



WEST HANTS REGIONAL MUNICIPALITY REPORT

Information ☐	Recommendation X	Decision Request ☐	Councillor Activity ☐
--------------------------------------	------------------	---	--

To: Committee of the Whole

Submitted by:

T. Richard

Todd Richard, Director of Public Works

Date: November 12, 2025

Subject: Pipe Crawler Camera System

LEGISLATIVE AUTHORITY

Nova Scotia Municipal Government Act, Section 65 authorizes Council to expend funds for municipal purposes.

RECOMMENDATION or DECISION REQUEST

That Committee of the Whole recommends to Council...

the approval of the purchase of a pipe crawler camera system , outfitted in a custom-built enclosed trailer from Deep Trekker for a total budget not to exceed \$166,864 including applicable taxes.

BACKGROUND

Property ☐	Public Opinion ☐	Environment ☒	Social ☐	Economic ☒	Councillor Activity ☐
-----------------------------------	---	---	---------------------------------	--	--

This report recommends the acquisition of a sewer crawler pipe inspection camera system to modernize the municipality's underground infrastructure inspection capabilities. These robotic systems offer high-resolution video, precise diagnostics, and remote operation, enabling

efficient, non-invasive inspection of sewer and stormwater pipelines. The investment will significantly improve maintenance planning, reduce emergency repair costs and enhance environmental and public health outcomes.

Public Works maintains an extensive network of underground sewer and stormwater systems. Traditional inspection methods are labor-intensive, hazardous, and often require excavation. With aging infrastructure, new infrastructure being added, and increasing demand for proactive asset management, the need for advanced inspection technology is critical.

DISCUSSION

Requests for quotes through Canoe Procurement were sought for camera systems that would meet our requirements.

Two companies provided quotes as follows:

Joe Johnson Equipment -	\$179,090.00 + net HST
Deep Trekker -	\$128,007.30 + net HST

The low bidder Deep Trekker meets all the requirements and is a Canadian company where the products are designed and made in Canada.

The enclosed trailer will be sourced locally within Nova Scotia and outfitted with work bench, cabinet, and viewing area. Our estimated budget for this portion is \$30,000 + net HST.

System Overview

A pipe crawler inspection camera system includes:

- Robotic crawler unit with pan-and-tilt HD camera c/w LED floodlights.
- Control console with live video feed and recording
- Powered cable reel, tether and crane retrieval deployment system
- Enclosed trailer for transporting, storage, and maintenance, along with area for viewing / workstation



Pictures showing examples of pipe inspections.



Pictures showing examples of enclosed trailer setup with crawler camera rack and viewing are inside enclosed trailer.

Benefits

- Detect areas showing water leaks entering sanitary and stormwater systems. In many cases, water main and service leaks enter the sanitary or stormwater systems without making their way to the ground surface. Being able to locate potential leaks entering these systems will improve our ability to reduce non-revenue / unaccounted for water loss.
- Identify areas of high-water usage, as the camera will allow viewing of sewer lateral connections inside the sewer main.
- Identify areas of noncompliance regarding sewer discharge bylaw like fats, oils and greases (FOG's) or other parameters being exceeded.
- Identify areas of illegal or unknown connections to our system.
- Overall conditions analysis to forecast future maintenance needs, including pipe replacement requirements, risk of failure, and likelihood of system breakdown, etc.
- Enhance cleaning program by identifying areas that require the most attention and follow up inspections to confirm successful completion.
- Identify blockages, restrictions, cracks, root intrusion, and structural defects with high resolution imaging.
- Enables non-invasive inspections by removing the need for excavation, thereby

minimizing disruptions - especially important given the municipality's new responsibility for sewer laterals extending from the property line to the main sewer.

- Improves safety by minimizing worker exposure to confined spaces and hazardous conditions.
- Cost savings through enabling targeted repairs and preventive maintenance, which will reduce emergency interventions and long-term costs.
- Data-driven planning via detailed inspection reports for asset management and capital planning.

Investing in a pipe crawler inspection camera system aligns with West Hants' commitment to sustainable infrastructure asset management. It enhances operational efficiency, protects public health, and ensures long-term cost savings.

NEXT STEPS

If approval is given the camera system will be ordered, and custom enclosed trailer will be outfitted with equipment. Training will be provided for staff by supplier.

FINANCIAL IMPLICATIONS

2025-26 Capital Budget – Pipe Crawler Camera System

Quote Pricing – Camera System	\$128,007.30
Enclosed Trailer	\$30,000.00
Net Tax (3.86%)	<u>\$6,099.08</u>
Total	\$164,106.38
2025-26 Budget Value	
Public Works Equipment Budget	\$83,432
Sewer Budget	<u>\$83,432</u>
Total Budget Value	\$166,864
Variance (under budget)	(\$2,757.62)
Sewer Reserve	\$82,053.19
Long-Term Borrowing	\$82,053.19

Within the 2025-26 Capital Budget, this equipment is scheduled to be funded 50% through Sewer Reserves and 50% through long term borrowing. Coming in under budget will reduce the draw from the sewer reserves by \$1,378.81. It will also reduce the borrowing amount, reducing the estimated debt servicing to \$9,742.

ALTERNATIVES

- No alternatives are being recommended other than not proceeding with the recommendation.

ATTACHMENTS

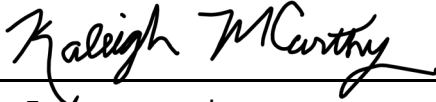
- None

CHIEF ADMINISTRATIVE OFFICER REVIEW

The project aligns with the allocation provided in the 2025/26 Capital Budget and equipment purchase plan.

I support the recommendation.

Report Prepared by: 
Todd Richard, Director of Public Works

Report Review by: 
Kaleigh McCarthy, Environmental
Technologist

Report Approved by: 
Mark Phillips, CAO