Source: City Manager

Agenda Item No: REP 171-13

To: City Council
From: City Manager and Staff

Council Meeting Date: Dec 16, 2013

Re: Annual infrastructure report

EXECUTIVE SUMMARY:

The City of Columbia's 2013-2015 strategic plan requests an annual infrastructure report be developed. Staff have created a seven-page report showcasing 2013 highlights, improvements, and what's new in 2014 that is available online and upon request.

DISCUSSION:

The City of Columbia strategic plan for 2013-2015 identifies infrastructure as a strategic priority area; with an objective for improving communication of infrastructure needs with our customers. One initiative for this objective is to develop an annual infrastructure report. The attached report was developed by city staff to communicate the 2013 highlights, improvements, and what's new for 2014. The intent of the report is not to provide ratings for the projects or to just list what was accomplished in 2013 for City Council. Rather, the report is intended to be read by the average citizen to show what was accomplished in 2013 with emphasis on the diversity of infrastructure that the city of Columbia is charged with maintaining. As the report states, our infrastructure is a network of systems and we are connected by our infrastructure. It is what makes us a community and everyone contributes to its success.

The 2013 Infrastructure is not divided by departments; it is organized by category of infrastructure. The categories include:

- Parks
- Electric system
- Water system
- Streets, Sidewalks, & Trails
- Transportation
- Sewer & Stormwater

This is the first year that staff has developed an infrastructure report and staff welcomes feedback on what additional information should be included in the 2014 infrastructure report.

FISCAL IMPACT:

None

VISION IMPACT:
http://www.gocolumbiamo.com/Council/Meetings/visionimpact.php

SUGGESTED COUNCIL ACTIONS:

For informational purposes only

FISCAL and VISION NOTES:					
City Fiscal Impact Enter all that apply		**Program Impact**		**Mandates**	
City's current net FY cost	$0.00	New Program/ Agency?	No	Federal or State mandated?	No
Amount of funds already appropriated	$0.00	Duplicates/Expands an existing program?		**Vision Implementation impact**	
Amount of budget amendment needed	$0.00	Fiscal Impact on any local political subdivision?	No	Enter all that apply: Refer to Web site	
Estimated 2 year net costs:		**Resources Required**		Vision Impact?	
One Time	$0.00	Requires add'l FTE Personnel?	No	Primary Vision, Strategy and/or Goal Item #	
Operating/ Ongoing	$0.00	Requires add'l facilities?	No	Secondary Vision, Strategy and/or Goal Item #	
		Requires add'l capital equipment?	No	Fiscal year implementation Task #	





2013 ANNUAL *infrastructure report*

Infrastructures are a network of systems. They can be the roads or trails you use for transportation. They can be the wires that bring you electricity. We are connected by our infrastructure. It is what makes us a community and everyone contributes to its success. You want the service provided to be accessible, safe, reliable, reasonably-priced and add to your quality of life. We at the City of Columbia are tasked with maintaining and improving the systems to meet your expectations.



City of Columbia, Missouri

parks

Eighty-seven percent of Columbia households use the park and trails system.



2013 HIGHLIGHTS

- Completion of phase one development of Bonnie View Nature Sanctuary including a new shelter, restroom, parking and trailhead for the Scott's Branch Trail
- Completion of infrastructure improvements at Albert-Oakland Park including the renovations of two baseball fields, tennis court resurfacing and new restroom within the park
- Completion of improvements to Twin Lakes Recreation Area including renovations to Little Mates Cove and redesign of the dog park
- Addition of a new neighborhood park at Jay Dix Station including a new playground and basketball court
- Completion of the 2013 Parks, Recreation and Open Space Master Plan

WHAT'S NEW IN 2014?

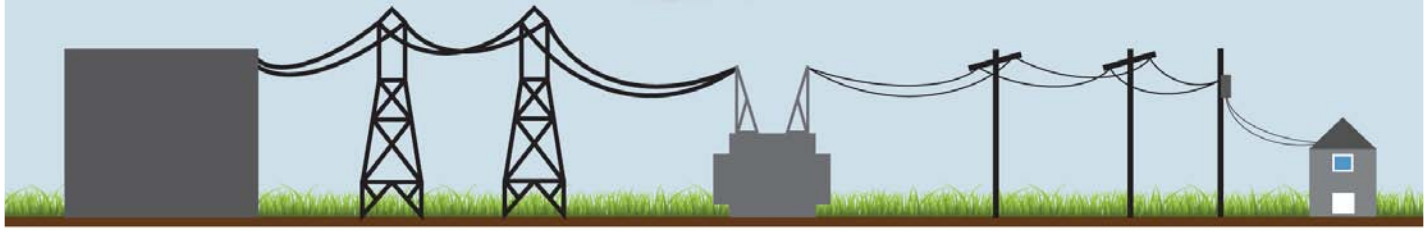
- Addition of new infrastructure development at the Gans Creek Recreation Area (50 acres) including the construction of seven athletic fields, one shelter, one large playground, 1.5-mile fitness trail and dog park
- Development of the Norma Sutherland Smith Park (50 acres), which will include infrastructure additions of a new shelter, playground, fitness trail and fishing lake
- Renovations at the Waters-Moss Memorial Wildlife Area to create the Hillcrest Community Center, Moss Building and park ranger offices

2013 IMPROVEMENTS

JAY DIX STATION New playground and basketball court	**4** new restrooms – Albert-Oakland Park, Bonnie View Nature Sanctuary & Columbia Cosmopolitan Recreation Area (2)
CLUBHOUSE RENOVATION L.A. Nickell Golf Course	**11** resurfaced tennis courts – Albert-Oakland Park (3) & Cosmo-Bethel Park (8)
2 new shelters (Bonnie View Nature Sanctuary & Columbia Cosmopolitan Recreation Area)	**8** renovated baseball/softball fields – Albert-Oakland Park (2) & Rainbow Softball Center (6)

electric system

In 2013, 47,425 electric customers used 1.17 million megawatt hours of electricity. The average monthly residential customer usage was 734 kilowatt hours.



The local electric generation facility assets include: the **power plant** – rated at 86 megawatts, this facility used coal, waste wood and natural gas to generate 5.7% of the energy portfolio; the **energy center** – rated at 144 megawatts, this facility used natural gas to generate 2.2% of the energy portfolio; **landfill gas** – rated at 3.1 megawatts, this facility used gas created from decomposing waste to generate 1% of the energy portfolio; **solar** – rated at 0.363 megawatts, these panels produced 0.03% of the energy portfolio and **diesel backup generators** – rated at 12.5 megawatts.

NOTE: External power sources (coal, natural gas, wind, landfill gas) help meet the rest of the 325 megawatts needed for the Columbia system electric load.

HOW DOES THE ELECTRICITY GET TO ME?

Average Electricity Availability	99.9893
70	miles of transmission lines
287	miles of overhead distribution lines
509	miles of underground distribution lines
11,463	distribution transformers
20,102	utility poles

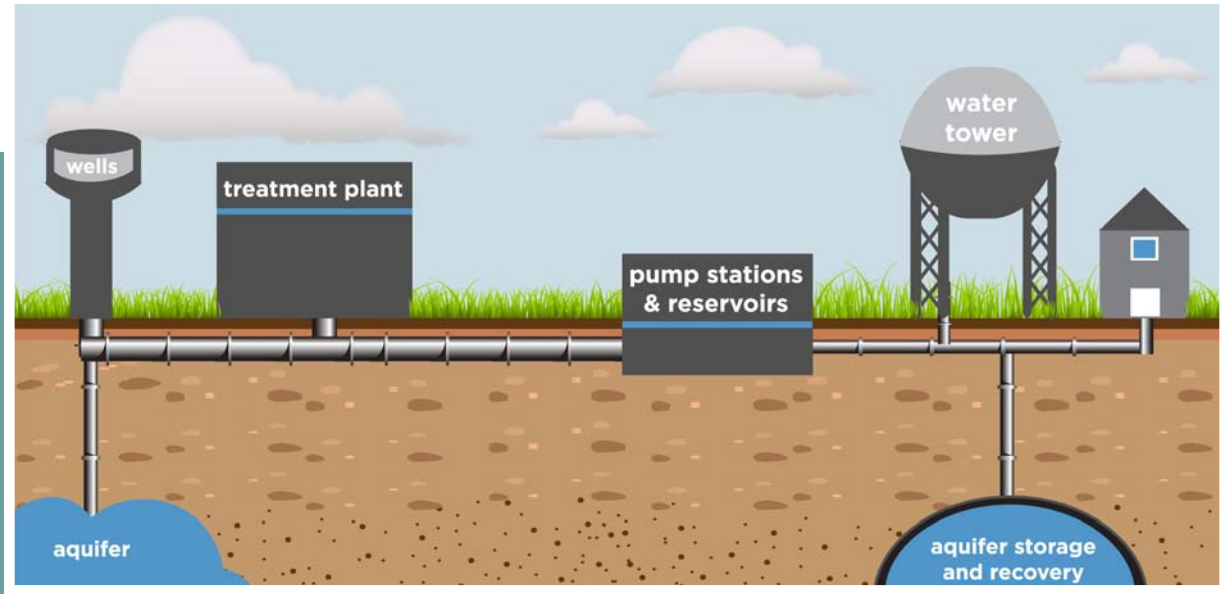
2013 HIGHLIGHTS

- Installed a third landfill gas generator to produce more renewable energy
- Constructed a backup control room to operate Columbia's electric grid to meet federal regulations
- Following three interested-parties meetings and gathering input through three surveys, a public hearing was held by the City Council to determine the route for the new southern electric transmission lines.

WHAT'S NEW IN 2014?

- Transmission line project: final line design, easement acquisitions, cost estimates, construction timeline and proposed funding plan will be delivered to the City Council.
- A test burn of a densified biomass product at the power plant will show if the product is a practical renewable energy source and if emissions are lowered.
- Develop a plan to meet growing electrical needs in the central city area for infrastructure planning purposes.

water system



Columbia's water is pumped from 15 wells that tap an alluvial aquifer in McBaine, Missouri. Softened, filtered and disinfected water is pumped from the treatment plant to reservoirs at Columbia's three pump stations. The water is then pumped throughout the city to consumers. It is stored at towers and reservoirs for times of high demand or for fire fighting. The water distribution system is also designed to connect with surrounding water districts in case of a water supply issue.

In 2013, 47,033 water customers used 4.32 billion gallons of water. The average monthly residential customer usage was 4,616 gallons in the winter and 5,866 gallons in the summer.

HOW DOES THE WATER GET TO ME?

671	miles of water pipes
3.4	miles of water mains were installed
5,780	total hydrants, 80 new locations installed and 10 replaced

2013 HIGHLIGHTS

- Completed the Source Water Protection Plan
- Completed the north end of the 24-inch water transmission line for eastern Columbia to move water where it is needed by customers, help add water to storage facilities and aid in fire protection
- Replaced .6 mile of water distribution mains

WHAT'S NEW IN 2014?

- Addition of three new wells will increase the amount of water available to Columbians
- Complete the southern end of the 24-inch water transmission line for eastern Columbia
- Backup generators at the pumping stations and storage facilities will get water to customers during electrical outages

streets, sidewalks & trails



Maintenance of major City streets saw a 10 percent increase in satisfaction in 2013.

IMPROVEMENTS

14 miles of streets "milled and overlayed" providing new asphalt driving surface and roadbed improvements

31 miles of streets maintained by "chip and seal," designed to extend the life of driving surfaces at 1/3 the cost of mill and overlay

3.8 miles of new trails constructed to provide connectivity for pedestrians and cyclists as part of Columbia's transportation plan

8,451 feet of new sidewalks and pedways

1,340 center lane miles of roadway now maintained by Public Works

SHORT STREET PARKING GARAGE completed to address parking needs in growing Arts District

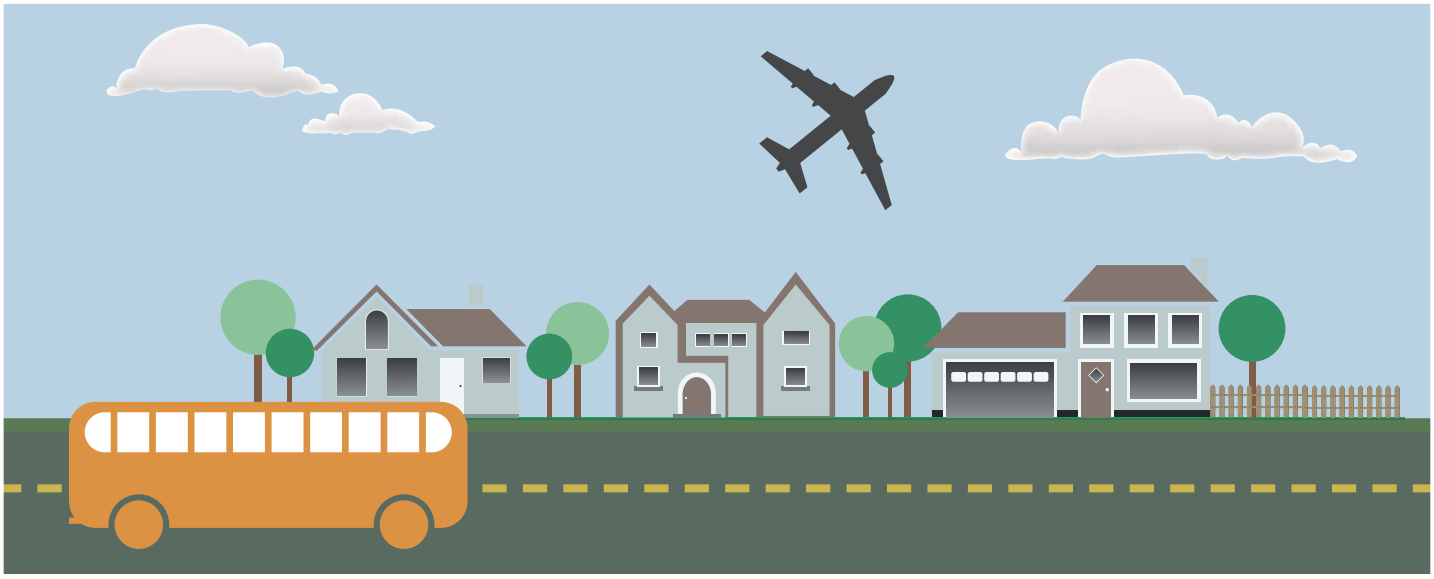
2013 HIGHLIGHTS

- Completed Clark Lane Phase II to improve access to new elementary and high school on St. Charles Road
- Completed Rolling Hills Road as part of East Columbia Transportation Study recommendations
- Constructed Delmar Cobble School sidewalk for ADA access to Parkade Park
- Completion of the Scott's Branch Trail and the first phase of the Hominy Creek Trail

WHAT'S NEW IN 2014?

- Scott Boulevard Phase II, which will raise road bed and bridge above flood plain, provide a roundabout at Vawter School Road and provide connection to Phase III, currently scheduled for 2016
- College Avenue Safety Enhancement Project to provide designated and signalized crosswalks on College Avenue between University and Rollins
- Clark Lane Improvement project between Ballenger Lane and Woodland Springs to enhance pedestrian safety
- Design and construction of five sidewalk projects to meet ADA standards
- Construction of the 1.76-mile Grindstone Trail

transportation



More than 250,000 people utilized mass transit provided by the City of Columbia last year.

IMPROVEMENTS

5,000 feet of new taxiway at Columbia Regional Airport (COU)

35,000 feet of new wildlife perimeter fence at COU

33 GPS tracking devices installed on all transit vehicles

40,000+ enplanements at COU

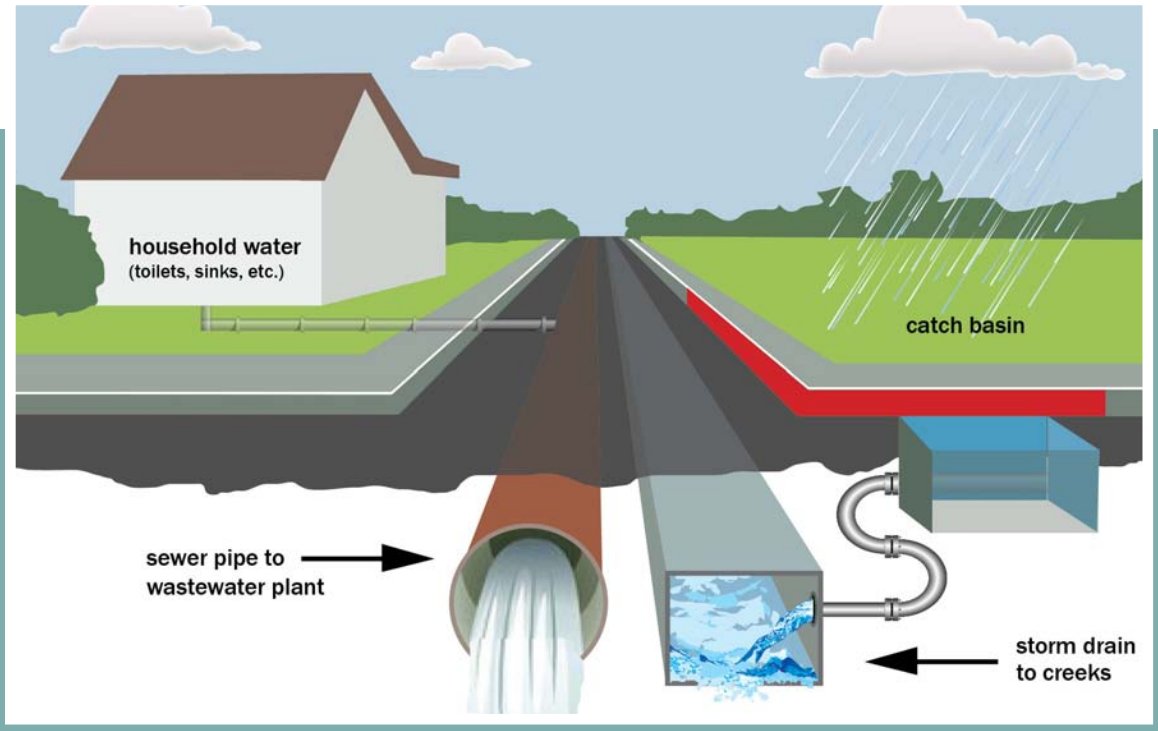
2013 HIGHLIGHTS

- American Airlines begins daily nonstop service to Dallas and Chicago
- CoMO Connect, a project to overhaul Columbia Transit to better serve customers, is approved by City Council Aug. 12
- Upgraded technology for buses including DoubleMap GPS tracking system to provide enhanced customer experience.

WHAT'S NEW IN 2014?

- Main runway/crosswind runway safety improvements at COU to prepare for new crosswind runway and main runway extension
- CoMO Connect to launch service Aug. 4
- Installing passenger counter and stop enunciators on all transit buses
- American Airlines to begin second daily nonstop Chicago flight
- Terminal improvements including restroom in secured passenger area

sewer & stormwater



IMPROVEMENTS

1,156	feet of sanitary sewer pipe replaced
405	sanitary sewer manholes rehabilitated
33,788	feet of sanitary sewer line rehabilitated
8,223	feet of stormwater pipe constructed
1,200	feet of outer berm walls at Wetland Treatment Cell #1 reconstructed

2013 HIGHLIGHTS

- Voters approved $32 million sanitary sewer bond issue with 80 percent in favor
- Continued Inflow and Infiltration (I&I) studies to find ways to reduce stormwater infiltration into the sanitary sewer system to reduce the number of overflows and basement backups
- Completed six sanitary sewer CIP projects

WHAT'S NEW IN 2014?

- Three Private Common Collector Sewer Elimination (PCCE) projects scheduled for construction
- Continue work to remove sources of inflow and infiltration identified by the inflow and infiltration studies
- Sanitary Sewer Cost of Service Study
- Ash & Hubble and Hitt & Elm Stormwater CIP projects scheduled for construction
- Seven sanitary sewer projects in design and easement acquisition