

Tentative Agenda
Municipal Committee
February 16, 2016
6:00 p.m.
City Hall Council Chambers

Roll Call

DISCUSSION ITEMS

- 1) Annual Chip Seal Program
Jason Hanson, City Engineer
- 2) Sanitary Sewer System Overview & Flow Monitoring
Jim Melvin, Interim Public Works Director
- 3) Clean-Up Coupon Discussion
Jim Melvin, Interim Public Works Director
- 4) Updates
 - a. 83rd Street Bridge RFP Award (March 1, 2016)
 - b. QuikTrip Agreement (February 16, 2016)
- 5) Next Meeting Date and Time – March 22, 2016 @ 6:00 p.m.

Adjournment

Future Topics:

- Enterprise Fleet Leasing Program
- 59th Street Sidewalk
- Blue Ridge Resurfacing Project

CITY OF RAYTOWN
Request for Committee Action

Date: February 16, 2015
To: Municipal Committee
From: Jason Hanson, City Engineer

Action Requested: Municipal Committee discussion of the City's current pavement maintenance chip seal program and annual needs.

Recommendation: N/A

Analysis: This discussion will overview the annual budget for pavement maintenance, the pavement maintenance methods utilized by the City, and ongoing needs related to pavement maintenance.

Alternatives: N/A.

Budgetary Impact: None.

- Not Applicable
- Budgeted item with available funds
- Non-Budgeted item with available funds through prioritization
- Non-Budgeted item with additional funds requested

Additional Information: Pavement Maintenance Powerpoint, Annual Chip Seal plan map and quantities, Annual Mill & Overlay plan map, map of grant projects.



Roadway Maintenance Overview

Raytown Public Works Department

The slide features a white background with a decorative border of overlapping green and light green geometric shapes on the left and right sides. The City of Raytown logo is positioned in the top left corner.

Annual Pavement Maintenance Program

The Pavement Maintenance Program is in place to improve the average pavement condition throughout Raytown.

This slide continues the theme of the previous one, with a white background and the same decorative green geometric border on the left and right sides.

Annual Funding

The Program receives approximately \$800,000 a year from the ½ cent Transportation Sales Tax to fund the following items:

- Crack Seal Program
- Street Striping Program
- Concrete Removal/Replacement Program
- Asphalt Overlay
- Light Weight Aggregate Seal

Program Objectives

- Apply low-cost preventive treatments
- Increase life by 7 years or more
- Apply the treatments at the critical Time
- Maintain Good Condition

(Assumes NO structural damage to candidate streets.)

Challenges

- Aging Infrastructure (Most pavement is 50-60 years old)
- Concrete D-Cracking (Local aggregates are porous)
- A.D.A. Requirements
- Lack of sufficient funding
- Recent decline of assessed values for taxes
- Deferred Maintenance

Pavement Deterioration Curve



Seal Treatment

Mixture of Small Aggregate, Emulsion, and Water

- Slows Down Surface Raveling
- Seals Minor Cracks
- Improves Surface Friction
- Extends Surface Life for 7 to 8 Years
- Relatively Inexpensive
- *This treatment has been used in Raytown for the past five years.*



Mill & Overlay

This technique has been used in our City for many years. It consists of milling 2" of the pavement with a cold plane machine, then replacing the milled material with 2" of asphalt surface material.

- Removes Ruts and other Surface Irregularities
- Prevents Surface Raveling
- Improves Surface Friction
- Improves Ride Quality
- Mill and Overlay is about 3.75 Times More than a Seal Treatment.



Rebuild the Street

This technique is just what it says. A total rebuild of the street. The rebuild does not include the storm sewers, but it could.

- A rebuild, even by City crews/Contractor is about 40 times more expensive than a Light Weight Aggregate Seal. A full rebuild with an 8" thick section is about 90 times more expensive than a Seal Treatment. Applying a Light Seal Treatment can postpone a rebuild for thirty to forty years.

Normally a rebuild would replace the full pavement section with our standard 8" asphalt section. Budget limitations have impacted our ability to utilize this standard.

Typical Treatment Cost



Additional Costs

Additional project costs that are incurred during roadway maintenance projects:

- Roadway Patching
- Curb & Gutter Repairs
- ADA improvements

Funding Sources

Transportation sales tax FY 2016

Pavement Maintenance	
Concrete repair:	\$150,000
Aggregate Seal:	\$250,000
Asphalt overlay*:	\$350,000
Pavement marking:	\$ 15,000
Crack seal program:	\$ 10,000
Total program:	\$775,000

*Budgeted overlay funds to go to Blue Ridge Bike Lanes Project.

Federal Grant Projects

- Downtown Streetscape Project (Spring/Summer Construction)
- 59th Street Sidewalks project (Summer Construction)
- Blue Ridge Boulevard Bike Lanes (Summer/Fall Construction)
- Raytown Road & 350 Highway Intersection Design (Fall Bidding)



2014 OVERLAY

2013 OVERLAY

2012 OVERLAY

2011 OVERLAY

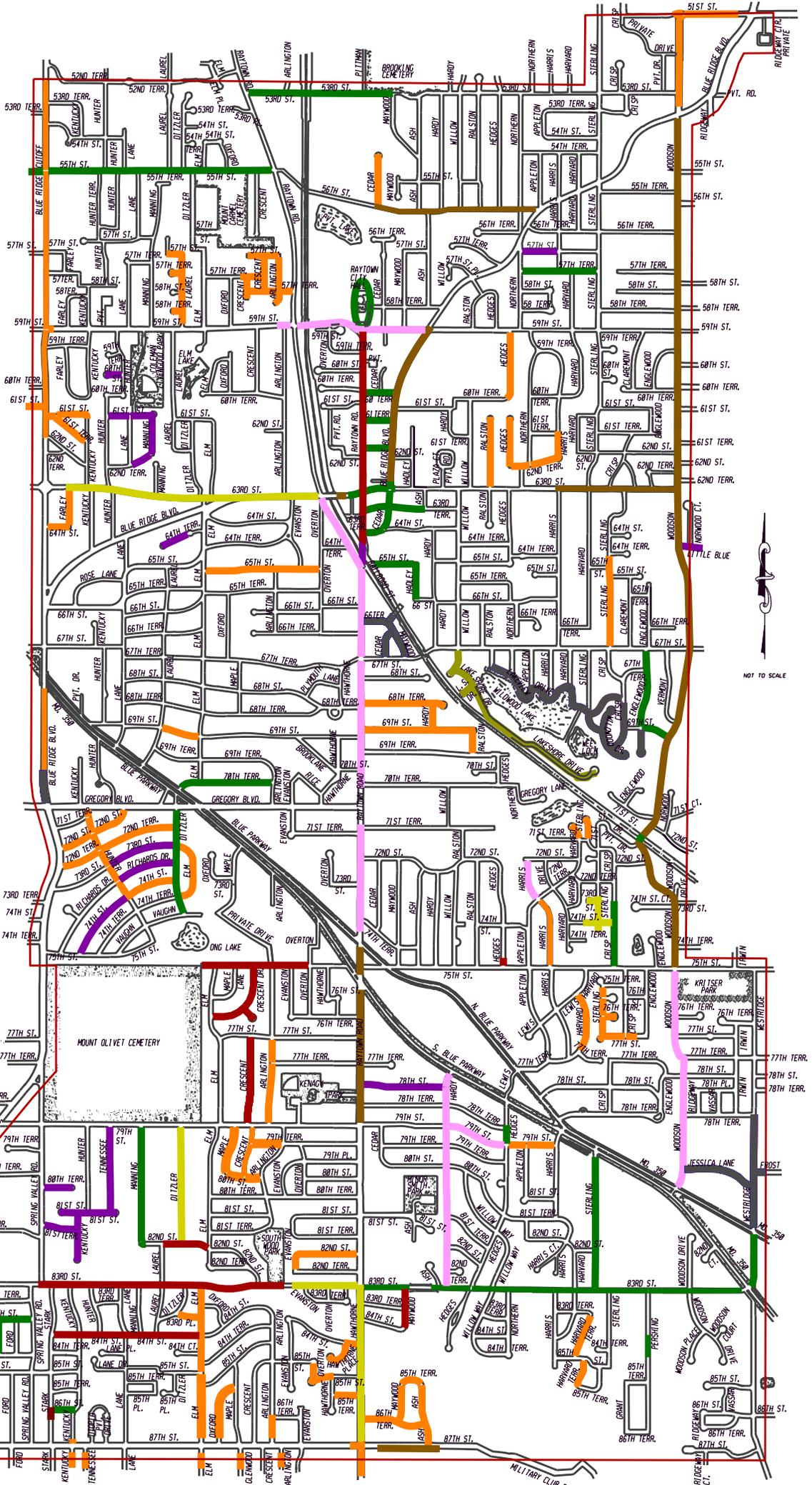
2010 OVERLAY

2009 OVERLAY

2007 OVERLAY

2006 OVERLAY

2005 OVERLAY



NOT TO SCALE



Yr 10 LWA Seal

Yr 9 LWA Seal

Yr 8 LWA Seal

Yr 7 LWA Seal

Yr 6 LWA Seal

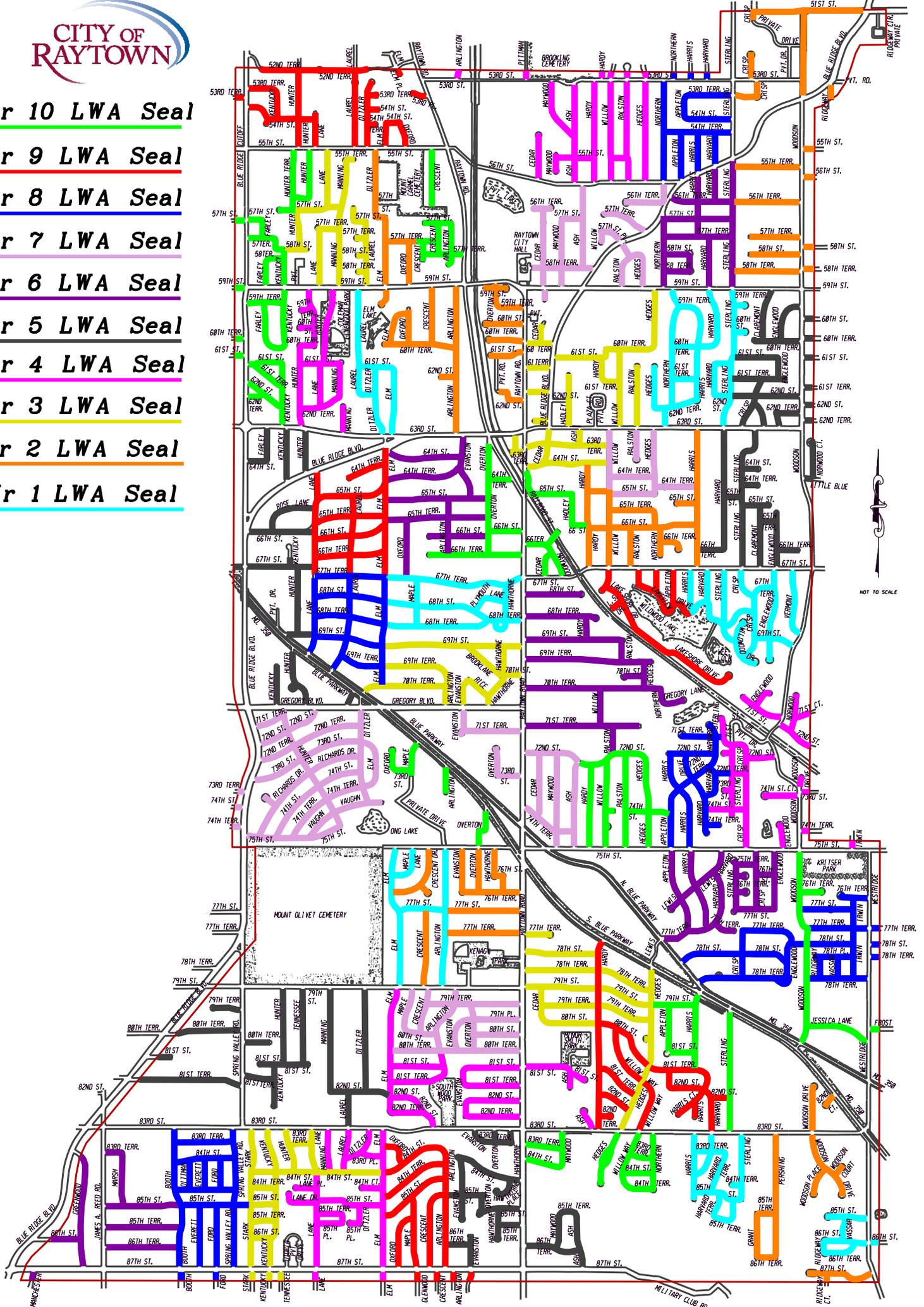
Yr 5 LWA Seal

Yr 4 LWA Seal

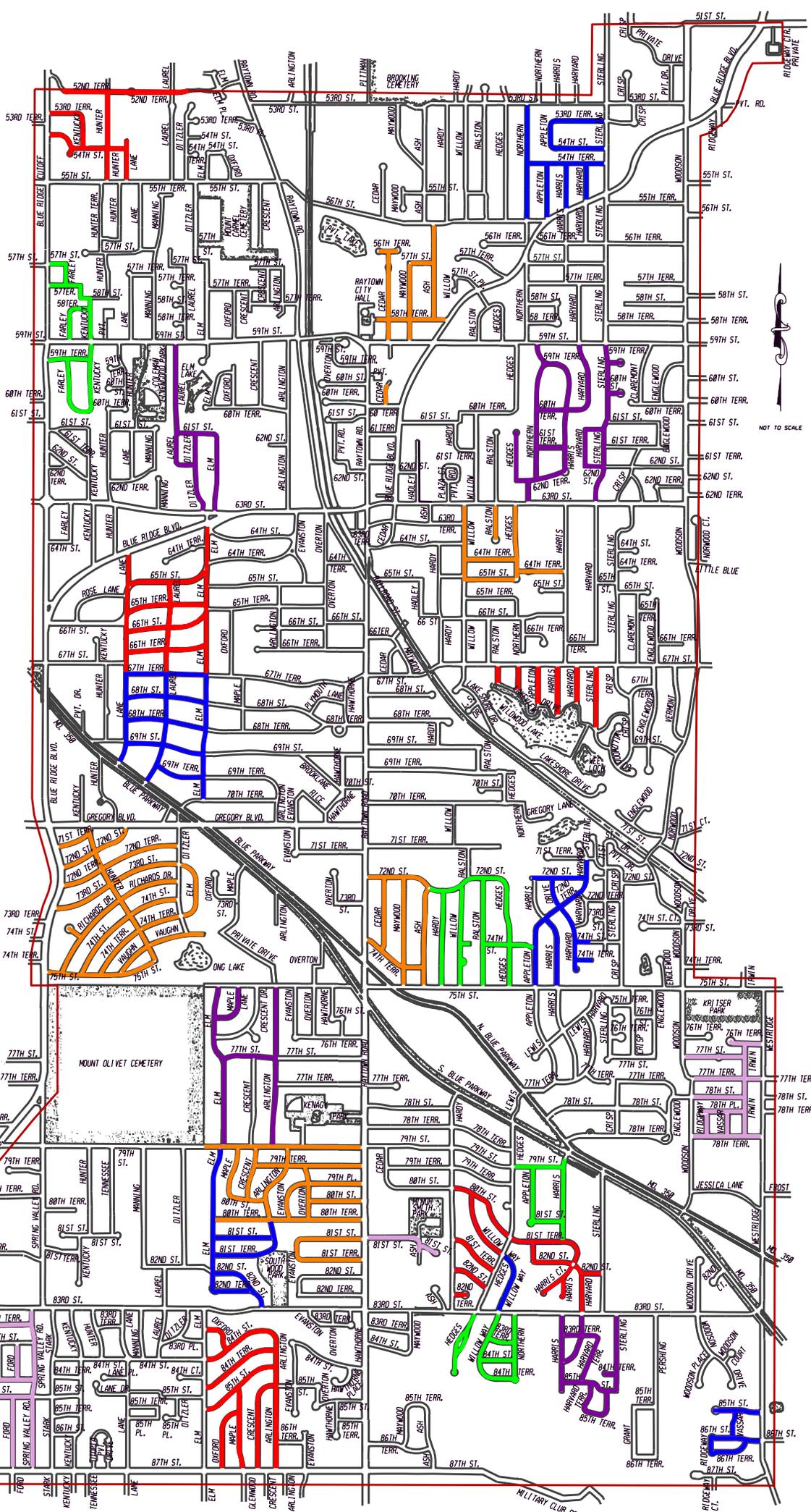
Yr 3 LWA Seal

Yr 2 LWA Seal

Yr 1 LWA Seal



NOT TO SCALE



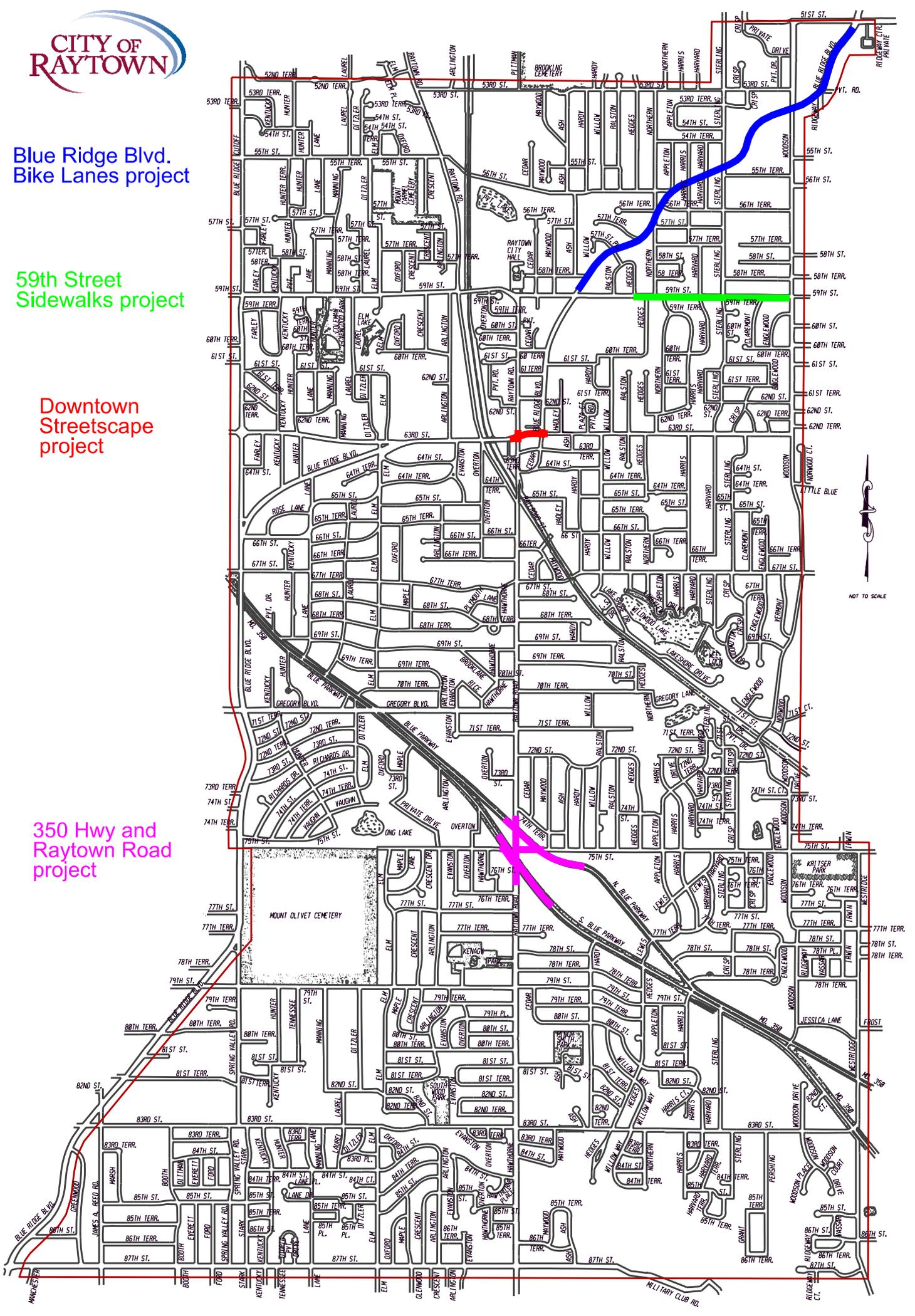
- 2015 LWA Seal
- 2014 LWA Seal
- 2013 LWA Seal
- 2012 LWA Seal
- 2011 LWA Seal
- 2010 LWA Seal

Blue Ridge Blvd.
Bike Lanes project

59th Street
Sidewalks project

Downtown
Streetscape project

350 Hwy and
Raytown Road project



CITY OF RAYTOWN
Request for Committee Action

Date: February 16, 2016
To: Municipal Committee
From: Jim Melvin, Director of Public Works

Action Requested: Municipal Committee discussion regarding the City sanitary sewer system operations. The purchase of five SmartCover system units will also be discussed.

Recommendation: N/A.

Analysis: Jim Melvin will give a short presentation overviewing the City's existing sanitary sewer systems, where the flows go, how the system is monitored internally, and how the flows are monitored both internally and externally. A map of the sewer lines will be overviewed during this presentation for greater understanding. An overview of Little Blue Valley Sewer District's calculation methods will also be discussed.

The Public Works Department is seeking to purchase five SmartCover system units for the use of sanitary sewer flow monitoring. The presentation and subsequent discussion will overview the applicability of this system to the City's current needs for flow monitoring.

Alternatives: N/A

Budgetary Impact: None.

- Not Applicable
- Budgeted item with available funds
- Non-Budgeted item with available funds through prioritization
- Non-Budgeted item with additional funds requested

Account Number(s): 501.66.615.100.53520
Fund: Sewer Fund
Amount to Spend: \$23,045.00

Additional Information: Presentation by Jim Melvin; SmartCover information (as provided at January 15, 2016 Board meeting)

Sewer/Stormwater Monitoring System Specifications

A sewer monitoring system shall be provided with the following characteristics:

1. The system shall provide continuous, real time monitoring of water level in manholes, lift stations and related wastewater structures.
2. The system shall use a dedicated, map-oriented web page, secure to at least 2048 bit security, to display data logging of water levels, alarms, and maintenance data.
3. The system shall have the capability of providing flow data as well as level data using a software interface to access either.
4. The system shall perform a scan of all sites at least once per day; it shall use algorithms to assess the scans to determine level or flow trend changes. It shall report level or flow trend changes to the user via email.
5. The web site shall provide for sending of control commands to the field units. The commands will be received and executed within one hour.
6. The level or flow trend change emails shall indicate the site location, the time, the date and the type of trend change as a “rise” or “fall”.
7. The system shall provide a specific symbol with a specific color on the dedicated user map display to graphically indicate the site or sites with trend changes.
8. The system shall collect and transmit data to a secure server. The data shall be accessible via device with a web browser.
9. The data shall be stored at no charge for an unlimited period of time and shall have no limits on the amount of data being stored.
10. The system shall use self-contained, battery power with an operating lifetime of at least one year.
11. The system shall provide system status and maintenance information including battery voltage, sensor performance, and radio signal strength.
12. The system shall provide notifications for instances where the battery, sensor or communications may require maintenance.
13. The system shall provide a specific symbol with a specific color on the dedicated user map display to graphically indicate the site or sites that may require maintenance.
14. The system shall provide a real-time security alarm that will transmit its signal typically within one minute, if the manhole cover or hatch is removed or tilted.

15. The system shall provide a specific symbol with a specific color on the dedicated user map display to graphically indicate the site or sites with an alarm that has been activated because a cover or hatch has been removed.
16. Installation shall not require confined space entry of any type and as defined by OSHA 1910.146 for installation or maintenance.
17. The system shall have a remote field unit that contains system control, system sensor, system power pack, system bracket assembly, and system antenna.
18. The remote field unit shall be mounted directly onto the sewer manhole or hatch in order to minimize time and expense of installation and service.
19. The antenna shall be mounted directly onto the top of the manhole cover and shall only require a 3/8" drilled hole into the cover to connect to the system control.
20. The system will communicate using two-way digital radio signals directly to orbiting satellites in order to provide uninterrupted operations in times of local, regional, or massive power outage.
21. The orbiting satellite system shall have 66 satellites in low earth orbit to assure communication redundancy.
22. No additional terrestrial communications systems shall be required to send or receive information to or from the installed units.
23. The field units shall be capable of surviving immersion in sewage water for at least one hour.
24. The system field units shall use ultrasonic water level sensing, with a resolution of at least 0.1". .
25. The system remote field units shall monitor water levels at a fixed rate of at least 10 times per hour.
26. The monitoring system type shall be installed at more than 50 other public agencies in the US.
27. The monitoring system type shall cumulatively have in excess of 80,000,000 operating hours of field unit operational experience.
28. The system field units shall be capable of replacement in under 15 minutes of on-site labor and without any confined space entry as per OSHA 1910.146.
29. Alarms shall be set and adjusted through the user website and shall not require any adjustment at the remote field unit to change alarms settings.
30. Alarms from the system shall be able to be acknowledged through a handheld wireless device.
31. Data updates from the remote field unit shall be no less frequent than once per hour.

32. The system shall, on the user website, calculate flow from water levels and adjust parameters needed to calibrate these flow levels.
33. The system will provide: alarms under conditions of high water levels or intrusion; alerts indicating the need for service of the remote field unit; and advisories for trends in data that indicate the water levels are not normal and require attention.
34. The remote field unit shall be capable of supporting more than one sensor at a time.

QUOTATION

For

City of Raytown, MO

Attn: Tony Mesa

offered by

Key Equipment and Supply CO., KS



Quotation Date: 12/15/2015
Quote Validity: 90 days.
By: Steve Williams Key Equipment and Supply Co.
Representing SmartCover Systems[™]

Section I: Pricing

SmartCover[®] Systems[™] (SCS) is pleased to provide the following Proposal for **SmartCover[®]** level and flow-estimating monitoring system. Please find in this document:

- Pricing Summary as shown in Section 1
- System Description in Sections 2-5
- Warranty statement in Section 6
- Acceptance in Section 7

Pricing Summary

Part Number	Description	Unit Qty.	Unit Price (Each)	Extended
SC-D-S-15	SmartCover® System Components E-Box System Control with onboard computer, modem, digital radio; fully potted and IP-68 rated. Distance Sensing Module (DSM) with 3" to 81" sensor range, with 15' cable. PowerPack® - lithium thionyl chloride battery with high power density. E-Square™ antenna , including antenna and installation kit. Mounting bracket kit - three-part amounting bracket set made of heavy gauge, hard-anodized aluminum; includes all mounting hardware.	5	\$3,985	\$19,925
Parts Warranty	One (1) Year, Parts-Only Warranty Limited Parts-Only Warranty on all system SmartCover® hardware. See Warranty Statement for complete details.	5	Included	Included
ASM-SC1	Active Site Management (ASM), One-Year. Comprehensive support services including: <ul style="list-style-type: none"> • Software subscription with <i>unlimited number of users</i> accessed with secure user name and password • Complete maintenance of all cloud based software • Regular feature updates and upgrades including the all new <i>SmartTrend™</i>. • Hosting of data storage – unlimited data storage • Iridium Satellite connectivity service with bi-directional communication. • Advisories, Maintenance Alerts and Alarms issued to customer defined personnel via email and/or text message • Ongoing technical support via phone or online. 	5	\$364	\$1,820
IST-1	Dedicated Customer Website: Initial Set-up & Training (IST) <ul style="list-style-type: none"> • Dedicated Customer Website set-up and training • Browser-based, secure user access • Includes map view, site-specific data and information • Alarm and Advisories set-up • Comprehensive training for login, website features and website functions • Note: this is a one-time charge for new customers and does not apply to follow up orders. 	1	\$899	\$899
Freight Out	Shipping and Handling UPS Ground		5	\$151
Installation Labor	Installation to be determined by Key Equipment		5	\$250
TOTAL	All items above			\$

Delivery

- **Standard: Six (6)** weeks upon receipt of a Purchase Order and with receipt of complete engineering and site information from the customer as requested.
- All customers will be notified of the shipment date upon Order Acknowledgement.
- Actual availability may vary depending on total demand. The “Standard six weeks” is not a guarantee but a good faith estimate. It is strongly recommended that an order be placed as early as possible. Reasonable efforts will be made to provide earlier delivery if requested.

Terms and Conditions

- Payment: Net 30 days
- Late charges: A service charge of 1.5% per month will be added to all balances unpaid 30 days after invoice date. Failure to pay in accordance with these terms may void all warranties.
- Cancellations: for all orders of less than \$10,000, cancellation is accepted prior to shipment. For orders equal to or greater than \$10,000, a 15% restocking charge is applied for cancellation.
- Returns: returns are accepted with a valid Return Material Authorization (RMA) number only.

Ongoing Annual Costs

After the first year of operation, the following fees will provide ***continued comprehensive services*** including ***software support, data storage, upgrades, added features, and satellite connectivity and PowerPack™ Warranty.***

These are *annual charges* paid prior to the start of the year.

Active Site Management (ASM)

ASM-SC1

\$364

One-Year software subscription, satellite connectivity, online maintenance, online S/C monitoring per unit per year.

PowerPack Warranty

PowerPack™ Warranty (PW-LTC1):

\$225

One-Year PARTS-ONLY PowerPack Warranty for each installation site, part-only warranty on the PowerPack™ offering unlimited replacements during the Warranty term.

Extended Part Warranty

Extended Parts Warranty (EW-SC1, Optional):

\$ 399

One-Year PARTS-ONLY covers: E-Box System Control, Distance Sensing Module (DSM), antenna, and mounting bracket.

This is a PARTS ONLY warranty extension after the first year.

NOTE: Warranty extensions must be for consecutive years. Should a warranty be purchased after any initial year where the warranty was not purchased then the previous year(s) must be additionally purchased.

End Section 1; proceed to Section 2, next page.

SECTION 2: PRODUCT DESCRIPTION OVERVIEW

Each SmartCover® System includes the following components which comprise the hardware delivered with each system:

- One (1) E-Box system control
- One (1) Ultrasonic Distance Sensing Module (DSM) with connecting cable.
- One (1) communications antenna for direct connection to the Iridium Satellite System.
- One (1) PowerPack™, a proprietary high power density lithium thionyl chloride battery
- One (1) bracket kit for either mounting flat to the underside of the manhole cover or for mounting to the manhole cover vein.
- One installation kit containing all hardware and accessories necessary to mount a single system

Item Descriptions:

E-Box System Control

The E-Box is the system control containing the digital satellite radio, computer and signal processing components. It is fully potted and can be completely submerged in water (IP-68 rated) It is housed in an, ABS enclosure and shock tested to 10 G's.



SmartCover® E Box Control

PowerPack™

The PowerPack™ is a high power-density battery system designed for reliable, consistent delivery of power in the harsh wastewater environment. It housed in a urethane coated pack containing Lithium Thionyl Chloride primary batteries. Typically the PowerPack™ provides at least one year of life and generally longer under normal operating conditions. PowerPacks™ have a 10 year shelf life prior to use.



SmartCover® PowerPack™

Distance Sensing Module (DSM)

The distance sensing module is an ultrasonic distance sensor. It is enclosed and sealed in an ABS housing. It is fully potted and completely water-proof, meeting IP-68 standards. The crystal controlled oscillator sensor is self-calibrating. There are two [distance] ranges available.

- The standard range senses between 3” and 81”
- The long-range sensor’s range is 11” to 240”.

The DSM has two standard cable lengths of 15’ and 25’. Custom lengths are available, application dependent, up to 300’. SCS Application Engineers are available to assist users to determine the correct DSM range and cable lengths.



SmartCover[®] DSM

E-Series[™] Antennae

The E-Series[™] antennae include the “E-Square” and the “E-Dot” types. Both are traffic rated and designed to mount directly to the manhole cover or vault lid. They communicate directly to the Iridium Satellite System and do not require any intermediary devices for boosting signals. The antennae are secured to the top of the manhole cover using a high strength, two-part acrylic adhesive specifically designed for high stress, structural applications.

The E-Square antenna is a road-reflector type used in areas where there is no opportunity for dislocation from such hazards as snow plows.

The E-Dot antenna is for cold-weather climates where snow plow operations occur and are designed to be mounted below the manhole profile.



E-Square[™] Antenna



E-Dot[™] Antenna

Mounting Bracket Kit

The mounting bracket is a ruggedized, corrosion resistant assembly designed to protect and secure system components. The bracket is secured with two stainless steel bolts whereby the installer drills two ¼" holes into the cover. The bracket is designed in such a manner such that **NO CONFINED SPACE ENRTY IS REQUIRED FOR INSTALLATION**. Its hard-anodized aluminum housing encloses the PowerPack and the E-Box control. The DSM (distance sensing module) is connected to the E-Box and suspended via a cable, typically over the invert.

The bracket is supplied as a three-piece kit for mounting directly to the underside "flat" of the manhole or, alternately, to the manhole cover vein.



Bracket with kit



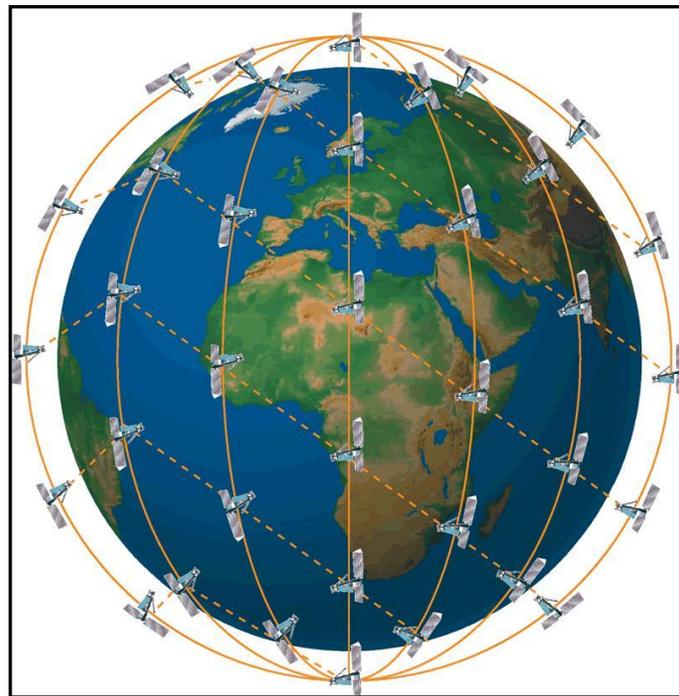
Mounted Bracket

SECTION 3: DESCRIPTION OF THE SATELLITE COMMUNICATION SYSTEM

The SmartCover[®] system uses the high reliability, highly secure **Iridium Satellite System** as its communications backbone. Iridium is a state-of-the-art communications system consisting of 66 Low Earth Orbiting (LEO) satellites. It has global, redundant coverage and is known to provide highly superior connectivity to that of terrestrial systems such as GSM, GPRS and other cell phone based systems. Iridium has a very strong record of performance and reliability. It is used by the US DOD for its reliability.

Iridium Satellites are in orbit across the globe and assured connectivity is achieved requiring but a small fraction of the available horizon. SmartCover[®] systems are able to communicate in challenging locations with such impediments as tree canopies, overpasses or buildings.

SmartCover[®] data is highly secure with servers using 2048 bit encryption. These are redundant servers located in a climate controlled; secure facility with emergency power to prevent any interruptions. Servers store Historical Communication, Data, and Data Access information. Being a web or “cloud” based system; data is available at all times through a browser from a computer, tablet or phone. Users can access data through any web browser to the server via encrypted data and send notifications directly to the user.



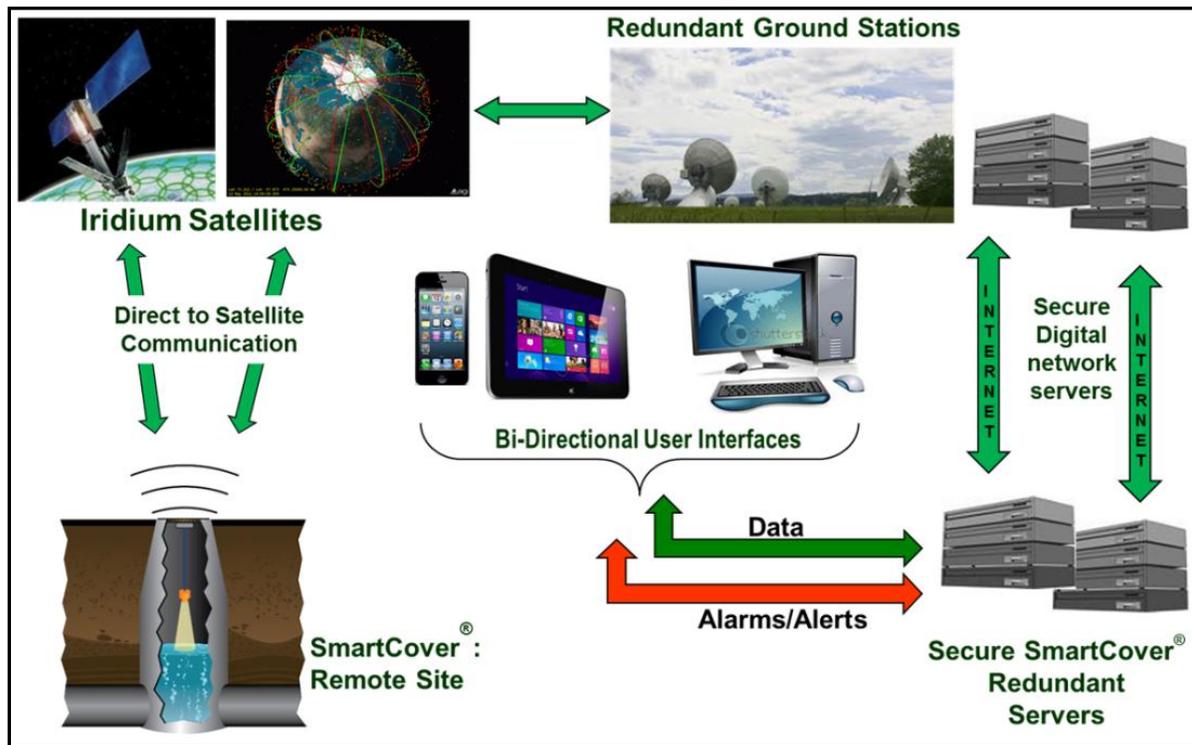
Iridium Satellite Constellation

The Communication Process

As per the diagram below, the SmartCover[®] system communicates directly to an orbiting satellite. The communication signals are then sent to Iridium earth link stations, and then to SCS secure servers.

For alarm signals, they are subsequently sent to the Customer via cell phone, Smart Phone, digital pager and/or to computers via the internet. It is possible to have alarms sent to a central control room as well.

SmartCover[®] communication is *bi-directional* and the user has control over the remote sites. A major benefit of the SCS system is that data acquisition, alarms and system setting changes are enabled *remote from the installation* site saving time and resources. For example, the alarm level [distance] setting can be accessed via the Dedicated User Website to be changed or disabled. Changes to these settings are communicated from the SCS servers through the Iridium system and to the SmartCover[®] system at the designated site.



SmartCover[®] communications system diagram

SmartCover[®]: Measurement, Data Acquisition, Transmission and Process Overview

The SmartCover[®] system monitors continuously 24 hours per day, seven (7) days per week. SCS has cumulatively acquired thousands of years of data and experience with this basic measurement protocol to assure users that this methodology is extremely sound and reliable for ongoing data acquisition and alarming functions.

Measurement Frequency

The SmartCover[®] system takes a measurement every six (6) minutes. If the measured level is below the pre-set alarm level then the cycle begins again.

Data Acquisition Frequency

The SmartCover[®] logs alternate readings of the six (6) minute measurement cycle. In other words it log a measurement every 12 minutes, five (5) times per hour. These readings are “batched” and sent once per hour via satellite to the server and stored for user access such as trending and analysis.

Alarming

If the SmartCover[®] system measures and senses that the water it is *above* the alarm level, an alarm notification is sent to the designated users and by a pre-established communication protocol i.e., text message to a mobile device or an email message to a computer. Alarms through cell phones or pagers are via Short Message Service (SMS), or Smart Phones and emails via email messaging. Alarms will continue to be sent until acknowledged. The system will continue to monitor, even though the alarm has been acknowledged. Note: a dedicated direct-from-satellite handheld system is available option for highly critical communications. Contact SCS for more information.

A LEVEL MEASUREMENT IS TAKEN EVERY 6 MINUTES AND DATA IS UPDATED ON THE SERVER EVERY HOUR. IN THE EVENT OF A HIGH WATER EVENT, THE ALARM IS SENT THE NEXT TIME A LEVEL MEASUREMENT IS MADE. THE LONGEST TIME BETWEEN THE TIME THE WATER REACHES THE ALARM LEVEL, AND WHEN THE ALARM SOUNDS IS 5 MINUTES AND 59 SECONDS.

Graphical Data

The website is accessed by designated users through a secure portal and using a user name and password. Upon login a map of the system appears as shown below.



System Map

System Map

The system map has five, colored-coded symbols for ease of viewing and management where:

GREEN (circle) – Indicates that the SmartCover[®] system is functioning properly and that the site does not have any alarms or maintenance alerts.

GRAY (circle) – Indicates that the SmartCover[®] system was previously located at this site but has been moved. The data for this site is archived and accessible.

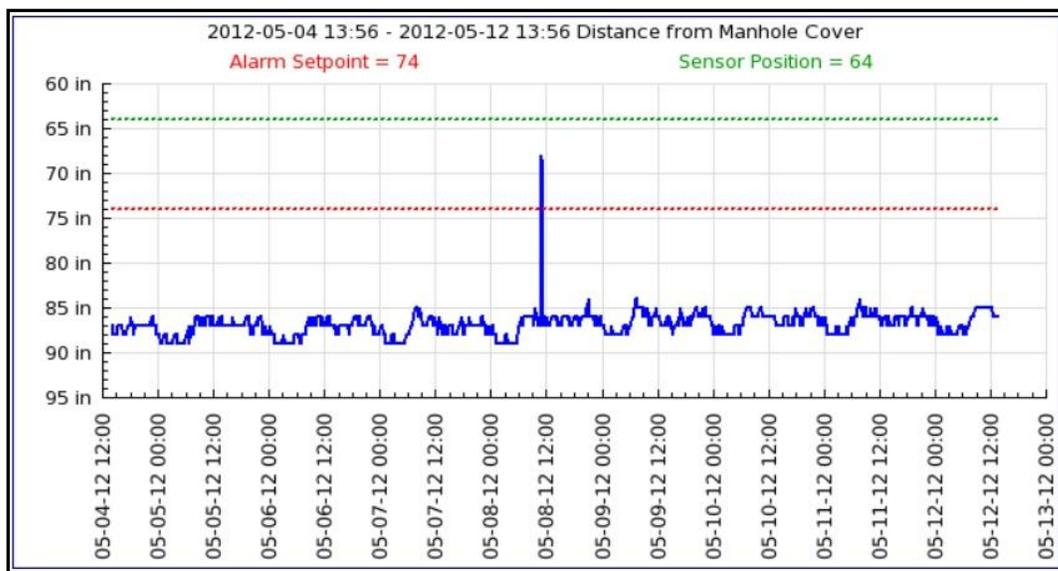
ORANGE (circle) – Indicates that the SmartCover[®] system, while not in an Alert or Alert state, has issued an “Advisory”. The Advisory is an email message has been sent because the site data trend indicates that an anomaly is occurring. It advises users to view this site’s data and determine what, if any, remedial action should be taken.

BLUE (square) – Indicates an “alert” and that a SmartCover[®] maintenance action is required. For example, it could mean the battery has low voltage and needs to be replaced or that a unit has not communicated within the expected interval.

RED (triangle) – Indicates that an “alarm” condition exists at this location. It could be high water event (surcharge) or an intrusion. Action is required.

Site Graph

A user may access any remote site by clicking on the map or on the address location. As an example, the graph below illustrates level in inches (y-axis), date/time (x-axis), flow levels (blue line), and the alarm setting (red line). We see in this case flow levels are below the alarm and then followed by a surcharge. The surcharge would have triggered an alarm. Note that the alarm is set well below the level where a spill may occur (green line) and allows for sufficient time to respond. In this case the bottom of the sensor is 64 inches from the manhole cover and the alarm is set for 74 inches below the manhole cover.



Site Graph

SECTION 4: INSTALLATION AND ACTIVATION

Installation

It is most important to note that the SmartCover installation never requires confined space entry. With this, a typical installation is inexpensive and takes much less than one hour for physically attaching of the SmartCover[®] system. The antenna is mounted to the top of the cover or lid and the mounting bracket, housing the PowerPack and E-Box with the DSM connected to the E-Box, to the bottom.

The antenna is mounted and secured with a high strength, MIL-Spec grade, two part adhesive and a hole is drilled to feed the antenna wire to the underside where the E-Box control is located.

The bracket is mounted to the underside by drilling to two holes into the cover or lid. Two stainless steel screws secure the bracket. The DSM is connected to the E-Box control and it is suspended and aligned to the flow target area i.e., the invert.

On-site testing of the communication link is performed to ensure that the unit is operational.

- **Standard Installation:** The SmartCover[®] system (hardware) is installed in the field at the designated site.
- **Offsite Installation:** The SmartCover[®] system is installed on the selected cover at an offsite facility and transported to the designated location. This method can minimize onsite time to a few minutes reducing the need for traffic control and disruption.
- Typically, the Customer will provide personnel and equipment, as appropriate for traffic control as required by local regulations and safety of field personnel.

Activation

After the physical installation of the SmartCover[®] system(s), the following actions are taken to bring full functionality to the SmartCover[®] system. SCS technicians will assist with all installation activation as part of our standard service protocol.

- ***SmartCover[®] Activation: Customer Actions***
 - Upon receipt of a Purchase Order, SCS the user will receive a questionnaire to obtain the information necessary to perform the SmartCover[®] service Set-Up. Proper system operation is dependent upon receipt of required information.
 - This information is used as part of installation where communication will be tested to verify functionality.
- ***SmartCover[®] Activation: SCS Actions***
 - At the SCS technical Support offices, the secure Customer Web Site is set up including a private account and database on the SCS secure server.
 - Web site is configured for the Customer Web Site with SmartCover[®] system locations and users.
 - Initial population of the Customer SmartCover[®] database.
 - Registration of the SmartCover[®] system wireless radios with the network and setting the Customer default system operational parameters.

Training

Training is provided after completion of the installation process. Once on-site personnel are trained, SCS will be available to provide additional web site training remotely after the SmartCover[®] system has been installed and operational.

SECTION 5: ACTIVE SITE MANAGEMENT

Active Site Management (ASM) is a **compressive support service** for the SmartCover[®] system. It includes software support, satellite connectivity and ongoing technical support with these three elements described below.

It is an annual, per site service provided by SCS. ASM includes but is not limited to:

- **Website hosting-** initial set-up and ongoing hosting of all software and customer data. Note that all data is owned by the customer.
- **Website / Software Upgrades-** from time to time SCS provides new features and tools at no charge including such features supporting improved analytical tools, improved graphical tools and new reports.
- **Website maintenance** – maintaining the secure servers on which your web site resides, and providing free upgrades to the web sites as they become available.
- **Standard Reports** - SCS will support Customer in the preparation of these reports for management or regulators **Technical Telephone Support** - This service is offered by the SCS Technical Services team from 7am to 5 pm Pacific time and with additional support from local representatives.
- **Management Oversight**
 - SCS Technical Services team monitors the proper operation of all installed systems including battery voltage, the radio signal strength and the communication to/from the systems.
 - SCS coordinates the appropriate service to repair any components in the field with you or the local dealer
- **Alarm Processing** – maintaining the infrastructure of the alarm contact system.
- **After Hours Support** – on an as-needed basis. Contact SCS for details
- **Wireless Communications Connectivity** – Access to the two-way, wireless satellite network.

Product Improvements

The SmartCover[®] is continuously improving, adding new features and functions. SCS often uses customer input to add new features. Product improvements are backwards compatible to existing satellite systems with 0.10” resolution. There is no charge for these improvements as they are part of the annual ASM.

SmartTrend[™]

SmartTrend[™] is an all-new addition to **SmartCover[®]** that enables notifies and enable users to anticipate events at remote monitoring sites. **SmartTrend[™]** automatically scans each remote site to assess data trends. Should it see an “anomaly”, it provides users an Advisory email message. This important addition to the **SmartCover[®]** system means that users now have the most advanced predictive method available identifying future issues such as SSO days or even weeks *before they occur*.

SECTION 6: ADDITIONAL TERMS & CONDITIONS, LIMITED WARRANTY

Mutual Hold Harmless

SCS hereby holds Customer harmless from any and all claims that may arise, or damages that may result, to SCS or SCS staff during the performance of this contract. Customer hereby holds harmless SCS, its founders, owners and staff, from any and all claims that may arise, of any kind or from any cause whatsoever, due to or as a result of the installation, operation, or use of the SmartCover[®] system.

Loss of Communications

Customer acknowledges that SCS is not responsible for the loss of wireless communication or internet communications or any communications used in the operation of this system.

Advisory Only

The SmartCover[®] System is an advisory service only. As such, SCS and its founders, owners, or staff are not responsible for any damage of any kind or from any cause whatsoever that may result from, in relation to, in connection with, due to, or as a result of the installation or operation of the system, including without limitation, equipment failure, or any consequential damages caused by, or resulting from, the use or installation of the SmartCover[®] system.

Limited Warranty

The equipment components of the SmartCover[®] system are warranted free from material defects of material and workmanship for a period of one year from the date of installation. Unless otherwise stated, the SCS warranty herein is a parts-only warranty.

Should the Customer discover any condition that might invoke a warranty claim, they are to expeditiously and without delay notify the SCS Technical Services group.

Upon notification, SCS will assess and instruct the user on follow-on actions.

Should a component fail as a result of a defect in material or workmanship, SCS will replace the component or repair it at the SCS location.

For all valid warranty claims, as determined by SCS, reasonable freight charges to and from Customer shall be paid by SCS. In all cases, SCS shall determine the shipping method and/or carrier unless otherwise agreed to in writing by Customer and SCS.

Upon approval of a warranty failure by SCS, SCS will either repair or replace the defective component at SCS' sole discretion.

THE FOREGOING WARRANTY IS EXCLUSIVE AND IN LIEU OF ALL OTHER WARRANTIES OR CONDITIONS, EXPRESS OR IMPLIED (INCLUDING ANY WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE). REPAIR OR REPLACEMENT IN THE MANNER PROVIDED ABOVE SHALL BE THE SOLE AND EXCLUSIVE REMEDY FOR BREACH OF WARRANTY AND SHALL CONSTITUTE FULFILLMENT OF ALL LIABILITIES OF SCS WITH RESPECT TO THE QUALITY AND PERFORMANCE OF THE PRODUCTS.

THIS WARRANTY DOES NOT COVER DAMAGE OR REPAIRS OR REPLACEMENTS BY ANY CAUSE BEYOND THE CONTROL OF SCS, INCLUDING ACTS OF NATURE, IMPROPER USE, LACK OF PROPER MAINTENANCE OR UNAUTHORIZED REPAIR.

REPLACEMENT AS PROVIDED UNDER THIS WARRANTY IS THE EXCLUSIVE REMEDY. SCS SHALL NOT BE LIABLE FOR ANY ACTUAL, EXEMPLARY, INDIRECT OR CONSEQUENTIAL DAMAGES, INCLUDING DAMAGES FOR LOSS OF GOODWILL OR PROFITS AND/OR LOSSES FROM ANY CAUSE WHATSOEVER, EVEN IF SCS HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.

In no event shall SCS's liability, whether in contract or in tort (including negligence and strict liability), exceed the price of the Product from which such liability arises.

SECTION 7: Acceptance

The undersigned have read and acknowledge their understanding of this offer.

Signatures

City of Raytown, KS

**Key Equipment Inc.
Exclusive distributors for
SmartCover[®] Systems[™]**

Steve Williams

Signature

Date: 12/15/2015

Date

Sole Source Letter- Exclusive Manufacturer
December 17, 2015

This letter is to provide notification that Hadronex, Inc. doing business as SmartCover[®] Systems[™] and herein known as "SCS", with corporate offices located at 2067 Wineridge Pl Suite E. Escondido, Ca. 92029 is the creator, manufacturer and marketer of systems and products, including the proprietary, patented and award winning SmartCover[®] and SmartFLOE[™], SmartTrend[®], SmartVault[™] and SmartRain[™] systems.

These systems are **proprietary** and have certain **patents**. They are designed and manufactured by SCS and provide users with unique qualities and functions to acquire water level or flow data below the manhole cover or lift station lid, or other structures with open channel flows, using ultrasonic technology. The system acquires and transmits data through a satellite network and provides 24/7 user access via a secure web browser and through a dedicated, secure user website. It *uniquely* communicates by an embedded digital radio through the Iridium Satellite System assuring secure, global, redundant coverage.

SCS systems enable users acquire *trend data* via the *proprietary and patent pending SmartTrend[™]* analysis software tool that issues predictive "Advisories" on developing trends. The SCS systems are capable of acquiring and fully integrating rain data into the same graphical display with level or flow data, providing a composite picture of the effects of rain versus level or flow data via the proprietary SmartRain[™] software tool. In the event that water levels surcharge or an intrusion occurs "Alarms" for surcharges are issued via text message or email with no limit to the quantities of these communications.

The system has certain self-monitoring characteristics providing information on specific operational parameters system. It communicates to users with "Maintenance Alerts" using the proprietary satellite communication network. All notifications provide information and resources to users that improve user intelligence and enable effective, informed decision making for corrective action.

These systems uniquely provide real-time, continuous monitoring capability operated by an engineered and proprietary long-life, lithium thionyl chloride battery pack. The system uniquely measures and displays the battery pack voltage level. It communicates to the user when voltage has reached a low limit.

These systems are protected by the following US Patents 7,292,143, 7,948,215, 7,944,352, 7,598,858 and 7,589,630. The product is also protected by registered trademarks and international patents. Company also has a Madrid Treaty filing for its main trademark.

We hope this information will satisfy your requirements and that it clearly demonstrates the unique, patented and proprietary features of our systems.

Sincerely,



Chief Operating Officer

CITY OF RAYTOWN

Request for Committee Action

Date: February 16, 2015
To: Municipal Committee
From: Kati Horner Gonzalez, Assistant Director of Public Works

Action Requested: Municipal Committee discussion of the existing City policies and procedures regarding citywide clean-up efforts.

Recommendation: Increase Clean-Up Coupon allowance to one per quarter per address.

Analysis: This discussion will outline the policies and procedures in which the City has implemented and follows in regards to citywide cleanup.

The City currently utilizes the Clean-Up Coupon program which allows residents to purchase two coupons per two years per address. The coupon allows residents to dispose of \$25 worth of yard waste for \$5 at designated disposal locations (see attached). The City has also allowed the purchase of additional coupons after wind/storm events resulting in significant levels of debris. In 2015, 203 Clean-Up Coupons were issued. Resulting in a cost of \$4060 incurred by the City for clean-up efforts at a cost of \$20 per person utilizing the service.

Staff has found this to be a cost-effective program that has steadily grown in use each year since its implementation. The Public Works Department is working toward implementing new procedures to promote a more widespread use throughout the City. Currently staff is working toward implementing capabilities for Public Works staff to accept payment online and mail the coupon to residents. Additionally, it is recommended that the limit be increased from two coupons per two years to four coupons per year, or one per coupon per quarter, based upon the requests received from residents to raise the limits.

Other ideas that have been previously implemented or suggested include a Clean-Up Day event. While this program experienced some positive results, there are multiple challenges experienced by City staff such as inflexibility of availability (only one day of the year), significant overtime expenses, safety concerns, and inefficient use of City funds.

Another idea to be investigated is entering and agreement with Kansas City and/or Lee's Summit at their disposal facilities. This program is a set fee of \$30,000 per year; using clean-up coupon participation for a baseline, this would result in a \$130 cost per user.

Alternatives: See above.

Budgetary Impact: None.

Not Applicable
Budgeted item with available funds

Additional Information: Current Clean-Up Coupon pricing options, 2013 Clean-Up Coupon Presentation;



Raytown Cleanup Day

Objective



The purpose of the community cleanup day event is to provide the residents of Raytown an option to dispose of unwanted items and debris. Staff proposes changes to make the event more targeted, productive, and efficient.

Topics of Discussion...

- Current Program Challenges
- Proposed changes
- Benefits of Change
- Program Details
- Program Limits

Current Program Challenges



The current one day event has the following challenges:

1. It is a one day event that last 7 hours.
2. Traffic congestion along Raytown Road
3. Overtime expenses for staff
4. Potential for injuries.
5. Utilization by non-Raytown residents.

Proposed Changes



Staff proposes to change from a one-day event to a coupon system. The coupon system would provide a \$25 coupon valid at participating vendors. The coupon would cost Raytown residents \$5 and they would be limited to 2 coupons per 2 year period.

Benefits of Change



- 305 days available for disposal
- 2448 hours available for disposal
- More days available for community groups to organize and participate
- Lower cost per participating resident
- Ability to serve more residents
- More avenues for code enforcement to be proactive in solving issues.
- Less non-resident utilization

Program Details



- Coupons will cost \$5 to get a \$25 value
- Limit of 2 coupons per residential property in a 2 year period
- Coupons will have a 60 day expiration period
- Proof of residency in the form of a utility bill and picture ID required to receive a coupon
- Vendor sets all fees, the city does not dictate or negotiate fees
- A limited number of coupons will available free of charge to non-profit groups based in Raytown for community outreach programs.
- Two vendors available
 - Material Recovery & Transfer, LLC
 - Flynn's Raytown Disposal Service, Inc

Program Details



- Current budget allows for the following coupons
 - 600 coupons for residents
 - 120 coupons for code enforcement and not for profit groups
- Material Recovery and Transfer LLC (MRT) is a drop off site and is located 2 miles Northwest of the current site at Super Splash.
- The most economical alternative will be the drop off site and Flynn's will be advantageous for those that don't have access to a truck or trailer.
- The \$25 value was set to coincide with the minimum amount charged at MRT.

Program Limits



- The allocated budget for the program will limit the number of coupons issued.
- Commercial and apartment properties are not eligible to participate.
- No cash back from vendors and no refunds for unused coupons
- Valid for primary residence only.
- No 3rd party issuance of coupons
- No coupon issuance by mail.
- Vendor participation limited to help prevent abuse and fraud.



Questions?

