



City of Lawrence
UTILITIES

2017 Summary Report Capital Improvement Projects

The City Commission adopted the Water and Wastewater 2013-2017 Capital Improvement Program (CIP) on March 12, 2013. The \$151 million CIP identifies water and wastewater projects needed for functional integrity, regulatory compliance and capacity. Key factors include ongoing structural assessments, changing community needs and future growth. The current CIP includes large-scale, multiyear capital projects such as a new wastewater treatment plant, a citywide inflow/infiltration removal program in the sewer collection system, and taste and odor process improvements at the water treatment plants, as well as a range of other projects addressing capacity, reliability and/or structural integrity.

The 2017 Summary Report provides a year-end CIP status update, organized broadly within the following categories:

1. Capacity and Large Capital Projects
2. Reliability Projects Other Than Watermain Replacement
3. Watermain Replacement Projects
4. Other Utilities Projects

1. Capacity and Large Capital Projects

UT1304 Wakarusa Wastewater Treatment Plant and Conveyance Corridor

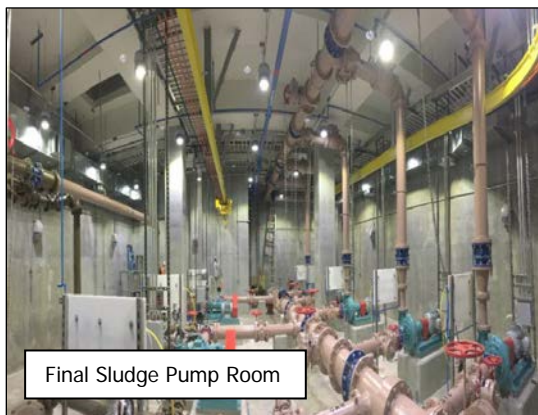


- Project Description – Design and construction of the new Wakarusa River Wastewater Treatment Plant (Wakarusa WWTP), the new Pump Station 10, related force mains, and improvements to the existing Kansas River Wastewater Treatment Plant (Kansas River WWTP). This project provides a second wastewater treatment plant and enhanced operational flexibility, with pump station functionality to divert flows between treatment plants as needed to meet changing operational needs. The project provides for future community growth, meets the regulatory requirements for wet weather treatment and nutrient removal and increases system reliability and resiliency in transporting and treating wastewater without negatively impacting the community or the environment.

- Project Details – In 2014, after eight years of planning, design and preliminary improvements, the project moved into the construction phase beginning with site fill placement and installation of force mains. In addition to the contractors identified below, qualified department staff is performing various inspection services; designing the automation, integration and programming systems; installing pipeline, and acquiring various equipment both as cost-saving measures and for enhanced in-house operational knowledge of new infrastructure functionality. Recent progress is illustrated in the following timeline.

Kansas River WWTP Improvements – Laboratory expansion started in late 2015 and completed in August 2016. Facility improvements also included final clarifier equipment replacement.

Wakarusa WWTP – Site construction began in June 2015 with structure excavation, placement of below-grade slabs and walls, and installation of site process piping. In 2017, construction surpassed 95 percent completion and remains within budget and on-schedule to be completed in spring of 2018. All buildings, the Peak Flow Storage Basin, the Biological Nutrient Removal (BNR) train and outfall structure were completed. Final grading, roadway, seeding and sidewalks are currently being constructed. Plant startup and occupancy will take place in March 2018.



Pump Station 10 – Construction began with excavation in late 2015 on the pump station located at the northwest corner of 31st and Louisiana Streets. The pump station structure, piping, temporary seeding and access roads are complete. All equipment is installed and tested. Final seeding of the native grasses will take place in spring of 2018.



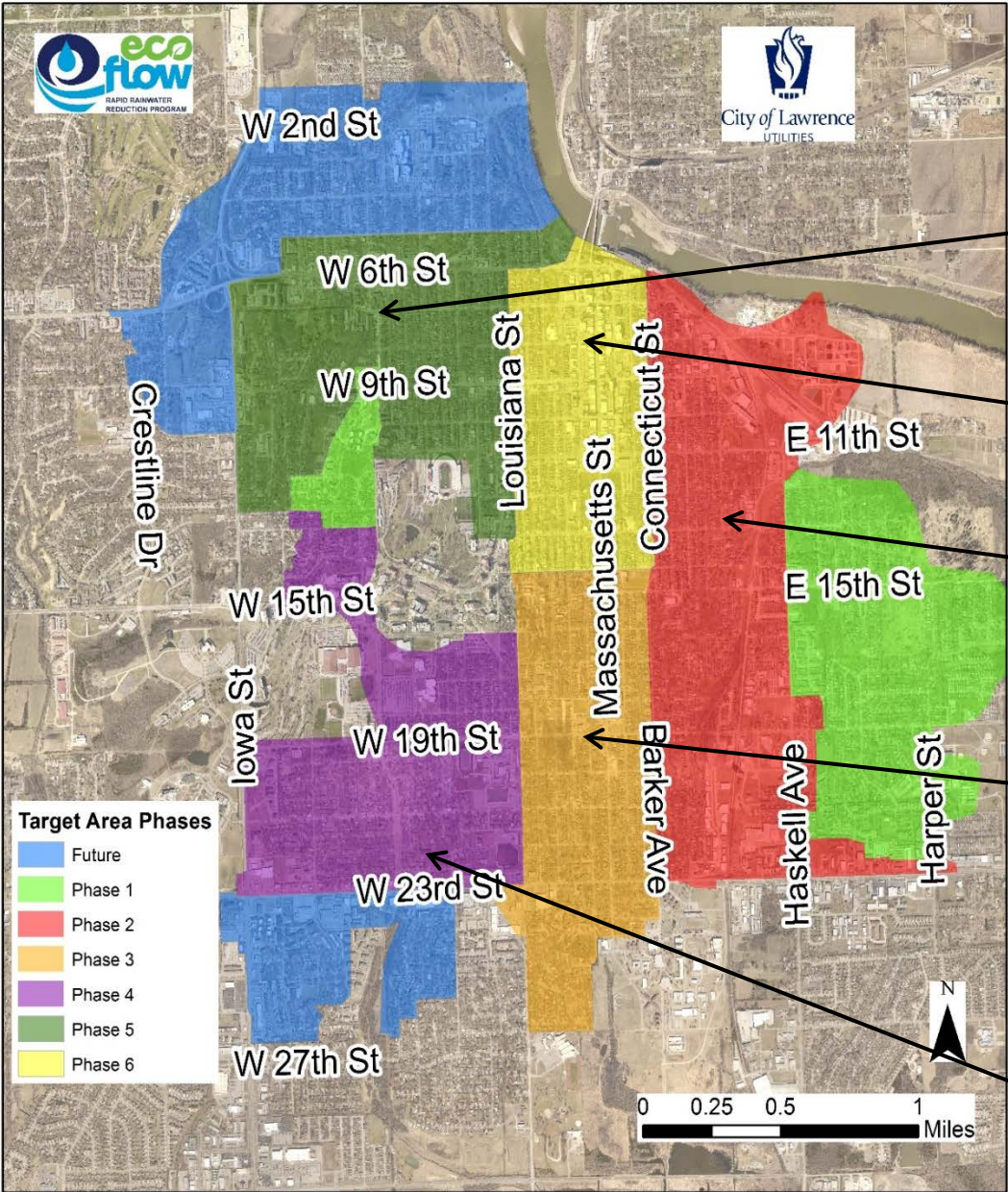
- Design Engineer – Black & Veatch/PEC ENGINEERING/Bartlett & West
- Construction – Garney Construction (Wakarusa WWTP, Pump Station 10, Kansas River WWTP Improvements), Kings Construction (Site Fill) and BRB (Force Mains)
- Status – Project Completion spring 2018
- Project Budget - \$74.1 million (\$11.2 million Design and Construction Phase Services; \$13.6 million Site Fill, Roads and Force Main Contracts; \$45.2 million for Wakarusa WWTP, Pump Station 10, and Kansas River WWTP Improvements; \$600,000 Property Acquisition; \$1.5 million Power/Gas Utility Infrastructure, and \$2 million City-Provided Work and Materials)

UT1307 Oread Water Storage Tanks & Booster Pump Station Replacement

- Project Description - Replacement of two aging water storage tanks and the booster pump station in the 1200 block of Oread Avenue proximate to the University of Kansas (KU) main campus. The 1931 tank located to the south stores 1,000,000 gallons; the 1954 tank located to the north end stores 1,300,000 gallons (Oread Tanks). The 1.8 million gallon per day (mgd) booster pump station transports water from the Oread Tanks to the West Hills service area. Structurally, the Oread Tanks exhibit severe corrosion, loss of structural members, exterior holes, deteriorated foundations and failing interior/exterior coatings. They also fail to meet current safety and American Water Works Association standards. The pump station has several electrical equipment, valving, maintenance and operational issues. Following preliminary design activities and extended staff consideration of alternate siting/storage strategies in consultation with KU, the City Commission approved an engineering services agreement with HDR, Inc. on March 27, 2015 for design services to replace all three structures at the existing site.
- Project Details – This project was advertised and bid with UT1310 19th & Kasold Booster Pump Station Improvements. The projects were awarded to Crossland Heavy Contractors on April 18, 2017. During 2017, the north Oread Tank was demolished, reconstructed and put into service, achieving over 40% of project completion. In addition to the tank, the waterline piping leading to the north tank, the tank overflow line and the surrounding storm sewer lines were also constructed. In 2018, demolition and reconstruction of the south tank, retaining wall, booster pump station, and additional site piping will take place.
- Design Engineer – HDR Inc., Lee's Summit, MO
- Construction – Crossland Heavy Contractors
- Status – Project Completion spring 2019
- Project Budget - \$5,276,500 (Completed - \$2,267,000)



UT1305 EcoFlow: Rapid Rainwater Reduction Program



2017 EcoFlow Activities

- PHASE 5**
On going
 - Private Property Investigations & Repairs
 - Public Sector Investigations

- PHASE 6**
Scheduled (2018)
 - Smoke Testing

- PHASE 2**
Scheduled (2018)
 - Manhole Rehabilitation (UT1710)

- PHASE 3**
On going
 - Main Sewer Public Sector Repairs (UT1705)Scheduled (2018)
 - Manhole Rehabilitation (UT1710)
 - 23rd and Mass Sewer Replacement (UT1805)

- PHASE 4**
Completed
 - Private Property Investigations & Repairs
 - Public Sector InvestigationsScheduled (2018)
 - Main Sewer Public Sector Repairs (UT1807)

- Project Description – Comprehensive, multiyear, multiphase, “find and fix” program to investigate and reduce rainwater entering the City’s sanitary sewer system from public and private sources. EcoFlow targets discrete geographic areas inside City limits, with six Phase areas identified to date and phasing of the future areas based on data from ongoing flow monitoring. The map above shows 2017 activities and 2018 scheduled activities. Public feedback and participation rates continues to be overwhelmingly positive.
- A. Project Details – Public sector investigation activities completed in 2017 included 264 manhole inspections, approximately 17,000 linear feet of sanitary sewer smoke testing, and approximately 16,000 linear feet of closed-circuit television (CCTV) sewer inspections. Completed public sector sewer repairs included 42 sanitary sewer point repairs, and approximately 10,000 linear feet of cured-in-place pipe (CIPP) rehabilitation. An additional 29,000 linear feet of sanitary sewer is currently under contract to install CIPP in this area as part of the larger Citywide project UT1705. Private sector activities completed in 2017 included over 1,000 private property evaluations. Of the approximately 550 defects identified, department staff repaired approximately 50 minor defects and EcoFlow plumbing contractors repaired 309 defects. Private sector investigations are planned to continue throughout 2018, targeting Phase 5 and Phase 6 in the map above.

Several related sanitary sewer rehabilitation projects were identified in this area during 2017. Planning and design activities have been initiated with construction planned for 2018. These projects include:

 - 2018 Manhole Rehabilitation Project (UT1710)
 - 2018 Manhole Replacement and Installation Project (UT1802)
 - 23rd and Massachusetts St Sanitary Sewer Replacement Project (UT1805)
 - 2018 CIPP Sewer Rehabilitation (UT1807)
- Design Engineer – TREKK Design Group
- Construction – Seven Pre-qualified Plumbing Contractors & City Staff
- Status – Initial Program scope to complete 2020, with ongoing evaluation/correction of to-be-identified future areas.
- Project Budget - \$19,400,000 (over the life of the project) (Completed - \$7,138,000)

UT1209 –Water Process Improvements – Phase I (previously, Taste & Odor Improvements – Phase 1)

- Project Description – Phase I improvements to the Clinton Reservoir Water Treatment Plant are based on recommendations in the 2013 Taste & Odor Study and other improvements requested by the City. These improvements will increase effectiveness of existing processes, streamline operation and maintenance activities, reduce chemical costs and improve taste and odor removal. These improvements will also provide the groundwork for additional taste and odor removal processes if needed in the future.
- Project Details –Improvements include the addition of a new rapid mix system, carbon dioxide system, ferric system and liquid lime system; tube settlers in the primary basins; coating of the South Train basins equipment, operator training and post-construction process testing and optimization. During 2017, the following improvements were completed; the roof on Clinton Lake Water Treatment Plant, installation of the carbon dioxide system, equipment startup, operator training, and final punch list completion.
- Design Engineer – Burns & McDonnell, Kansas City, MO
- Construction – Crossland Heavy Contractors
- Status – Project Completed in May, 2017
- Project Cost – \$5,500,000



2. Reliability Projects

UT1310 19th & Kasold Booster Pump Station Improvements

- Project Description – Evaluation of and improvements to booster pumping facilities to meet current conditions and future demands.
- Project Details – Replacement of the booster pumping facility at the water tower, located at 1800 Kasold Drive. This project was advertised and bid with the Oread Tank Replacement Project UT1307. The project was awarded to Crossland Heavy Contractors on April 18, 2017. Construction on this project will take place in 2018.
- Design Engineer – HDR Inc., Lee’s Summit, MO
- Contractor – Crossland Heavy Contractors
- Status – Project Completion fall 2018
- Project Budget - \$1,035,000

UT1417 Clinton Water Treatment Plant Raw Water Pump Station Electrical Improvements

- Project Description – Originally constructed by the US Corps of Engineers in conjunction with Clinton Dam, the existing building did not protect the electrical and control equipment from the elements in a climate-controlled environment. The existing building was expanded to include a climate-controlled addition isolated from the existing unconditioned space to provide an optimal operational environment for this sensitive equipment. Existing pump #2 was upgraded from 5-MGD to 10-MGD pump/motor/variable frequency drive (VFD), thereby bringing the Clinton Raw Water Pump Station to its design, firm capacity of 25 MGD. Other improvements include VFD replacements on pumps #1 & #3; bypass addition on the existing VFD for pump #4, with reinstallation in the new space; replacement of existing incoming electrical service transformers to meet increased pumping capacity load requirements; replacement of existing 36-inch-diameter steel pump discharge piping, fencing and re-roofing of the existing building.
- Project Details –During 2017, the Pump Station roofing, lightning protection, and other site piping was completed. In addition, the final operations and maintenance manuals were procured.
- Design Engineer – Black & Veatch, Kansas City, MO
- General Contractor – Crossland Heavy Contractors
- Status – Project Completed in March, 2017
- Project Cost - \$2,075,000



UT1503 Kaw Water Treatment Plant Structural Maintenance Analysis

- Project Description – Structural condition assessment of the Kaw Water Treatment Plant, including overall condition and potential liabilities, through visual review and non-destructive materials testing. Design of the repairs identified in the report are installation of a new slab in the carbon contact basin, installing topping slabs on the primary and secondary basins, crack injection on the basin walls, coating structural concrete, replacing guardrail in areas, and replacing the weirs on the primary basins. Assessed areas include carbon contact basin, presedimentation basin, primary treatment basins, secondary treatment basins, weir troughs and the surrounding walkways. Identified needed improvements to the carbon contact basin is included in the 2018 – 2022 CIP Plan, identified in Water Treatment Plant Process Improvements projects.
- Project Details –The project was awarded to John Rohrer Contracting Company on April 18, 2017. During 2017, construction reached 20% completion. Repairs were completed in the presedimentation basin and the south primary and secondary basins. Repairs included floor topping and partial depth repair, crack injection on vertical walls, walkway repair, and the removal of floc paddles and basin sweeps that were no longer in use.
- Design Engineer – Walter P Moore
- Construction – John Rohrer Contracting Company
- Status – Project Completion April 2018
- Project Budget - \$1,420,000 (Completed - \$489,000)



UT1508 CIPP Sewer Rehabilitation

- Project Description – Sewers are identified for rehabilitation through various assessment programs, including EcoFlow and CCTV inspection by city crews, based on such factors as existing defects, pipe age, pipe material, depth, and ground conditions. The CIPP rehabilitation method lines the inside of old, vitrified clay pipe sanitary sewer mains – a more cost-effective rehabilitation method than open-trench excavation and replacement.
- Project Details – Starting in 2016, CIPP rehabilitation of approximately 44,500 linear feet of sanitary sewer ranging in size between 8 inches and 36 inches in diameter (6,500 linear feet completed in 2017). A total of 42 public sector point repairs were completed as part of this project (2 completed in 2017). The project area was throughout the City with a focus on Phase 2 of the Rapid I/I Reduction Program.
- Design Engineer – City Staff
- Construction – SAK Construction (CIPP Installation) and Vito's Plumbing (Point Repairs)
- Status – Project Completed in April, 2017
- Project Cost - \$1,734,375 (Total), \$279,005 (Point Repairs), \$1,455,370 (CIPP)



UT1512 & UT1610 Treatment Plant VFD Replacements

- Project Description – Replacement of VFDs installed on critical treatment process equipment helps ensure system reliability and functionality.
- Project Detail – Replacement of five aging VFDs, four at Kansas River WWTP and one at Kaw Water Treatment Plant.
- Design Engineer – City Staff
- Construction – City Staff
- Status – Project Completed in April, 2017
- Project Cost - \$195,000

UT1513 Sanitary Sewer Replacement (Naismith Drive & Crescent Road)

- Project Description –Replacement of deteriorated sanitary sewers near the intersections of Naismith Drive and Crescent Road and Spencer Drive and Crescent Road.
- Project Details – Rehabilitation or replacement of 900 linear feet of sanitary sewer mains generally located south of Crescent Road and north of the University of Kansas's Learned Hall. Street and traffic calming improvements at the intersection of Crescent Road and Naismith Drive were also a part of the project.
- Design Engineer – BG Consultants
- Contractor – Freeman Concrete Construction, LLC
- Status – Project Completed in October, 2017
- Project Construction Cost - \$719,000 (Sanitary Sewer Cost - \$382,000)

UT1603 Pump Station 5 Electrical and Mechanical Improvements

- Project Description – Evaluation and improvements to major electrical equipment as needed to ensure critical infrastructure is fully functional to meet operational needs.
- Project Detail – Replacement of obsolete and damaged electrical switchgear and motor control centers; installation of variable frequency drives for pump operation; installation of a backup generator connection and transfer switch; installation of dual electrical transformers; new HVAC equipment and emergency bypass pumping connection. The new transformers and variable frequency drives were put into service in December 2016. During 2017, the following items were completed; the pump station roof, HVAC system and ductwork, site grading and final punch list completion items.
- Design Engineer – Black & Veatch
- Construction – Crossland Heavy
- Status – Project Completed in April, 2017
- Project Cost - \$871,000



UT1604 Clinton WTP Sludge Building Improvements

- Project Description – The Clinton Water Treatment Plant Sludge Building shows signs of structural concrete deterioration, necessitating structural condition assessment of the structural concrete between the sludge building and the clarifiers through visual review and non-destructive materials testing. Other project improvements include failing interior coatings and replacing the deteriorating access hatch.
- Project Details – Repair of structural concrete, replacement of access hatch and surrounding concrete slab and curb, and application of protective coatings on interior surfaces, piping and mechanical equipment. The project was designed in 2017 and will be awarded to John Rohrer Contracting Company in March 2018. Construction will begin in spring 2018.
- Design Engineer – Walter P. Moore
- Contractor – John Rohrer Contracting Company
- Status – Project Completion fall 2018.
- Project Budget - \$550,000



UT1605 Wastewater Flow Optimization

- Project Description – Develop a real time decision support system (RT-DSS) to optimize flow distribution through the current wastewater collection system, with specific focus on the operations of existing Pump Station 9, Pump Station 5, and the Kansas River Wastewater Treatment Plant (KRWWT) as well as currently under construction Wakarusa WWTP and Pump Station 10.
- Project Details – EmNet developed an RT-DSS that City staff are implementing throughout the collection system to operate the collection system and wastewater treatment facilities to maximize efficiency.
- Design Engineer – EmNet
- Contractor – City Staff
- Status – City Implementation in 2017 and 2018
- Project Budget - \$234,000

UT1606 Clinton WTP Zebra Mussel Mitigation

- Project Description – Evaluation of alternatives, procurement and installation of equipment to mitigate zebra mussel infestation in the Clinton Reservoir Water Treatment Plant Raw Water Pump Station and 36-inch diameter transmission main.
- Project Details – Black & Veatch completed a Basis of Design Report evaluating 11 different alternatives for the control of zebra mussels within the pump station and 36-inch diameter transmission main. The evaluation considered effectiveness, ease of installation and operation, life cycle costs and impact on existing water treatment processes. The selected alternative, copper ion generation, eradicates existing zebra mussels and prevents further infestations by the introduction of low doses of copper ions into the raw water.
- Design Engineer – Black & Veatch
- Contractor – City Staff
- Status – Project Completed in November, 2017
- Project Cost - \$150,000



UT1608 Lower Naismith Valley Interceptor

- Project Description – The Lower Naismith Valley Interceptor was planned for replacement with the Pump Station 8 abandonment project in 2018 – 2019. Development plans for residential construction where the Lower Naismith Valley Interceptor is located places the interceptor in future residential backyards. Constructing this portion of the interceptor prior to residential construction of the homes allowed for easier and likely cheaper construction.
- Project Details – The Lower Naismith Valley Interceptor replaced approximately 1,400 linear feet of 24-inch and 36-inch Interceptor sewer into Pump Station 10 with 36-inch and 48-inch Interceptor. The pipes are designed to have sufficient capacity for the future Naismith Valley Interceptor that will be installed when Pump Station 8 is taken out of service.
- Design Engineer – PEC ENGINEERING
- Contractor – RD Johnson
- Status – Project Completed August 2017
- Project Cost - \$640,000

UT1611 OSI Software Analytics

- Project Description – Developing software for compiling/analyzing wastewater and water treatment plant processes and laboratory data. The data will be used with OSISoft PI software for data analytics, chemical and electrical costs/usage, and performance analysis.
- Project Details – Black & Veatch will deliver the following with the development of the OSI PI software; Data Integration Services – gathering of data from multiple sources to be analyzed, Software Services Provided – OSISoft PI System Tools, Asset360 Performance Analyst, Asset360 Activated Sludge Treatment Application; Setup and Training; Reporting – a quarterly report B&V process engineers will review plant data and trends. The data is analyzed for producing a performance report that summarizes overall plant performance. Recommendations are provided for treatment improvements or operational changes that may result in energy or chemical savings.
- Design Engineer – Black & Veatch
- Contractor – Black & Veatch
- Status – Since spring of 2017, department staff have utilized the OSISoft PI and Asset360 software for Kansas River Wastewater Treatment Plant. Black & Veatch gives weekly reviews of process, quarterly reports and presentations to Department Staff outlining their observations, and provides recommendations for improvements in process performance and potential cost savings. The software implementation for the Kaw Water Treatment Plant will begin in spring 2018. Clinton Reservoir Water Treatment Plant will implement the software in fall 2018, following the software development and execution at the Kaw Water Treatment Plant. Software for the Wakarusa River Wastewater Treatment Plant is under development, with plans for implementation in spring 2018.
- Project Cost - \$88,000

UT1705 CIPP Sewer Rehabilitation - 2017

- Project Description – Sewers are identified for rehabilitation through various assessment programs, including EcoFlow and CCTV inspection by city crews, based on such factors as existing defects, pipe age, pipe material, depth and ground conditions. The CIPP rehabilitation method lines the inside of old, vitrified clay pipe sanitary sewer mains – a more cost-effective rehabilitation method than open-trench excavation and replacement.
- Project Details – CIPP rehabilitation of approximately 46,500 linear feet of sanitary sewer ranging in size between 8 inches and 24 inches in diameter. A total of 76 public sector point repairs have been completed on the sewers associated with this project since the start of 2016. It is anticipated that an additional 15-20 point repairs will be required to complete the project. The project area is throughout the City with a focus on Phase 3 of the Rapid I/I Reduction Program.
- Design Engineer – City Staff
- Construction – SAK Construction (CIPP Installation) and Vito's Plumbing (Point Repairs)
- Status – Completion Spring 2018
- Project Budget - \$2,050,000 (Total), \$700,000 (Point Repairs), \$1,350,000 (CIPP)

UT1717 – Bowersock Dam Maintenance

- Project Description – Repair of downstream apron in existing Bowersock Dam across the Kansas River. City Staff completed structural repairs to the Dam filling void with concrete.
- Designer – City Staff
- Contractor – City Staff
- Status – Project Completed in August, 2017
- Project Cost – \$43,000

3. Watermain Replacement

Staff continuously evaluates the water distribution system based on main breaks; pipe material and age; capacity and fire protection needs, the criticality of the watermain in the system; the number of services affected, coordination with planned street improvements and other stakeholder needs such as University of Kansas (KU) and USD #497. Ongoing evaluation and replacement increases the City's water distribution system reliability. The following watermain projects were completed or were under construction or design in 2017.

UT1504 – 23rd Street (Ousdahl Road to Alabama Street)

- Project Description – Replacement of approximately 2,600 feet of 8-inch cast iron watermain from 1956 with 8-inch PVC.
- Design Engineer – PEC ENGINEERING
- Contractor – MCON, LLC
- Status – Project Completed December, 2017
- Project Cost - \$484,000

UT1514 – Harper Street (15th Street to East Glenn Drive) & East 15th Street (Cadet to Lindenwood)

- Project Description - Replacement of approximately 4,200 feet of 8-inch cast iron watermain from 1958 with 8-inch PVC
- Design Engineer – PEC ENGINEERING
- Contractor – MCON, LLC
- Status – Project Completed July, 2017
- Project Cost - \$575,000

UT1702 – 10th Street (Arkansas Street to Illinois Street)

- Project Description - Replacement of approximately 1,950 feet of 6-inch and 8-inch cast iron watermain from the 1920's and 1966 with 8-inch PVC
- Design Engineer – PEC ENGINEERING
- Contractor – Banks Construction
- Status – Project Completed October, 2017
- Project Cost - \$415,000

UT1715 – Arkansas Street (W 24th Street to W 27th Street)

- Replacement of approximately 3,500 feet of 8-inch cast iron watermain from the 1960's with 8-inch PVC. Project was designed in 2017 and construction will start in spring 2018.
- Design Engineer - PEC Engineering
- Contractor – Westland Construction
- Status – Project Completion fall 2018
- Project Budget - \$974,000

UT1716 – Connecticut Street (W 10th Street to W 11th Street)

- Replacement of approximately 750 feet of 8-inch cast iron watermain from the 1960's with 8-inch PVC. Project was designed in 2017 and construction will start in spring 2018.
- Design Engineer - PEC Engineering
- Contractor – Hettinger Excavation
- Status – Project Completion summer 2018
- Project Budget - \$245,000

In-House Watermain Replacement

- Project Description – Identified watermain replacement projects are completed by department staff based on annual watermain condition assessments in consultation with department engineers and others. Project scope is typically watermains 8 inches and smaller located in low traffic neighborhoods.
- Project Detail – The following In-House Projects were completed in 2017.

Location	Status	Length (ft.)	Project Cost
Stonegate Court	Complete	1,039	\$98,201
Almira Avenue	Complete	611	\$51,149
California Street	Complete	752	\$100,776
Rockledge Road	Complete	48	\$10,204
Ousdahl Road	Complete	472	\$59,961
Gower Place	Complete	704	\$79,649
Countryside Lane	Complete	521	\$57,763
Grandview Terrace	Complete	118	\$18,058
W. 29 th Street and Alabama	Complete	83	\$11,924
TOTALS		4,348	\$487,685



4. Other Utilities and Stormwater Projects

UT1505 – 23rd Street and Ousdahl Road Street, Stormwater and Utility Improvements

- Project Description – Street and stormwater improvements at the intersection of 23rd and Ousdahl including over 4,900 linear feet of stormwater collection improvements. The existing storm sewer infrastructure provided capacity for a 2-year or less storm event which results in localized street flooding. Due to infrastructure condition, design life, and utility conflicts; waterline and sanitary sewer were also replaced as part of the project.
- Project Details – New stormwater pipe and reinforced concrete structures ranged in size from 12" to box structures as large as 53-inch by 83-inch box structures. Approximately 1,850 feet of 8-inch cast iron watermain from 1959 was replaced with 8-inch PVC, and 550 feet of 8-inch sanitary sewer was replaced.
- Design Engineer – BG Consultants
- Contractor – RD Johnson
- Status – Project Completed November 2017
- Project Cost – \$3,110,000 (Total cost, including \$523,000 for Utilities)

UT1518 19th Street Utilities Replacement & Relocation (Iowa to Alabama Streets)

- Project Description – Replacement of aging, smaller-sized waterline with PVC pipe from Iowa Street to Alabama Street and replacement of existing sanitary sewer from Naismith Drive to Stewart Avenue to accommodate the reconstruction of 19th Street
- Project Details – Existing waterline is primarily 6-inch and 8-inch cast iron or transite pipe from the late 1940's to mid-1950. Replacement pipe will be 8-inch and 12-inch PVC. Existing 10-inch and 12-inch clay sanitary sewer from Naismith Drive to Stewart Avenue will be relocated to accommodate project improvements. Agreement with KU provides for cost sharing of identified water main adjacent to the KU Central District Project.
- Design Engineer – PEC Engineering
- Contractor – RD Johnson (Phase 1), Miles Excavating (Phase 2), To Be Determined (Phase 3)
- Status – 19th Street and Ousdahl construction completed August 2016 (Phase 1). 19th Street from Alabama to Naismith construction completed August 2017 (Phase 2). 19th Street west of Naismith (excluding Ousdahl) currently under design; anticipated construction completion August 2018 (Phase 3)
- Project Budget - \$1,300,000 (estimated)

UT1704 – Kasold Drive (6th Street to Bob Billings Parkway)

- Project Description - Replacement of approximately 7,000 feet of 8-inch and 12-inch cast iron watermain from the 1960's with 8-inch and 12-inch PVC to accommodate the reconstruction of Kasold Drive.
- Project Details – Existing waterline is 8-inch and 12-inch cast iron watermain from the 1960's. Replacement pipe will be 8-inch and 12-inch PVC.
- Design Engineer – CFS Engineers
- Contractor – RD Johnson Excavating
- Status – Project Completion spring 2019
- Project Budget - \$1,000,000

UT1714 Kansas River WWTP Chemical Storage & Feed and Excess Flow Building Protective Maintenance Coatings

- Project Description – Protective coatings applied to mechanical equipment and other structures prevent corrosion, maintain functionality, and extend useful life.
- Project Details – Protective coating applications to the interiors of and equipment in the Chemical Storage Building, Excess Flow Building and the Crane and Gantry at the Kansas River WWTP including walls, floors, stairs, pipes, pumps, and other appurtenances, with appropriate preparatory work. During 2017, the exterior piping and Excess Flow Building areas were complete, reaching 50% of project completion.
- Design Engineer – City Staff
- Construction – MVP Painting
- Status – Project Completion April 2018
- Project Budget - \$160,000 (Completed - \$112,357)

