storm drain pipes and inlets

2. **Minimum Specifications:** The following, at a minimum, will be included in the bid price. If **substituting specifications make note in the proposal**:

Cameras

Orion 3.0 Zoom HD/SD Adaptive Pan & Tilt Camera

	Pan, Tilt and Zoom Camera (Color) (Orion Zoom)	Yes	No
	Camera must have pan, tilt and zoom function with motorized controls to allow the operator to change the viewing angle and camera zoom from the camera controller.		
	Camera total diameter not to exceed 2.5 inches		
	Camera total length is not to exceed 4 inches		
	Camera must be able to operate in a minimum 4" diameter pipeline.		
	Camera must weigh less than 1.25 lbs.		
	Camera housing must be cylindrical in design with long radius edges and no protruding surfaces to catch on during operations.		
	Camera must be able to be attached to multiple tractor and push applications without the need for adaptors or additional components to facilitate fitment: ✓ Push rod for lateral inspection operation including both lateral launch and hand push reel ✓ Wheeled robotic tractor(s) (minimum of 3) for mainline operation without the need for ancillary adaptors or additions. Systems that require adaptors or additional components to move the camera from the tractor to the push rod or from the push rod to the tractor will not be accepted.		
	Camera shall have remote focus controls that can be changed from the camera controller.		
	Pixels must be (1920 x 1080) when operating in full HD mode		

	Camera aperture angle / FOV shall be no less than 150 degrees diagonal		
	Camera photosensitivity shall be no more than 0.05 lux. Cameras that have a higher LUX may will not be deemed acceptable.		
	Camera resolution shall be no less than 570 TVL of horizontal resolution. Systems that have resolution lower than 570 horizontal lines of resolution may be deemed unacceptable due to low resolution video.		
	Camera shall have a digital 3x zoom for looking up into laterals and focusing on more distant objects within the pipeline.		
	Camera shall have automatic iris that adjusts light sensitivity based on pipeline conditions and be able to manually set the iris level via a joystick.		
	The camera housing must be pressurized to a minimum of 1 bar to avoid water ingress that could cause damage. A low-pressure situation will alert the operator with an audible tone and text message on the camera controller's diagnostic display. Systems that do not have both on screen pressure display and audible alarm may be deemed unacceptable.		
	Camera must be pressurized with dry air. Systems that utilize gasses that require additional purchase will be deemed unacceptable.		
	Camera shall have built-in a minimum of 4 groups of 10 white LED lights to illuminate the interior of the pipeline. Light groups must be connected in parallel so that the failure of 1 LED does not affect other LEDs		
	Camera must have an integrated single laser that allows for measurement with use 3rd party software. Measurement capabilities to include ✓ Inside Diameter ✓ Ovality or Deformation percentage ✓ Defect – All objects on pipe surface including joint gap ✓ Object – Objects that take up 3D space in the pipeline o Protruding taps, Debris, Roots etc.… Cameras must have all the above measurement capabilities to be deemed acceptable		
	All fasteners used on the camera must be recessed so that no protruding fasteners to catch during operations.		
	Camera must have a built-in radio sonde transmitter operating at 32.8 kHz. The transmitter shall be able to be powered off or on remotely without interrupting the camera operation.		
	Camera must have 360 degrees of continuous rotation.		
	Camera rotation must be on the horizontal axis of the main connector with a slipring through the geometric center of the camera to reduce unnecessary strain on moving parts and connectors during operation.		
	Camera rotation must be controllable must be variable based on operator input.		
	Camera must have 240 degrees of total pan with no less than 300 degrees angle of view		
	Camera shall have a zero (home) position where the camera views straight ahead and the upright picture control automatically enables		

	Camera must display viewing direction on screen while operating. The display shall appear as a clock allowing the operator to clearly and quickly indicate viewing direction.		
	Camera must have auto upright picture control to ensure video image is automatically and correctly displayed on the monitor with the top of the pipe always at the top of the video monitor screen		
	Camera housing must be constructed of hard-anodized high strength aluminum with a documented testing of shock resistance of 1 kg / height of fall 27.5”.		
	Camera light housing must be constructed of high strength polycarbonate with a documented testing of shock resistance of 1 kg / height of fall 15.75”		
	Camera lens protective front window shall be constructed of a special glass with a documented testing of shock resistance of 1 kg / height of fall 15.75”		
	Camera protection class shall meet a minimum of an IP68 to IEC 529 rating		
	All electronic PCBs shall be connected to one another without the need of soldering for ease of service and repair. Any camera with PCB’s that require soldering will be deemed unacceptable.		
	A tool and spares kit, and storage transport case must be provided.		

Tractors

T76 HD

	High Definition Robotic Tractor (Medium) (T76 HD)	Yes	No
	Tractor must be able to operate in a minimum 5” diameter pipeline with enough clearance to negotiate offsets and debris.		
	Tractor shall be designed utilizing wheels / tires as its mode of propulsion. Tracked crawlers or other modes of propulsion shall be deemed unacceptable.		
	Tractor must be four (4) wheel drive, Tractors that utilize more than four (4) wheels may be deemed unacceptable		
	Tractor must be steerable with each side able to be independently operated to provide skid-steer style of turning. Tractor must have two internal motors for this operation.		
	Tractor must be no longer than 22 inches in length. Any tractors longer than 22 inches shall be deemed unacceptable.		
	Tractor must weigh a minimum of 44 pounds without any wheels attached.		
	Tractor must have a dual swivel cable connector, allowing both X & Y axis to pivot.		
	Tractor must have continuously adjustable speed with speed set.		
	Tractor shall have a front moveable camera connector, referred to as a base module, which will fold upwards to assist during insertion in confined areas.		
	The base module must be removable through utilization of a recessed connector.		
	Tractor must have the ability to remove the base module and have the ability to add a lateral launching module to convert the tractor to a fully operational lateral launch robot.		

	Tractor must have anti tilt compensation that will automatically steer the tractor so that it does not ride up on the pipe wall and capsize. The anti-tilt compensation shall maintain the tractor in a level plane within the pipeline during operation. Any tractors without anti tilt compensation shall be deemed unacceptable.		
	The tractor housing must be pressurized to a minimum of 1 bar to avoid water egress from damage. A low-pressure situation will alert the operator with an audible tone and text message on the camera controller's diagnostic display.		
	Tractor body must be manufactured from solid brass for weight and coated with a chrome finish to resist tarnishing and facilitate cleaning.		
	All fasteners must be manufactured from a non-corrosive material such as stainless steel or aluminum.		
	Tractor must have a remotely operated motorized camera-elevating device that allows the camera to be raised and lowered inside of pipeline during operation. Manual elevating of camera will be deemed unacceptable.		
	Motorized camera elevator must be able to raise the camera vertically a minimum of 8.25"		
	Motorized camera elevator must have the ability to display the height of operation in percentage on the main control panel.		
	Motorized camera elevator must be pressurized to a minimum of 1 bar to avoid water egress from damage. A low-pressure situation will alert the operator with an audible tone and text message on the controller's diagnostic display. Systems that do not have both on screen pressure display and audible alarm may be deemed unacceptable.		
	Tractor must have the ability to be operated without the use of a motorized camera-elevating device for smaller diameter pipelines. Protective caps and all hardware must be supplied for this mode of operation.		
	Appropriate graphical warning stickers shall be affixed to warn of any potential pinch points on elevating device.		
	Tractor must have a milled sloped hook system with a lowering claw to quickly and efficiently insert and extract the tractor from manholes.		
	The tractor may be supplemented with various wheel sets, additional weights		
	Tractor must have ability to accept and function with High Definition Camera		
	All fasteners used on the tractor must be recessed so that no protruding fasteners catch during operations		
	All electronic PCBs shall be connected to one another without the need of soldering for ease of service and repair. Any tractor with PCB's that require soldering will be deemed unacceptable.		
	All electronic PCBs must be located in a single location on the tractor with a single access cover, o-ring sealed, and secured with a minimum of 6 fasteners for protection and ease of service and repair.		
	All gearing and motors must be accessible from a single location on the tractor with a single access cover, o-ring sealed, and secured with a minimum of 8 fasteners for protection and ease of service and repair.		

	The tractor may be outfitted with an inclinometer module to monitor and log the pitch and roll of the tractor in the pipeline.		
	The tractor shall include wheel sets for 6”, 8”, and 10” diameter pipe.		
	Tractor protection class shall meet a minimum of an IP68 to IEC 529 rating		
	A tool and spares kit must be provided for maintenance of the tractor.		

Medium Tractor Accessories

Medium Tractor Tungsten Carbide Wheel Set for 6”

	High-Traction Tungsten Carbide		
	High-Traction Tungsten Carbide Wheels for 6" and up • Wheel set must utilize brass construction impregnated with tungsten carbide • Must be same size and dimension of standard wheel sets • Must be designed for the camera tractor specifically tractor use of carbide grinding wheels or not manufacturer designed, engineered and for use in pipelines.		
	All wheel sets must come with all fasteners needed to be utilized with supplied tractor		

Medium Tractor Tungsten Carbide Wheel Set for 8”

	High-Traction Tungsten Carbide		
	High-Traction Tungsten Carbide Wheels for 8" and up • Wheel set must utilize brass construction impregnated with tungsten carbide • Must be same size and dimension of standard wheel sets • Must be designed for the camera tractor specifically tractor use of carbide grinding wheels or		
	All wheel sets must come with all fasteners needed to be utilized with supplied tractor		

Medium Tractor Treaded Wheel Set 8” Hard

	Treaded Wheel set for 8” pipe (soft rubber)		
	Wheels must be profiled to maximize pipeline contact area.		
	Treaded these wheels are perfect for climbing over rocks, debris and off set Joints.		
	Wheel set shall be able to be installed with 2 screws		
	All wheel sets must come with all fasteners needed to be utilized with supplied tractor		

Small Pneumatic Tires

	Pneumatic tires for use in 12” and larger pipelines		
	Tire must utilize field replaceable inner tube		
	Rim must be a three (3) part wheel that can be disassembled easily to accommodate tube and tire changes without the need for specialty tools.		
	Tire must be a turf style tire as to not facilitate digging into debris and silt		
	Hub assembly must be made of brass with a chrome coating to add additional weight to aid in the higher flow situations		

	Wheels must attach to the tractor hubs with two (2) fasteners		
	Must be able to be utilize in conjunction with brass axle extenders to aid in facilitating centering in larger pipe sizes.		

Computer Systems

19" Industrial PC Package

	Computer	Yes	No
	Rugged Intel Based Motherboard ✓ Includes on-board RS-232 Port ✓ Includes on-board 2 DVI video outputs ✓ Includes minimum of 2 full size PCI expansion slots		
	Intel Quad Core Processor > 3gHz		
	4 GB RAM Minimum		
	1 TB Hard Drive for Applications		
	1 TB Hard Drive for data		
	500GB Portable USB Hard Drive		
	DVD-R/CD-RW drive		
	Washable Anti-Microbial Keyboard ✓ Washable keyboard offering antimicrobial protection ✓ Treated antimicrobial coating provides added defense against the growth of mold, mildew, and fungi		
	Anti-Microbial Mouse ✓ Antimicrobial protection of the mouse surface ✓ Dishwasher Safe		
	Rugged industrial grade rack mount enclosure ✓ Includes shock mounted hard drive carriage ✓ Includes minimum of 2 front mounted USB ports		
	Windows 10 Professional 32/64-bit duel operating system		
	Professional Grade 17" Monitor ✓ High 1280 x 1024 SXGA resolution or similar ✓ Optical Glass Protective Cover over LCD Screen ✓ Anti-Burn-in technology ✓ Versatile connectivity (BNC in/out x2, S-Video, VGA, DVI, Audio in/out) ✓ Selectable aspect ratio for ultimate image: Native, Overscan, Underscan ✓ Input Signal VGA, DVI, CVBS, S-Video		

Controllers

BS7 Controller

Power Supply / Controller (BS 7)			
	Power supply controller must be able to operate both digital scanners and analog CCTV inspection equipment.		
	Power supply controller must have removable power supply card situated on a bus to easy diagnostics or replacement without removal from the rack.		
	Power supply controller shall be rack mount design with remote control station and keyboard handling camera power and controls, tractor power and controls, text generation, diagnostics, and cable winch controls. Camera systems that require more than one mounted component will be deemed unacceptable.		
	Remote Control Station must have a minimum 6” diagonal, full-color adaptive touch screen for selecting options and controlling system functions.		
	Remote Control Station shall give a diagnostic readout of component pressure and issue an audible warning when pressure is low.		
	Remote Control Station shall display the current draw of both the lightheads and each motor in the tractor by view of a bar graph representing percentage.		
	Remote Control Station shall allow for adjustment of brightness / intensity of both auxiliary light rings and camera lights, as well as be able to switch off individual light banks on the auxiliary lighthead.		
	Power supply controller must have a graphic-oriented on-screen display generator to allow the operator to: ✓ Type on-screen text ✓ Display distance counter ✓ Tractor inclination ✓ Display date and time ✓ Display camera viewing angle ✓ Display tractor speed in numeric value or in a graphic with color indicators of Green, Yellow and Red keeping the operator within correct speed limits. Each of the OSD (On Screen Display) objects shall be positioned to any portion of the viewing screen based on systems owner’s requirements. Systems that do not allow for all OSD items to be displayed or repositioned shall be deemed unacceptable		
	On-screen text must have a minimum of 16 lines of text with a minimum of 53 characters per line.		
	The controller must be capable accepting inputs for a minimum of 2 distance counters and switchable between meters and feet.		
	The controller must be able to delete all text from the screen with the press of a single key.		
	The power supply controller shall allow for a minimum of 10 color variations of overlay text to contrast on different backgrounds.		
	The on-screen text generator must have a header field that will continuously display text at the desired location.		

	The power supply controller shall allow the user to position each system field anywhere on the visible screen to prevent obstruction of view.		
	The power supply controller must automatically identify which camera, tractor, and cable winch is connected to the system.		
	The power supply controller must have a minimum of 4 video output, 1 composite video input		
	The power supply controller shall be able to operate: push cameras ✓ Minimum of 10 different cameras ✓ Small medium & large tractors ✓ Lateral launch systems ✓ PANORAMO mainline scanner ✓ PANORAMO SI manhole scanner Should an upgrade be desired in the future, systems should not require additional controller modules to allow for additional or enhanced inspection capabilities.		
	Tractor functions shall be operated from a single joystick. ✓ Tractor speed ✓ Speed set ✓ Direction ✓ Steering All to be operated from a multi-axis, multi-function joystick to be mounted in the desktop area. ✓ Forward and reverse must be controlled by an up or down motion ✓ Drift or incremental steering by side-to-side motion ✓ Skid steering via rotation of the joystick. ✓ In addition, two function buttons must be supplied on the top of the joystick, one to set the speed and stop the tractor, the other to switch between cameras on a lateral launch.		
	Camera functions shall be operated from a single joystick. ✓ Camera pan & tilt operations ✓ Auto-home ✓ Aris, and focus All to be operated from a multi-axis, multi-function joystick to be mounted in the desktop area. ✓ Camera rotation must be controlled by side-to-side movement of the joystick ✓ Tilting by up and down movement of the joystick ✓ Focus and iris controlled by rotation of the joystick. ✓ In addition, two function buttons must be supplied on the top of the joystick, one to return the camera to the home position, the other to switch between iris controls.		
	Joystick functions should automatically change based on power supply controller's recognition of the attached tractor or camera.		
	Joystick must have proportionate directional controls so that the speed of the tractor varies by the percentage from home to max.		

	Power supply controller must have the capability to switch between right hand and left-hand joystick configurations.		
	Power supply controller must a have 360 degrees joint inspection function that will automatically turn the camera to an upright position and then slowly scan 360 degrees.		
	Remote Control Station must allow the operator the ability to electronically and remotely switch the radio sonde transmitter in the camera head off and on.		
	Remote Control Station must allow the operator the ability to electronically and remotely switch off and on the upright picture control of the camera head.		
	When used with corresponding equipment, the power Remote Control Station must allow the operator the ability to electronically and remotely switch off and on the laser diodes, auto-focus, and control the zoom of the camera head.		
	The Remote-Control Station must allow the operator the ability to electronically and remotely switch off and on the automatic tilt compensation of the tractor.		
	Remote Control Station must have an emergency stop button to remove all power to the downhole equipment.		
	Power supply controller shall weigh no more than 10 lbs. for ease of installation and shipping.		
	On-screen text entry and menu navigation shall be done on a standard QWERTY PS2/AT keyboard.		
	Controller must have a serial communications port using a DB9 connection for interface with various types of computer software.		
	The power supply controller must be able to be restarted without removing power to other components and via menu selection from the Remote-Control Station.		
	The power supply controller shall have a master power switch on the front of the unit.		
	Power supply controller must have on-board help menus to aid in new user operation.		
	Power supply controller menu system shall come standard with a minimum of 12 unique language settings.		
	Power supply controller must be able to be reset to factory defaults by a maximum of 3 key presses.		
	The power supply controller must have a function to calibrate the tractor mounted inclination meter and be able to calibrate within a minimum of +/- 5%.		
	The power supply controller must be constructed from lightweight, extruded aluminum with a minimum of 4 sides with over 80% of the surface area ventilated.		

Reels

KW505 HD Synchronized Power Reel

	Powered Cable Winch (1000ft) (KW505 HD)		
	The cable winch shall be stationary mounted and hold 1000 linear feet of camera cable.		
	Cable winch must be compatible with digital pipe inspection / HD/4K pipe inspection equipment as well as analog CCTV pipe inspection equipment transferring data over a duel fiber optic cable.		
	Cable reel must operate with a 48-volt DC power source.		
	The cable winch must have an electromagnetic clutch to engage and disengage the cable winch.		
	The cable winch's clutch must be electronically switchable on and off using a push button switch with a LED status indicator light.		
	The cable winch must have an automatic level wind guide.		
	The cable winch shall have a cable equalization amplifier for video picture processing.		
	There shall be a cable distance-measuring device built into the boom and integrated pulley.		
	Cable winch must have an integrated traction-regulating device that ensures optimum performance of the tractor in all operating conditions. ✓ This system assists in paying out cable dependent on tractor speed.		
	Cable winch must have an integrated lowering winch to lift, lower, and position the tractor from the truck into the manholes. ✓ Systems that do not have integrated lowering devices and utilize 3rd party cranes to lower equipment will not be deemed acceptable.		
	The cable reel integrated lowering winch must be capable of lifting a minimum of 175 lbs.		
	Cable Reel must have a foldable boom that will have multiple locks allowing it to position at various angles to enhance setup capabilities.		
	Cable Reels foldable boom must be able to support a minimum of 175 lbs.		
	The cable reel shall be equipped with an emergency brake that will lock the reel if power is lost to the system to prevent uncontrollable unreeling of camera cable. ✓ Emergency brake must be equipped with a manual override and hand crank.		
	Cable winch must have a remote-control pendant with the following controls: ✓ Tractor direction ✓ Tractor speed ✓ Tractor stop ✓ Control cable winch ✓ Operate lowering winch ✓ Switch between internal and external controls ✓ Turn winch on and off ✓ Removal of slack from the cable ✓ Retract lateral launch cable if attached.		
	Cable reel must have an emergency stop button on both		

	✓ Drum/Reel ✓ Pendant controller Emergency stops shall remove all power to the downhole equipment.		
	Cable Reel must have a minimum of 3 status indicators, power and circuit breaker states.		
	Cable Reel must have a digital distance counter		
	Cable Reel must have a button used to reset the digital distance counter to zero position. ✓ Digital distance counter must operate independently from the footage counter in the office.		
	Cable Reel must have a removable drip tray that will catch and retain water and debris from main cable drum.		
	Camera cable must be a duel fiber, maximum of 0.405" diameter with 2000 lb. rating and Kevlar fiber armored.		
	Cable winch must be able to operate with an optional foot-controlled switch for hands-free raising and lowering of the camera / tractor with the lowering winch.		

Cable Protection

Down Hole roller

Cable Protection (Downhole roller)			
	Downhole roller to protect the cable at the invert Downhole roller must be designed to spin freely to aid in reducing friction aiding in longer range inspections • Must be able to be secured to rope or lowering winch • Frame of roller must be constructed of aluminum • Shall use minimum of 3 lock pins to keep cable in the roller track Use of poles for lowering and locking the manhole roller into place is not acceptable for safety		
	Roller must have the preferred radius that will aid in encouraging longer life of the inspection cable and reduce wear.		
	Recommendation of a "tiger tail" or similar will not be accepted		

Remote Inspection Reel Guide Roller

Cable Protection 305/505 roller			
	Roller must connect to the cable reel to allow reel to maintain proper cable geometry when preforming remote inspections.		
	Roller must have the preferred radius that will aid in encouraging longer life of the inspection cable and reduce wear.		
	Roller must be of constructed of a steel frame and a nylon composite roller		
	Must be attached via a single locking pin Rollers that attach with hardware that requires tools will be deemed unacceptable		

	Roller must be able to be disengaged when not in use, and not require removal when not doing remote inspections.		

Conversions

Transit Van Conversion (Gas) (or Equivalent)

	Transit Conversion	**Yes**	**No**
	Studio Office Area		
	Partition wall between studio area and work area approximately 76 inches from the front of the box constructed of FRP.		
	Full height pass through to van cab with sliding and lockable door.		
	3 12-LED lights in studio (2 under cabinets and 1 located on the ceiling between roof air and side entry door. All switched directly on the light fixture.		
	3 Laminated overhead cabinets in studio with sliding smoked plexi-glass or similar doors.		
	13,500 BTU roof air conditioner with 1200-watt heat strip installed.		
	Onan 5500-Watt commercial gas generator to match fuel system of vehicle		
	Remote generator starter with hour meter mounted in control room.		
	Generator enclosure with a padded top to act as a bench seat for spectators.		
	Outside access door on generator for easy accessibility.		
	Laminate hard surface counter tops in studio; Must have 2 grommeted holes to accommodate cables from monitors.		
	Full profile shelf above desk that is 16” deep and 7” tall openings with 2 grommeted holes to accommodate cables from monitor. Partitions should be placed 19” apart when able.		
	Open space located under studio desk toward front of box. To accommodate either a filing box or a 19” rack as needed. And must have a minimum of 20.5 inches of horizontal space.		
	Sliding window with screen on partition wall above studio desk next to pass through door.		
	Passage door with one window or 1 larger window located at the center of door. Door must latch from inside and out. Door must be a minimum of 76” tall to pass through without hitting head.		
	Carpet wall and ceiling covering in studio, either blue or gray in color, indoor / outdoor or automotive carpet required.		
	LonSeal coin flooring (or Equivalent) in studio area.		
	Work Area		
	4 12 LED lights in work area. (1 located under cabinet and 1 located centrally on the ceiling. All switched directly on the light fixture.		
	FRP constructed overhead cabinets with latching doors in work area.		
	Dual latching door cabinet on top of workbench connecting to partition wall.		
	Lon Plate (Lon Seal) vinyl (or Equivalent) on workbench on partition wall on driver’s side and on passenger side in work area. Tank and pump to be located below counter with latching doors.		

	Automatic shore power / generator switch.		
	Exterior shore power plug / receptacle, 30 Amp with 30-foot extension cord and 15 Amp converter.		
	55 to 75-amp 12VDC battery charger / converter mounted.		
	12 VDC / 100 VAC fuse / breaker box mounted and wired.		
	Auxiliary 12 VDC battery mounted.		
	Five (5) 110VAC outlets with GFI protection on work area circuit.		
	Aluminum diamond plate flooring in work area.		
	Composite video cable installed from work area LCD monitor to under the counter in the studio.		
	3” minimum tall pass hole or channel between studio and work area.		
	14-gallon freshwater tank with 12VDC pump with switch and tank monitor.		
	FRP covered walls and ceiling in work area. White in color.		
	Minimum 22-watt strobe mounted on front roof with switch located for driver operation.		
	Directional LED arrow board on rear of vehicle with driver accessible controls.		
	7 drawer commercial toolbox with locking and latching doors. Must have ball bearing slides and be removable for warranty claims. Also, must carry a commercial warranty.		
	Backup camera with LCD Monitor.		
	KW Reel cabinet, (W-22", L-39" & H-34"), with a slide out tray and one locking drawer with a divider. All aluminum drawer construction.		

Accessories

Pressures Test Set

Pressure Test Set			
	Manual pump with pressure gauge utilized with all cameras and tractors to pressurize them to the recommended safe pressure. The pressurization is monitored for each component by the controller. The controller will alert the operator in event of a low-pressure situation.		
	Pressure test set must have pressure relief blow off valve integrated to ensure that the system cannot be accidentally over charged.		
	Air pump/Pressure test set must have an integrated and replaceable desiccant canister to remove moisture from the air.		
	Pressure test set must have a dial type gauge that is clear and easy to read.		
	Pressure test set must actively pump air in both directions (Pull & Push)		
	Systems that require gas canisters to pressurize the components will not be deemed acceptable.		

Alternate Items

Vendor may also choose to bid and price separately any add-ons for additional warranties, maintenance agreements or maintenance equipment that will be beneficial. Vendor shall list and describe any variations or differences from minimum specifications listed above.

3. **Addenda:** If the City determines that an amendment is required to this RFP, the City Representative will post a written addendum on the City Website at http://www.brunswickga.org (the "City Website") and upon posting will be deemed to form part of this RFP. No amendment of any kind to the RFP is effective unless it is posted in a formal written addendum on the City Website. Upon submitting a Proposal, Proponents will be deemed to have received notice of all addenda that are posted on the City Website.

4. **Proposal Requirements:**

- All proposals shall include vendor's full specifications and total costs including shipping, delivery, and any applicable fees.
- Vendor shall include service and maintenance schedule of equipment, as well as any warranties and vendor-provided service and maintenance options.
- Proposals shall include the cost of the proposed equipment and any accessories or add-ons deemed important by the vendor. These shall all be itemized and listed separately.
- Proposals shall include a tentative date of product delivery.
- Submittals shall also include references of three previous customers who have purchased similar vehicles.

Proposals will be evaluated on:

• Conformance to minimum requirements listed in this RFP;
• References from previous customers;
• Cost of the equipment;
• Value added accessories, warranties, or other items in addition to the base equipment;
• Date of delivery.

5. Conflict of Interest:

Vendors shall disclose any potential conflicts of interest and existing business relationships they may have with the City. If requested by the City, vendors should provide all pertinent information regarding ownership of their company at the City's request.

6. Negotiations and Contract award:

The City is under no obligation to accept any Proposal submitted. The City reserves the right in its sole discretion to waive informalities in, or reject any or all Proposals, or to accept any Proposal deemed most favorable in the interest of the City or cancel the competition at any time without award. Thereafter, the City may issue a new Invitation Request, sole source or do nothing.

-End of This Section