



CITY OF VANCOUVER

ADMINISTRATIVE REPORT

Report Date: April 27, 2007
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Meeting Date: May 15, 2007

TO: Vancouver City Council
FROM: General Manager of Engineering Services
SUBJECT: Fleet Addition - Metal Shoring Systems for the Sewer Operations Branch

RECOMMENDATION

- A. THAT, Council approve the allocation of \$285,000 from the Truck and Equipment Plant Account to fund the capital cost of the pre-fabricated metal shoring systems.
- B. THAT the annual costs of \$55,000 be repaid to the Truck and Equipment Plant account through rental rates charged to existing Sewer Operating Budget.

COUNCIL POLICY

Council approves expenditures from Reserves, including the Truck and Equipment Plant Account.

Council approves all increases in service levels, including the addition of vehicles and equipment to the fleet.

PURPOSE

This report seeks approval for the purchase of additional pre-fabricated metal shoring systems for the Sewer Operations Branch.

BACKGROUND

The Sewer Operations Branch routinely excavates large amounts of soil throughout the City for construction and connection projects. Heavy duty earth-moving machines dig trenches up to 20 feet in depth to install and repair sewer lines. Shoring systems are required to prevent the trenches from collapsing.

DISCUSSION

The Sewer Operations Branch has been utilizing metal shoring systems since December 2002. These systems replaced the traditional lumber shoring sets that were expensive and labour intensive to set up. Purchases of metal shoring systems were funded from the Truck and Equipment Plant account and repaid through rental rates charged to the Sewer Operating Budget. The Sewer Operations Branch utilizes all the existing metal shoring purchased to date and is finding more uses as crews become more familiar with the equipment and new products become available. In 2006, additional pre-fabricated metal shoring was leased to augment the existing City's metal shoring system at a cost of \$164,615. There is an ongoing need for this additional equipment since shoring is needed to comply with Workers' Compensation Board (WCB) Regulations that require engineered shoring systems be used to support excavations. There is a potential to save approximately \$110,000 annually, if the City was to purchase metal shoring in lieu of leasing from outside agencies.

FINANCIAL IMPLICATIONS

There will be a one time charge to the Truck and Equipment Plant Account of \$285,000 for 14 trench shields, 44 spreaders, 10 multi-shoring units, 152 air shore jacks, 60 replacement fin form sheets, and other associated accessories and outfitting. It will be repaid over the 10 year economic life of the metal shoring through rental charges of approximately \$55,000 per year for capital and maintenance. There will be no increase to the Sewer Operating or Capital Budget.

Table 1 shows a comparison between the annual external rental agency charges for metal shoring systems and the proposed internal rental charges. By funding the purchase of additional metal shoring systems from the Truck and Equipment Plant account and repaying through internal rental rates, there is a potential annual savings of approximately \$110,000 in lease costs.

Table 1: Detailed Annual Costs

External Metal Shoring Lease Costs for year 2006	\$164,615
Truck & Equipment Plant Account Funded Metal Shoring	\$55,000
Total Annual Savings by Funding through Internal Rentals	\$109,615

The \$110,000 annual savings in equipment rental costs will assist in reducing the per metre installation cost of sewer installation, allowing the City to meet its goal of the separation and renewal of the City's sewer system by the year 2055 as cost effectively as possible.

ENVIRONMENTAL IMPLICATIONS

Metal shoring is a more sustainable option when compared to lumber shoring. It is more often reusable than lumber shoring because it comes in adjustable sets whereas lumber shoring must be customized for each particular project. It lasts longer than lumber shoring because it is made out of metal and can often be repaired.

CONCLUSION

An ongoing need exists for the rental of pre-fabricated metal shoring. Accordingly, we recommend that \$285,000 from the Truck and Equipment Plant Account be used to purchase pre-fabricated metal shoring to meet the operational requirements of the branch.

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