

# City of Akron Combined Sewer Overflow (CSO) Long Term Control Plan



# SOS

Separate Our Sewers  
Save Our Streams

Ohio OWEA  
Collection Systems Workshop

Patrick Gsellman  
Genny Hanna  
Jim Hall



Thursday, May 9, 2013



# AGENDA

- **City of Akron CSO LTCP Update**

- Patrick Gsellman, PE, WW3
- Environmental Division Manager



- **Sewer Separation Projects: Design**

- Genny Hanna, PE
- Project Manager, Senior Engineer



- **Sewer Separation Projects: Construction**

- Jim Hall, PE
- Project Manager, Civil III



- **Questions**



# City of Akron CSO LTCP Update

- **Benefits**
  - Cuyahoga River
  - Water Quality
- **Federal Consent Decree Elements**
- **CSO Long Term Control Plan**



**Cuyahoga River Renewed**

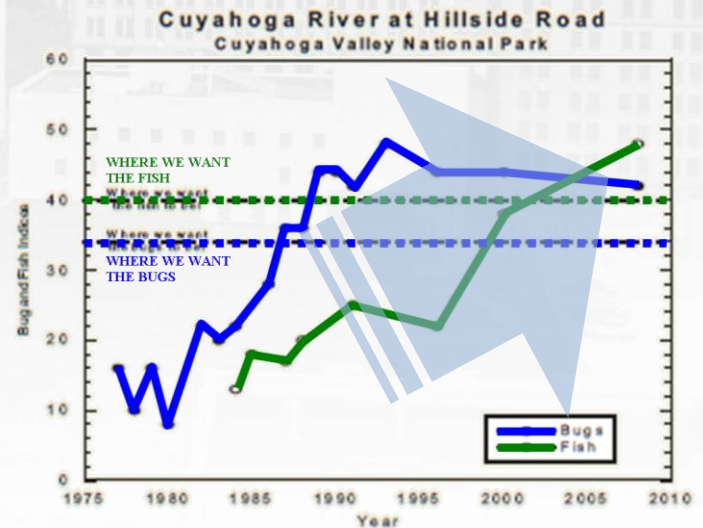


# Cuyahoga River

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## Water Quality

### Changes in Cuyahoga River Water Quality



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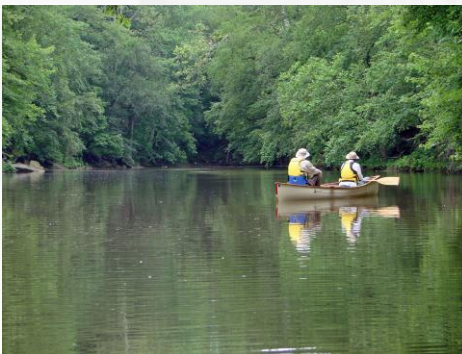
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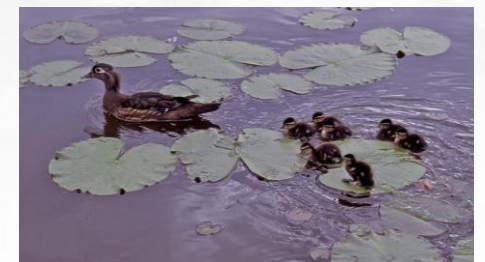
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# Benefits

- **Compliance with CSO Policy provisions in the Clean Water Act and furthering the goals of the Cuyahoga River TMDL and RAP**
- **Increased Recreation Opportunities in Akron and Cuyahoga Valley National Park (Southern Gateway)**
- **Coordinated Activities with Ohio Canal and Towpath and Possible Water Trail**
- **Economic Development Potential Related to Tourism and Natural Resource**
- **Quality of Life Issues**
- **Engineering and Construction Jobs**
- **Money into the Local Economy**





# Consent Decree Elements

**SPECIFIC ACTION PROJECTS**

**CSO AND WPCS CONTROL MEASURES**

**CMOM, FOG AND EMERGENCY RESPONSE**

**MUD RUN PUMPING STATION**

Upgrade WPCS to 130mgd

Long Term Control Plan Update and Report



Pump Station and Collection System Study

**Separation Projects (8, 25, 21, 30 & 13)**

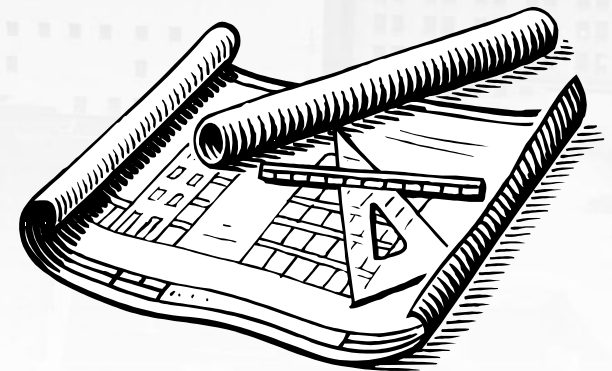


**CD: Complete all projects by LTCP Update :**

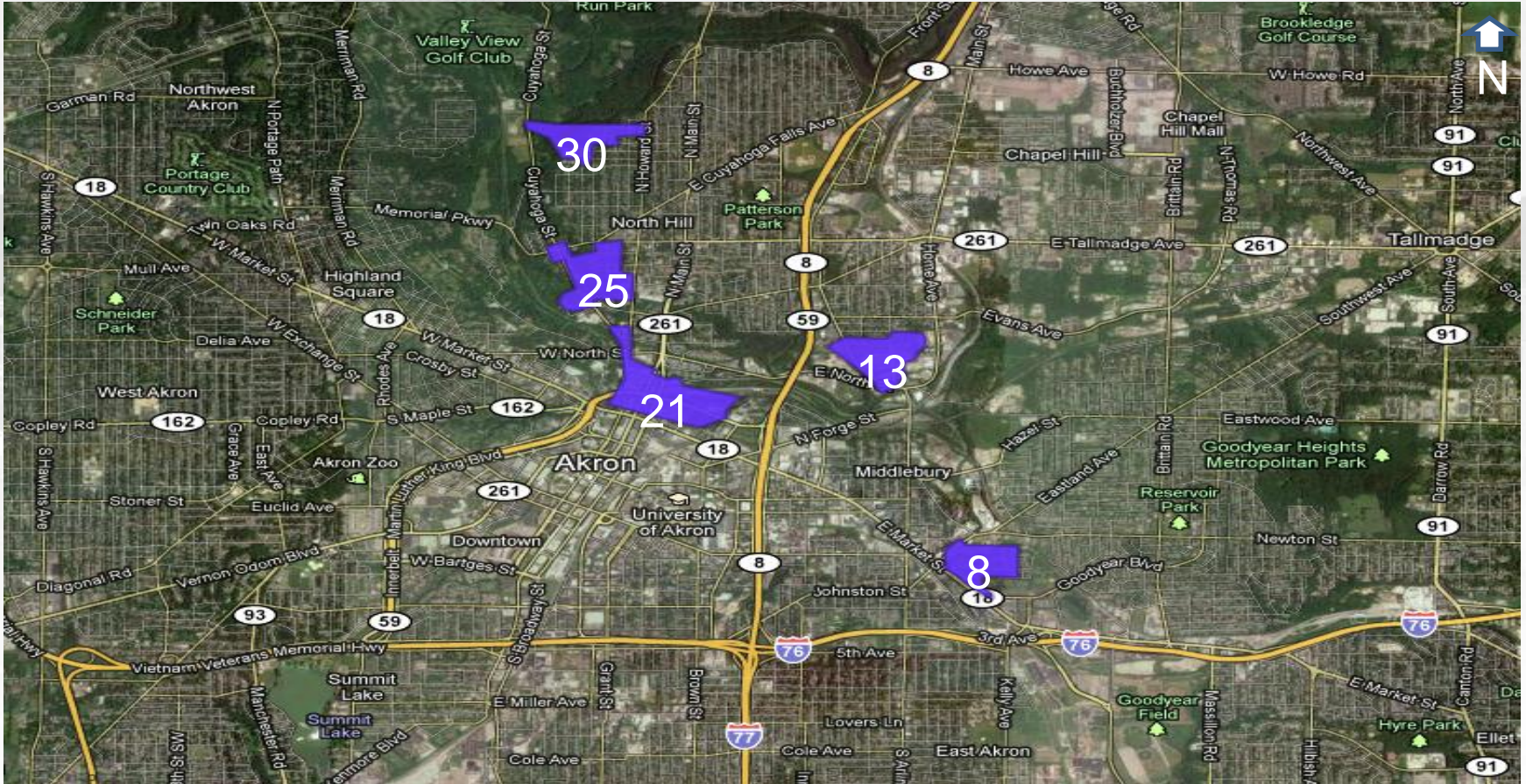


# Sewer Separation Projects Design

- – Construction Complete
- – Construction Complete
- – Design Underway
- - Design Underway
- - Design Underway

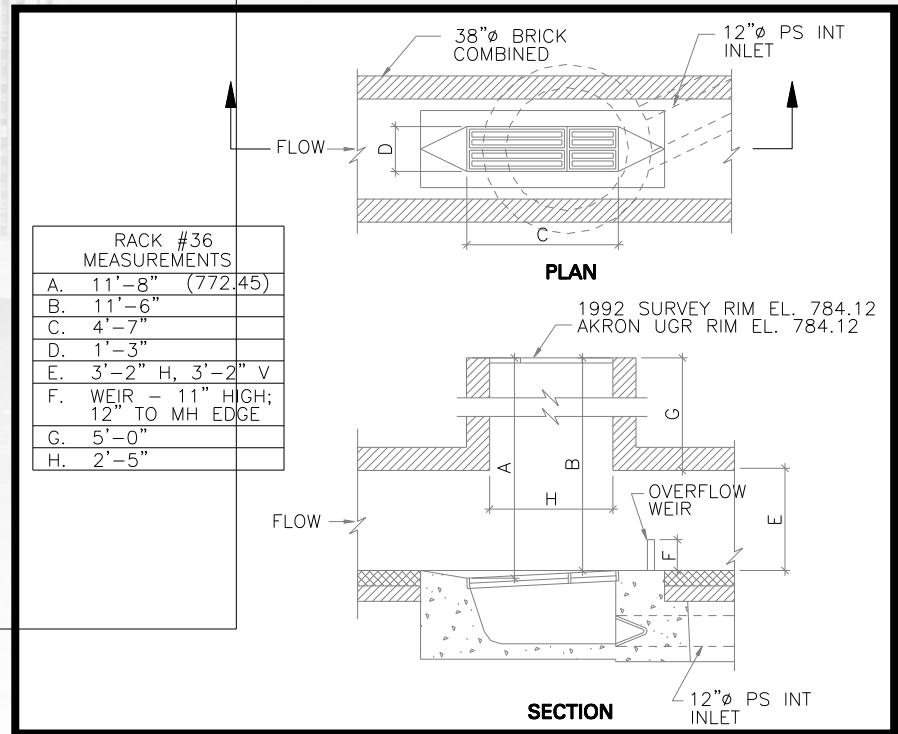


# Sewer Separation Drainage Areas





# CSO Rack Structures





# CSO Outlet Structures





# CSO Rack 25 Sewer Separation Design

## ● CSO Rack 25

- Located North of Downtown Akron
- Rack Located in a Manhole in Bass Avenue
- Overflowed to Little Cuyahoga River



# CSO Rack 25 Sewer Separation Design

## ● Pre-Design Work

- Researched Record Information
- Televised Existing Sewers
- Performed Smoke Testing
- Completed Flow Calculations





# CSO Rack 25 Sewer Separation Design

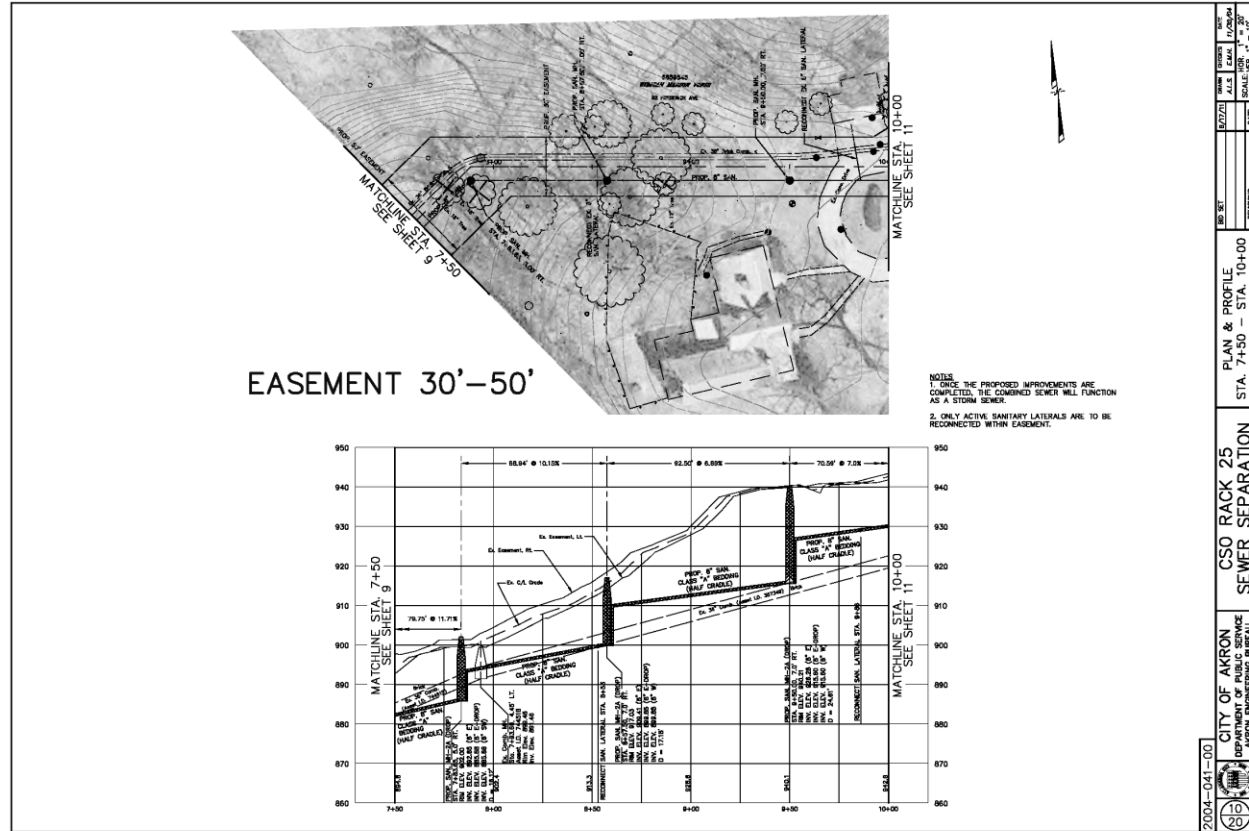
## ● Proposed Improvements

- New 8 inch sanitary sewer ( $\approx$  3,500 feet)
- Existing combined sewer became the storm sewer
- Reconstruct 8 inch water main ( $\approx$  1,300 feet)



# CSO Rack 25 Sewer Separation Design

- Design Challenges
  - Steep Slopes
  - Existing Utility Locations
  - Land Acquisition



# CSO Rack 8 Sewer Separation Design

- **CSO Rack 8**

- **Located Southeast of Downtown Akron**
- **Rack Located near Case Avenue and Kent Street**
- **Overflowed to Little Cuyahoga River**





# CSO Rack 8 Sewer Separation Design

## ● Proposed Improvements

- New 8-15 inch Sanitary Sewer ( $\approx$  5,000 feet)
- New 12-36 inch Storm Sewer ( $\approx$  1,100 feet)
- Reconstruct 8-inch to 36-inch Sanitary and Storm Sewer with CIPP Lining ( $\approx$  4,000 feet)



# CSO Rack 8 Sewer Separation Design

## ● Design Challenges

- Availability of Underground Record Information
- Accelerated Design Schedule
- Existing Utility Locations
- Coordination with Railroad



# Sewer Separation Projects Construction

2011, Finish: 11/9/2012

14 days (work in easement)

Estimate

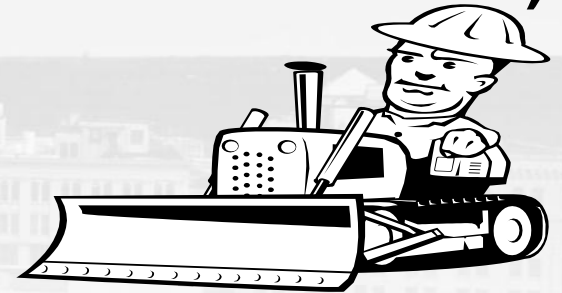
9%)

5%)

Existing sewer repairs

in 2004 – old CCTV

segment restoration costs.





# Sewer Separation Projects Construction

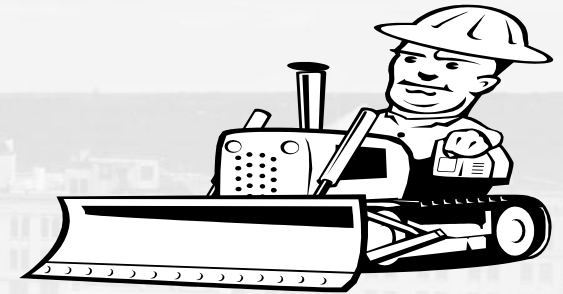
2012, Finish: 10/4/2012

Estimate

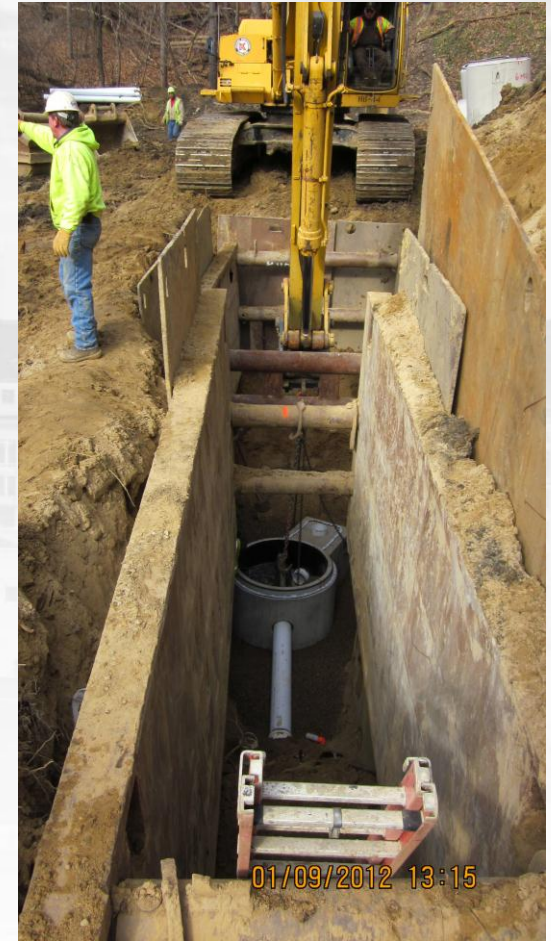
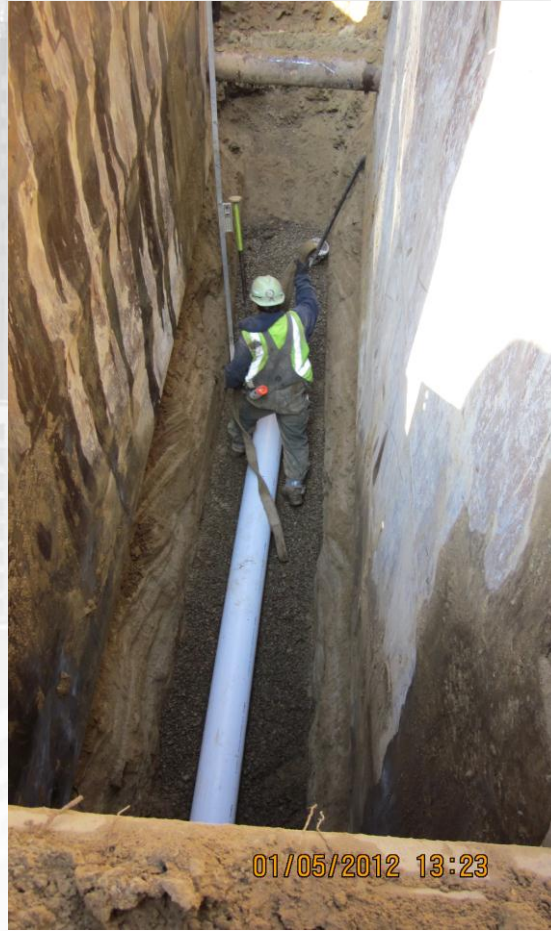
9%)

6.2%)

isting lateral investigations  
Case Avenue (shallow  
rground utilities (different  
ace restorations on Dublin  
e, and Fulton Street.



# CSO Rack 25 Sewer Separation





# CSO Rack 25 Sewer Separation





# CSO Rack 8 Sewer Separation





# CSO Rack 8 Sewer Separation



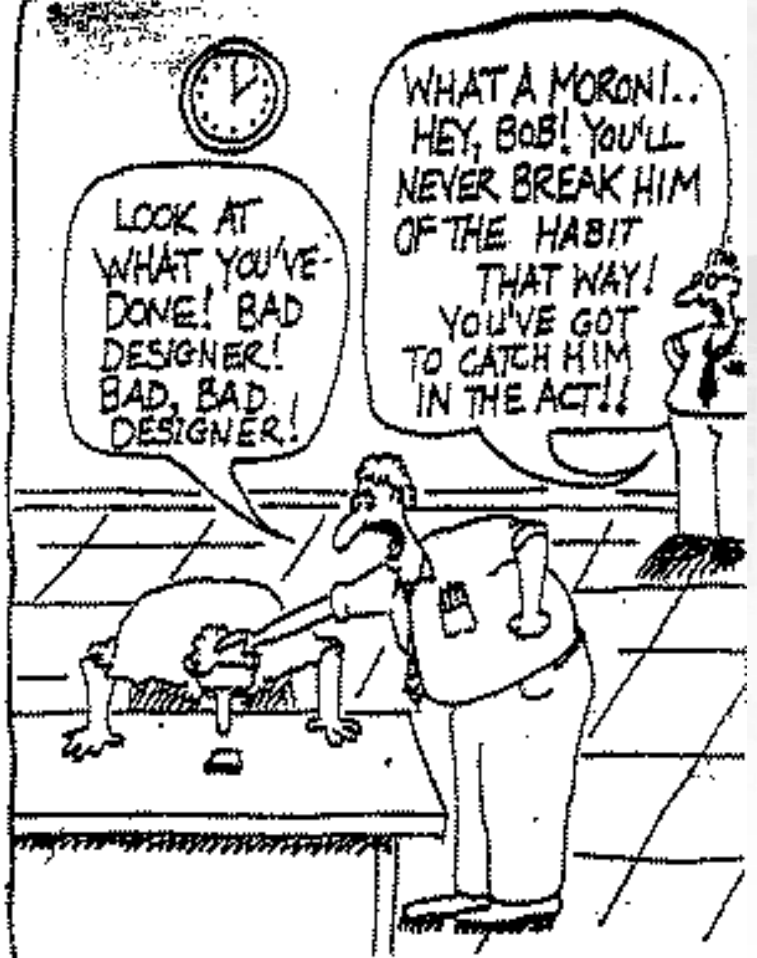
# Commissioning & Handover

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"Congratulations, Kegworthy, we're giving you the key to the Executive Sewer."

search ID: nbe0258







- **City of Akron CSO LTCP Update**

- Pat Gsellman
- 



- **Sewer Separation Projects: Design**

- Genny Hanna
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- **Sewer Separation Projects: Construction**

- Jim Hall
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City of Akron Website

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