

## **City of Saint Paul Sewer Cleaning and TV Inspection Program (SCTVIP) – Ten Year Cycle**

*The Ten Year Cycle Sanitary Sewer Cleaning and Televising Program was started in 2004 and the goal is to clean and inspect the average of 80 miles of sanitary sewers including all the associated manholes every year. The plan is to complete the first cycle by 2013. In this first cycle of Sewer Cleaning and TV Inspection Program (SCTVIP) only sanitary sewers and all the associated sanitary manholes are scheduled for cleaning and TV inspection. During the 1980's sewer separation program, most of the original sewers were left to function as sanitary sewers and the majority of storm sewers were built new. Therefore, our record indicates that the storm sewers and manholes are in a better condition than the sanitary sewers and accordingly they were omitted from the first cycle of this Program (SCTVIP). The plan is to include them in the second cycle of this program, which will start in 2014.*

*A supporting objective of this goal is to improve the Drainage System of City's sewer systems so that we can minimize the damage occurred by backups due to roots or debris accumulated in the pipes or due to collapsed pipes. Further, this program helps us to evaluate pipes and their structural conditions so that any necessary maintenance, repair or replacement can be scheduled to minimize unexpected problems and emergency repairs which are inefficient and very expensive.*

*For inspection purpose, City of Saint Paul's Sewers are grouped into ten Areas (Area 1,..., Area 10) based on historical information and maintenance records. Sanitary sewers grouped in Area 1 includes those sewers that are believed to be in the highest priority group and sanitary sewers in Area 10 includes those sewers that are believed to be in the lowest priority group based on the historic information and maintenance record. This inspection program was started with sewers that have the highest priority Area (Area 1) and progresses to the least priority Area (Area 10).*

### **Cleaning and TV Inspection Procedure**

#### **Sewer Cleaning**

*High velocity spinning head jet equipment is placed directly into the sewer mainline through the upstream manhole. The constant volume of water traveling from the Jet Vector truck through a reduced cross sectional area causes the particles to rapidly accelerate. This accelerated stream leaving the nozzle impacts the foreign materials on the surface of the pipe to be removed. The extreme pressure of the accelerated water particles contacts a small area of the pipe removes all the sludge, dirt, sand, rocks, minor roots and then the gravity of the water pushes them to the downstream manhole. And then the accumulated materials from cleaning vacuumed out at each downstream manhole.*

#### **TV Inspection**

*One of the most popular devices being used to inspect the sewer lines is CCTV (closed circuit television) systems. In this process a "pan and tilt" TV camera is mounted on top of a crawler or robotic device that is connected to a video monitor, a DVD or VHS recorder and other digital recording devices connected by a long electric cable. The mounted camera system is placed directly into the sewer mainline through a manhole. Once placed inside the sewer line, the robotic device can be operated by remote control located inside a truck. The inspector can examine the entire length of sewer line between two manholes by moving the camera in either direction at uniform rate, stopping when necessary to insure proper documentation of the sewer condition and rotated to view each service connection stub up to 2 to 3 ft from the mainline. The inspector documents all the defects in the line using City of Saint Paul Sewer Inspection Codes and submitted to the City engineers for review. Then the City engineers review all the submitted videos and reports to identify defective lines; rate; prioritize and schedule them for repairs or replace or lining. The rest of inspection videos and reports are stored electronically in a secured server and then linked to City's GIS system for future references.*

## **What to Expect**

*During this operation, you can expect to see a team of inspectors, field crews inspecting manholes and sewer lines that run under city streets and on private property, within the City's easement. Since this is a typical sewer cleaning and TV inspection projects, disturbances to the neighborhood is very minimal. At most you may encounter partial street closures and loud noises from the cleaning equipments mainly from vacator trucks. The City sends a notification letter **to only those residents where sewer lines constructed in their property within a sewer easement that is scheduled for inspection.***

## **Operation Time**

*Operation time of Sewer Cleaning and TV Inspection Projects varies from project to project but mostly from March to December, from 7:00 AM to 10:00 PM on weekdays, and between 9:00 AM and 9:00 PM on weekends.*

## **Active Projects**

*Currently the following Sewer Cleaning and TV Inspection Projects are in progress:*

***Annapolis \ Hall SCTVIP – 15.1 Miles***

***Kansas \ Robert SCTVIP – 18.5 Miles***

***Plato \ Lafayette SCTVIP – 10.4 Miles***

*To see the projects area map click in the below links*

## **Contact Information**

*For more information about this Program, contact:*

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