



DOWNTOWN LAWRENCE

THE HEART OF THE CITY

SMOKE TESTING PLAN

February 2018

INTRODUCTION

The City of Lawrence has implemented the Rapid Rainwater Reduction Program (Ecoflow Program) with a primary objective of reducing inflow and infiltration (I/I) rates in the sanitary sewer system. Goals of the program include reduction of peak wet weather I/I by approximately 19 million gallons per day (MGD), or 35%, within the oldest parts of the sanitary sewer system close to the Kansas River Wastewater Treatment Plant (KRWWTTP).

For the program to succeed, it is important that extensive efforts be made to identify and address individual I/I sources. The City has set forth a phased plan addressing different areas of the City, with the first three phases being successfully completed. Phase's 4, and 5 of the program are currently underway, along with planning for future study areas. The Downtown area is located within the phase 5 area, and is targeted for study/inspection in the spring/summer of 2018. Sanitary sewer smoke testing will be conducted to identify sources of rainwater entering into the sanitary sewer system. Extensive planning and preparation is required to conduct the sanitary sewer testing and inspections within the Downtown area due to the type of land use (commercial, churches, municipal), potential impact to the public, expected extent of the defects, contact with the public during testing, higher traffic in areas, and the high profile nature of the area to the public.

This report establishes a plan of action to complete the sanitary sewer smoke testing within the Downtown area while minimizing disruption and inconvenience to all stake holders.

NOTIFICATION PROCEDURES

Preliminary Preparations and Advance Notifications

Sanitary sewer smoke testing in the Downtown area will require advanced notification to prepare and educate both area stakeholders impacted and the general public about the program and timing of the testing.

The project team will meet with Downtown Lawrence, Inc. (DLI) in advance of any notifications being distributed to discuss any scheduled conflicts or other issues that we may not be aware of. Below are other organizations located in and around the downtown area that may be impacted as a part of the smoke testing efforts. An e-mail blast will be sent out to these organizations ten (10) days prior to smoke testing to better educate them of the pending activities. The following organizations and groups have been identified:

- Downtown Lawrence, Inc. (DLI) <http://www.downtownlawrence.com/>
 - Downtown Lawrence Facebook <https://www.facebook.com/DowntownLawrence/>
 - Downtown Lawrence Twitter <https://twitter.com/search/lawrence+kansas>
- Lawrence Kansas Chamber of Commerce <http://lawrencechamber.com/>
- Old West Lawrence Neighborhood Association <https://oldwestlawrence.net/>
- East Lawrence Neighborhood Association <http://www.eastlawrence.com/>
- Oread Neighborhood Association <http://www.oreadneighborhood.org/>
- Pinckney Neighborhood Association <http://www.pinckneyneighborhood.com/>

The DLI group has over 180 business members and will be a good resource for communication. The TREKK Team will be available to meet with the various stakeholder groups to discuss the smoke testing efforts and address specific issues and concerns if needed. Efforts will be made to obtain e-mail addresses for property owners and tenants to send out e-mail blasts to all interested parties the day before testing is to occur. Notification will also be posted on the Eco Flow web site one week prior to the downtown smoke testing.

- Eco Flow Web Site <http://www.lawrence-ecoflow.org/>
- City of Lawrence Web Site <http://lawrenceks.org>

Pre-Testing Public Notification

TREKK will send an e-mail notification ten (10) days prior to testing with the pending plans and TREKK/City contact information to the DLI, Lawrence fire department, police department, emergency dispatcher and agreed upon City staff. TREKK crews will canvass the project area a minimum of one week prior to smoke testing to distribute written notifications and communicate in person with building occupants when possible to provide information about the pending smoke tests and the schedule for the work. A draft of the information letter and the door hanger envelope for property owners/tenants is attached. Efforts will be made to obtain e-mail addresses and contact phone numbers for building occupants at that time. This contact information allows TREKK to send out notifications via e-mail blasts, and contact individual property owners if necessary. All these efforts combine to make every effort to ensure that all those effected will be properly notified.

Crews conducting the door-to-door notifications will be equipped with tracking devices to ensure and document that all buildings are visited and notification provided. The date and time of each visit is recorded for reference purposes.

The notification to building occupants will include the following minimum information:

- Information about the smoke test explaining:
 - Smoke testing purpose
 - Smoke testing schedule including beginning and ending dates
 - General test procedures
 - General description of the test area boundaries
 - General disclaimer that the smoke used is non-toxic and does not create a fire hazard
- Instructions to fill plumbing traps with water to prohibit smoke from entering structures through service lines
- Map of the testing areas with the specific date and estimated time the testing crews will be in the area
- Instructions to open doors and windows to ventilate in the event that smoke enters a building
- Contact name and telephone number for Ron Thomann and Robby Hartpence who will always be on site during smoke testing within the Downtown area

Testing Day(s) Coordination/Notification

Emergency and Municipal Agencies

Prior to commencing the smoke testing, the TREKK Project Manager or assigned Representative shall contact the Lawrence Fire Department, Police Department, Emergency Dispatcher and agreed

upon City staff. Notification will include, at minimum, a map identifying the areas to be smoke tested, crew lead contact information, and approximate schedule. This notification may be provided by email or facsimile to those parties as designated by the City staff and TREKK Project Manager. A copy of all notifications will be maintained in the project file.

The TREKK Project Manager will provide to the City the name of each crew leader and assigned assistant along with their contact numbers and email addresses. The TREKK Project Manager will provide the electronic notification template to be utilized.

Tenant/Homeowner Contact during Testing

It is not unusual for smoke to enter buildings during testing. Some of the more common causes include:

- Improper or defective vent connections to a building's sewer lateral
- Faulty or damaged plumbing with the building
- Faulty, dry, or missing sewer traps

Smoke that enters buildings on private property indicates a dry p-trap or plumbing defect that is allowing sewer gases into the building on a daily basis and should be corrected. Often, property owners react to seeing smoke in their building with alarm. Each TREKK field crew will be assigned a separate spokesperson that will be within close proximity to their crew at all times to assist with public interaction and address any concerns or issues that may come up with building occupants in an effort to avoid hindering the productivity of each crew. These spokespersons will be highly responsive and in the best position to calm the affected individuals with good public relation skills. A log of all contacts with residents/property owners will be maintained by each crew spokesperson during the smoke testing. The log will include, at a minimum, the resident's name and address, date(s), and any concerns raised. This log will be updated daily and submitted to the Project Manager to ensure that all issues have been addressed and any follow up contact made as appropriate.

Difficult property owners or situations of concern will be reported to the on-site TREKK Project Manager (Ron Thomann) immediately and the situation will be addressed. If a property owner or other person becomes aggressive or threatens TREKK field crews in any manner, testing shall be suspended and the on-site TREKK Project Manager (Ron Thomann) shall be contacted immediately for further instructions. Under no circumstance should a TREKK representative become confrontational with a property owner or member of the general public.

Downtown Smoke Testing Schedule and Restrictions

Due to the high profile nature of the Downtown area, smoke testing shall be conducted during periods of low public interference and low system flow to minimize disruption and maximize results. Smoke testing shall be scheduled for specific dates and times in order to accommodate commercial businesses in the downtown area. It is anticipated that testing in the Downtown area will be conducted on March 19, 20, and 21, 2018, starting at 7:00 AM and ending at 10:00 AM. The March dates were selected due to the University of Kansas and local schools being on Spring Break and the time of day was selected for minimizing impact to the general public. Testing in the downtown area will take approximately three days. Alternative dates will be established in June and July of 2018 in the event of unfavorable weather or that ground conditions are not adequate for positive test results. Extensive research has been conducted to ensure that there are no special events scheduled in the downtown area during the scheduled testing.

The specific schedule for notification and testing is as follows:

- **2/15/2018** – Final Smoke Testing Planning Meeting (TREKK Internal)
- **2/26/2018** – Final meeting with City Staff and Fire Department 1:30 at Kaw Point Plant
- **3/8/2018** (Thursday) – E-mail blast to DLI, organizations, any added tenant addresses, notifying testing will occur on 3/19 thru 3/21 weather dependent (include an informational letter, door hanger, and a map of the testing area and scheduled times). Nick to send this out
- **3/8/2018** (Thursday) – Smoke testing letter mailed to all downtown property owners. Nick to mail this out
- **3/8/2018** (Thursday) – City to send out Press Release (weather dependent)
- **3/11/2018 to 3/13/2018** (Sunday/Monday/Tuesday) – Block parking spots per ROW permit
- **3/12/2018 and 3/13/2018** (Monday/Tuesday) – Door-to-door notification process
- **3/8/2018 to 3/21/2018** – 24 hour I/I hotline service
- **3/15/2018** (Thursday) – E-mail blast to DLI, organizations, any added tenant addresses, notifying testing will begin Monday (include fact sheet and map)
- **3/19/2018** (Monday 7:00 to 10:00) – Complete Smoke Testing
- **3/19/2018** (Monday by COB) - E-mail blast to DLI, organizations, any added tenant addresses, notifying testing will resume tomorrow (include an information letter, door hanger, and map of the testing area and scheduled times).
- **3/20/2018** (Tuesday 7:00 to 10:00) – Complete Smoke Testing
- **3/20/2018** (Tuesday by COB) - E-mail blast to DLI, organizations, any added tenant addresses, notifying testing will resume tomorrow (include an information letter, door hanger, and map of the testing area and scheduled times).
- **3/21/2018** (Wednesday 7:00 to 10:00) – Complete Smoke Testing

Staged Smoke Testing Areas

The attached map depicts the Downtown smoke testing project area and the staged sections of approximately 2,000' of gravity sewer pipe each. Each section has a designated date and time frame that it will be completed. Sections are planned to be completed within a 45 minute time period, allowing for relocation and set up of equipment in the next area prior to the next area's start time.

The work will be completed as quickly as possible, with proper attention to documenting quality results to ensure that the data collected can be utilized to make recommendations to the City that will ultimately address the reduction of I/I rates.

Traffic Control

Traffic control has been a concern and consideration has been given to the impact to the traffic flow. In an effort to eliminate disruption and to ensure the safety of the testing crews and public, sewer manholes to be utilized for smoke blower set ups have been identified and at no time will traffic flow be impacted. Manholes selected for the smoke blower setups will be at locations out of streets. TREKK has worked with the City Staff and obtained all appropriate permitting including right-of-way and traffic control permits.

Video Documentation

Video documentation of roof drains and vents will be obtained during smoke testing for evidence of smoke. This video allows access to an otherwise difficult to see area and helps to better identify sources of I/I.

Summary

While TREKK Design Group has extensive experience with smoke testing in high profile and sensitive areas, the City of Lawrence Downtown area presents its own unique challenges that require proper planning and preparation. It is the goal of TREKK Design Group to approach this project with the upmost attention to detail and consideration for the residents and business owners impacted by this work. The key to the success of this project is communication with all those involved and impacted. TREKK is committed to going above and beyond the typical measures to ensure success of the smoke testing. Successful smoke testing will help provide an outline for recommendations that will assist the ultimate success of the Rapid Rainwater Reduction Program.