



By Paul Stenzler

Keep on Truckin'

Tips to Maximize Your Truck Purchasing Prowess

With the arrival of Capacity, Management, Operation and Maintenance programs (CMOM) for sanitary sewers, GASB-34 (requiring accrual accounting for all government activities and capital assets) and the National Pollutant Discharge Elimination System for Storm Sewers (NPDES), there has been a major expansion in the market for truck-mounted CCTV sewer line inspection systems.

EPA consent decrees are being issued in multiple metropolitan areas, and state environmental agencies are monitoring areas of concerns in their various communities, counties and districts. Asset management for sanitary and storm water systems has become an essential task and municipalities have arrived at the realization that it all begins with condition assessment.

Truck-mounted CCTV inspection systems are built to protect the operator from severe weather, to withstand the rigors of transportation vibration and reduce the time needed to inspect sanitary sewers, storm sewers, lateral services and manholes. These systems can be expanded to include various methods of trenchless technology, including mainline and lateral joint grout sealing systems, laser and sonar pipe profiling systems and lateral rein-

statement cutter systems. These state-of-the-art systems have become mobile data acquisition/analysis systems, equipped with decision support software that interfaces with major software systems that track assets and that provide mapping (GIS) for municipalities.

Choosing a Chassis

So what do you need to know before you make this major investment? Consider the road and off road conditions for the prime area of operation and define your ultimate goals for use of the video and corresponding data that are gathered. Ensure that your vehicle can be maneuvered in the streets and alleys of your community so that the majority of all access points are within range. Try to choose a vehicle that can be serviced in your local area. Ask the CCTV manufacturer to calculate the weight of the equipment and the truck interior in relation to the payload of the vehicle to ensure that the gross vehicle weight requirements (GVWR) for the front and rear axle are sufficient for the system, personnel and ancillary safety and operations equipment that will be added upon placing the unit into service.

Consider the rising price of fuel and investigate the fuel efficiency of the

chassis. Various diesel and gas chassis are available with sufficient GVSR and load space. The CCTV equipment can be powered by a variety of choices, including diesel or gas generators, inverters and Power Take Off system (PTO).

If you plan to expand your CCTV inspection truck at a later date to add grouting, lateral reinstatement cutters or lateral inspection systems, then make sure that you purchase a chassis with sufficient GVWR and load space for the future.

CCTV inspection systems can be installed in vehicles ranging from ATVs to light- and medium-duty trucks, so clearly define your inspection and rehabilitation goals before you make the final choice.

The Truck Interior

You can customize your unit to optimize safety, comfort, ergonomics and efficiency of operation. A separate viewing/data acquisition studio located toward the front of the vehicle is typical, with a separate rear work area, divided by a bulkhead wall with a large viewing window, containing a swing-out or sliding door.

The viewing/data acquisition studio contains rack mounted components such as power supplies, data acquisition systems and various controls.

These items can be mounted above or below the countertop, at your preference. Flat screen video or computer monitors can be installed on the countertop. For safety considerations, it is important to have a large viewing window in the bulkhead wall to provide a clear view of the work area and beyond the rear of the truck to the manhole. Attention should be applied to the installation of the countertop, with ample space for a keyboard, built-in ergonomic controls for the camera, transporter, reel and any ancillary items that the operator may require. The operator should have comfortable seating and an added bench and storage seat can be installed for additional personnel that may enter the area. If there is ample space, it is advisable to install a side exit door in this area to provide quick exit for the occupants in case of an unforeseen accident. Indirect lighting is recommended to produce even light distribution and to eliminate glare on the monitors. Lonseal material is quite rugged and is recommended for the floor as it carries a 10-year warranty by most manufacturers.

The rear work area will contain the video cable reel. With ample space, a wash down system with a stainless steel sink and overhead storage cabinets can be installed to wash hands, cameras, transporters and other related equipment at the end of the day. Lonseal non-skid material or alu-

space available, various custom cabinets can be installed to house cameras, transporters and spare parts. It is advisable to include a crane/hoist for insertion and retrieval of equipment. These units can be mounted on the reel, floor or installed as a bumper mounted configuration. Custom stor-



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age boxes can be mounted below some chassis frames or can be configured to slide out from the rear of the chassis. A rear awning can be installed to provide additional protection for the operator when working during wet weather events.

It is advisable to install a rear auxiliary monitor in the work area to face the manhole to facilitate the rear set up and operation of the CCTV inspection equipment. Local controls for the reel and transporter should be available at the rear of the vehicle.

Placement of the generator or

fire retardant material. Proper ventilation practices must be used in accordance with the manufacturer's recommendation.

The Truck Exterior

Please ensure that your truck is outfitted with sufficient lighting for safety



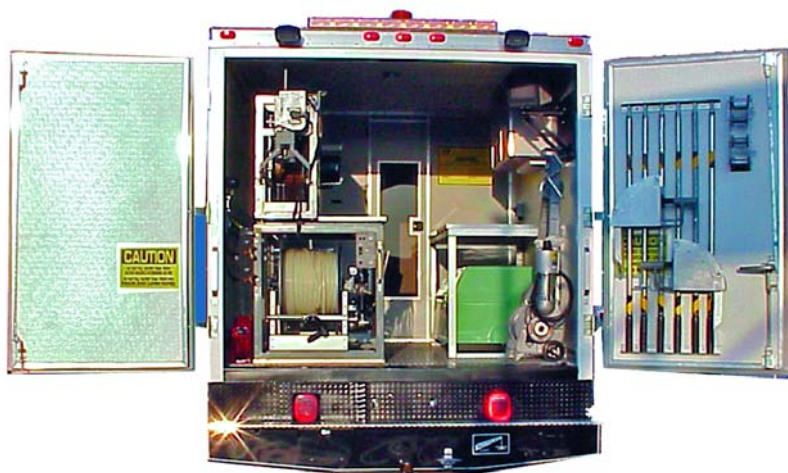
and traffic control, including front and rear arrow sticks, beacons and rear floodlights for night operation. Consider consulting with your state DOT to ensure safety compliance.

Choosing the Right CCTV Equipment

It is easy to write a complete article on this subject alone, but in summary, you must clearly define the range of pipe to be inspected. Are you inspecting sanitary sewers, storm sewers, lateral services or all of these? Define the pipe diameter range of your system. What are the most common pipe diameters to be inspected? Will the majority of your work be new construction, existing sewers or both? Do you plan to interface your video and corresponding data to a city software asset management system or GIS system? Do you have the need to profile your pipe? Can the manufacturer supply timely service, support and spare parts?

Purchasing a CCTV sewer line inspection truck is a major investment for any municipality or private contractor. Hopefully, this information will help you make an informed choice to ensure proper return on investment, efficiency of operation, safety and a well maintained wastewater system.

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minum diamond plate is optimal for the flooring. Seamless walls and ceilings with a Kemlite or Aluminum liner should be considered for durability and easy cleaning. Depending on the

inverter should be given significant attention in regards to proper weight distribution. If a generator is used, it should be installed in a locking enclosure containing sound deadening and