

Combined Sewer Overflow Mitigation in Elmira Sewer District



Chemung County Legislature
Multi-Services Committee Meeting
May 26, 2026

Ali Rennie, PE
Executive Director, CCSD

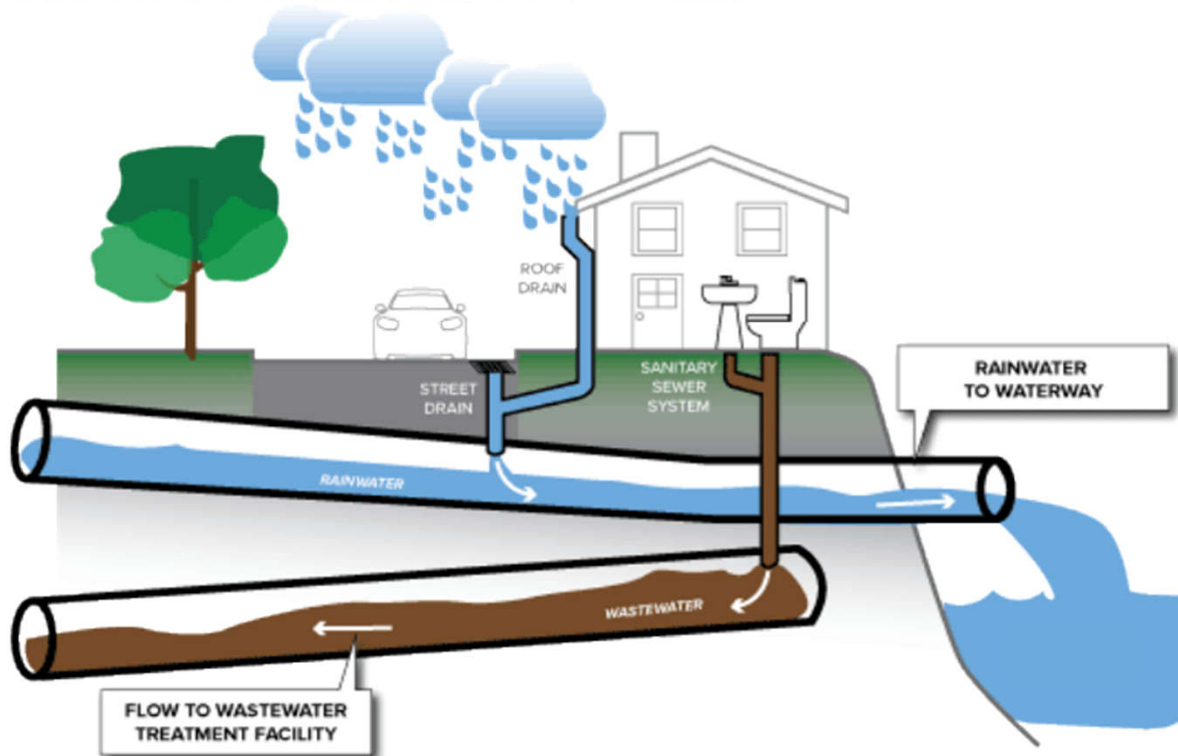
Brad Sick, PE
Project Manager, Larson Design Group

Agenda

- What is a CSO and why is mitigation needed?
- Why is green infrastructure part of the CSO mitigation effort?
- What other benefits might green infrastructure provide?
- What will this effort look like in the short term and long term?

What Is A Separated Sewer System?

SEPARATE SEWER SYSTEM



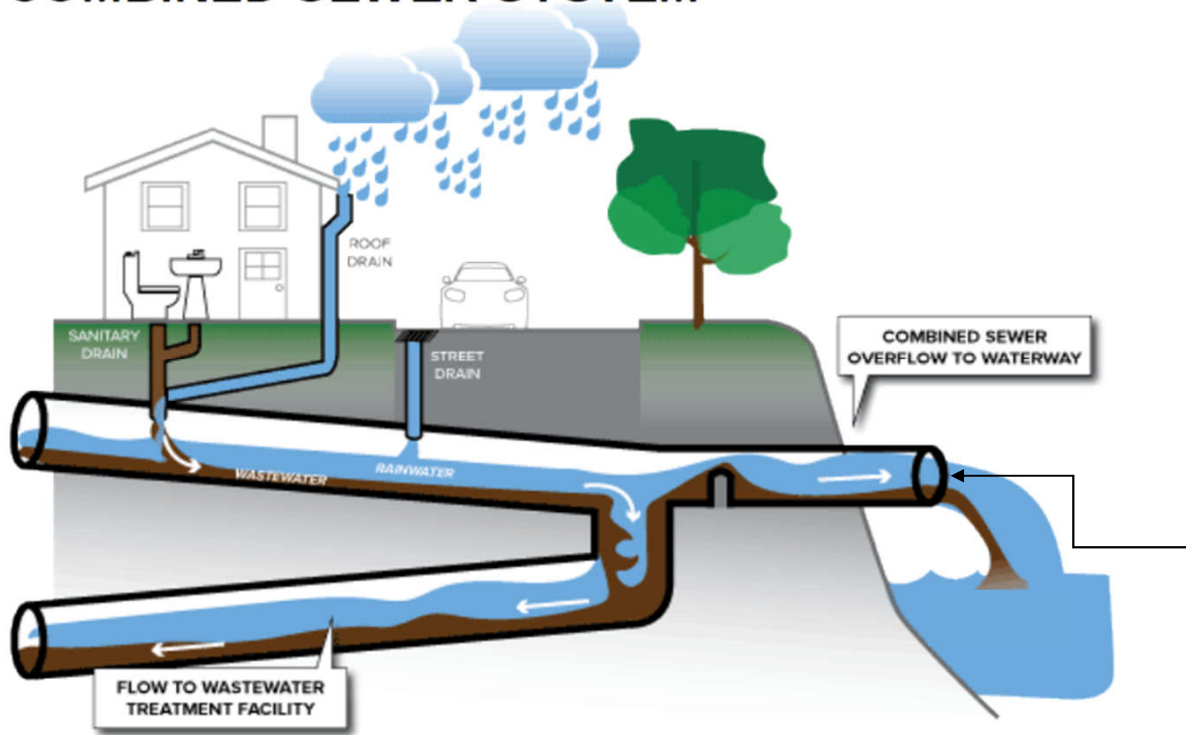
One Pipe Conveys Only Sanitary & Industrial Sewage to the Wastewater Treatment Facility

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A Separate Pipe Conveys Stormwater Runoff to Local Waterways

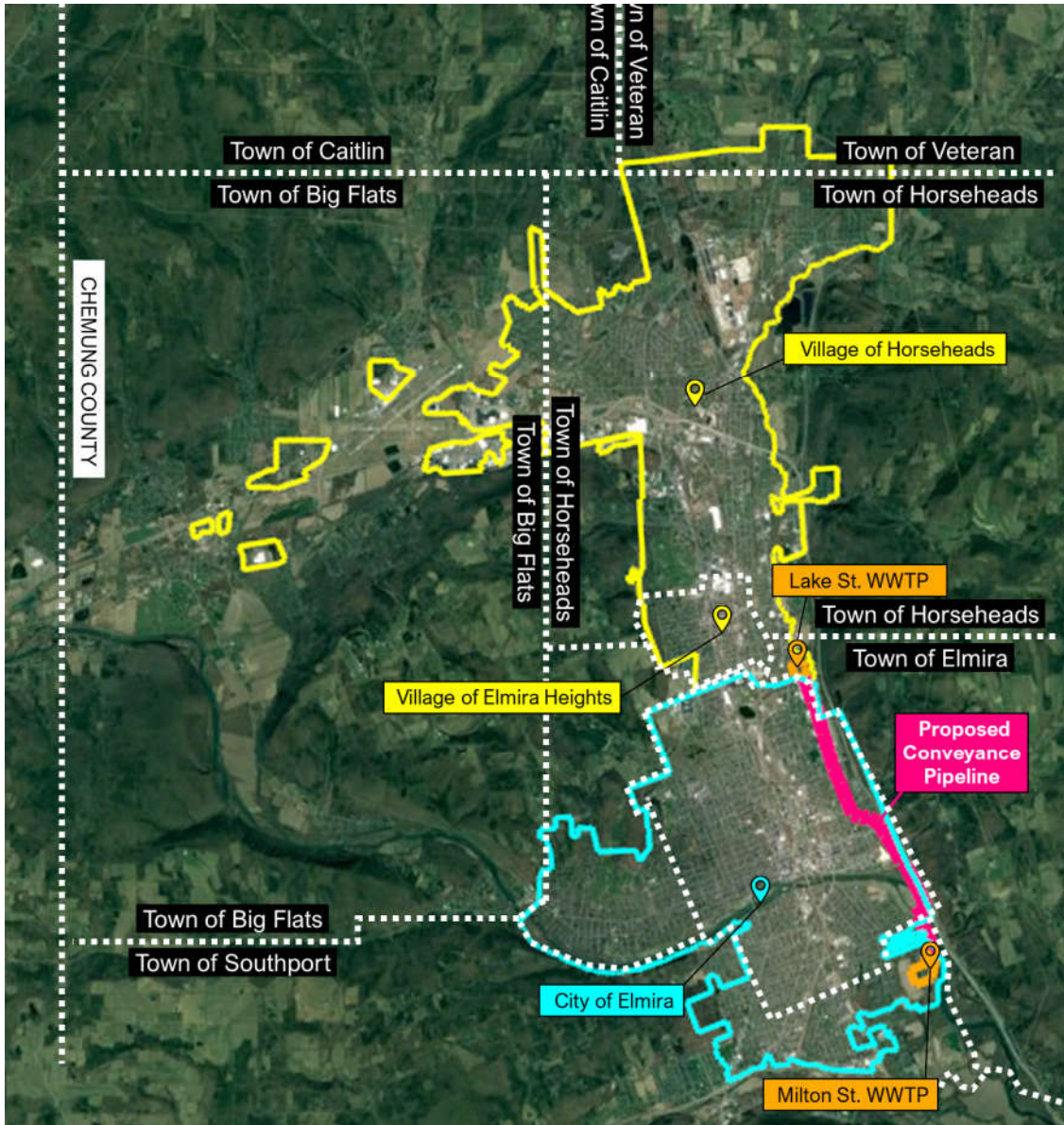
What Is A Combined Sewer System?

COMBINED SEWER SYSTEM

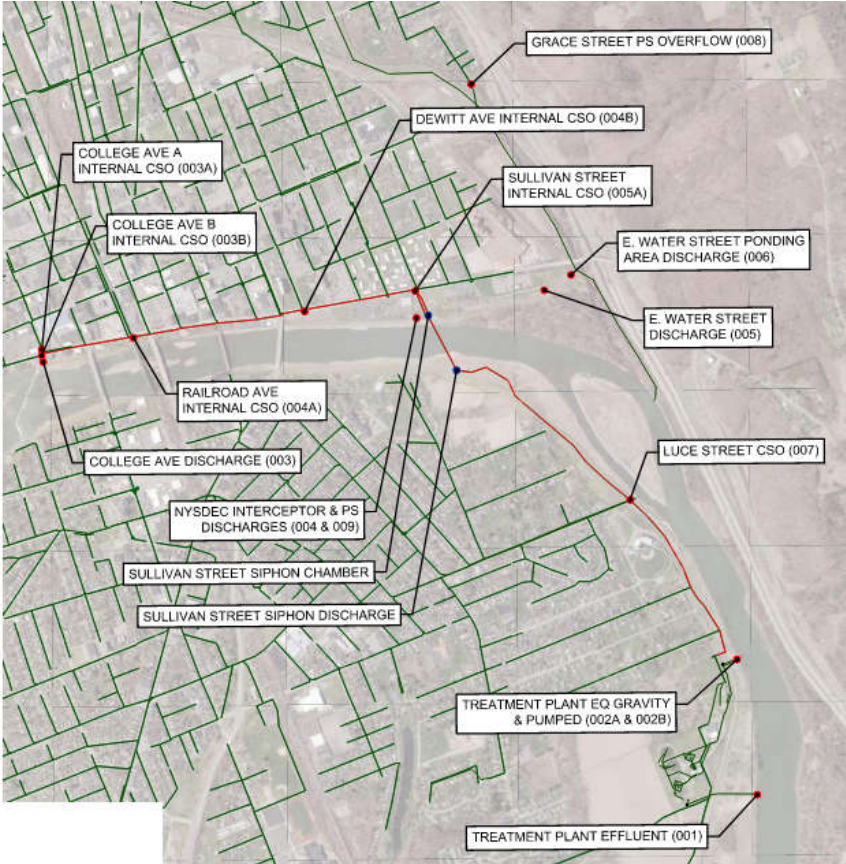
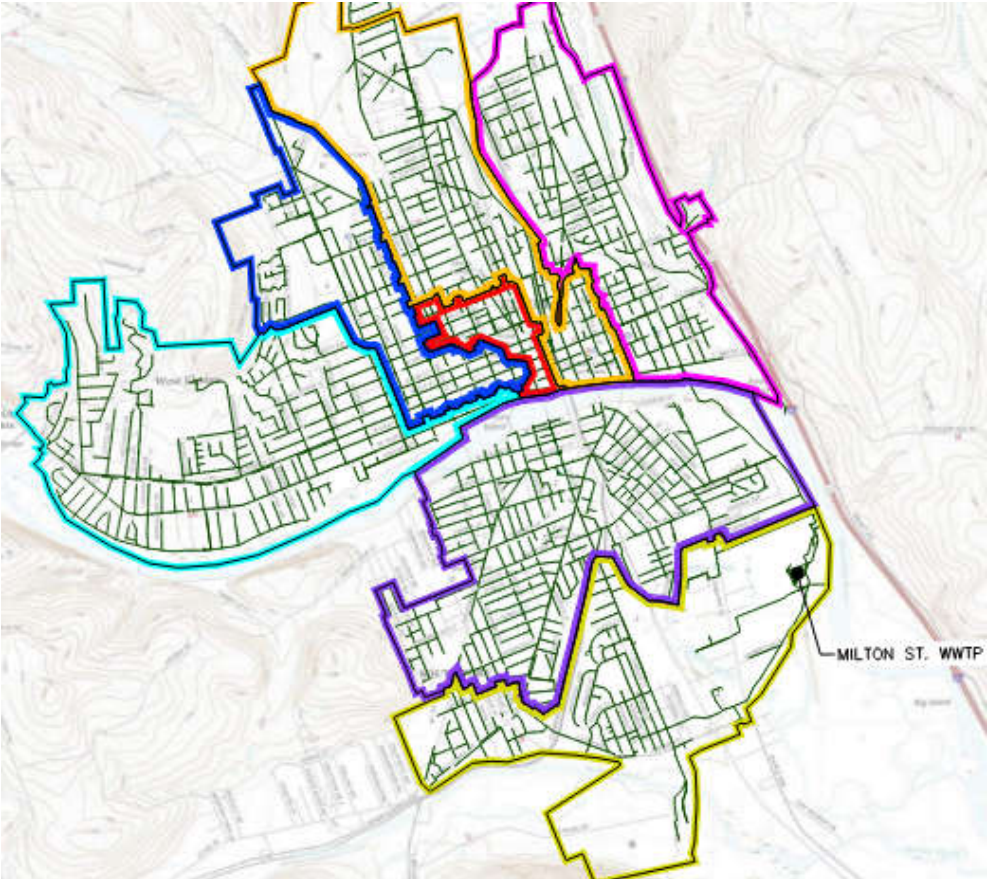


One Pipe Conveys Sanitary & Industrial Sewage AND Storm Water Runoff to the Wastewater Treatment Facility

Combined Sewer Overflow (CSO) –
A hydraulic relief point where untreated combined sewage is discharged to the environment during high flow conditions.

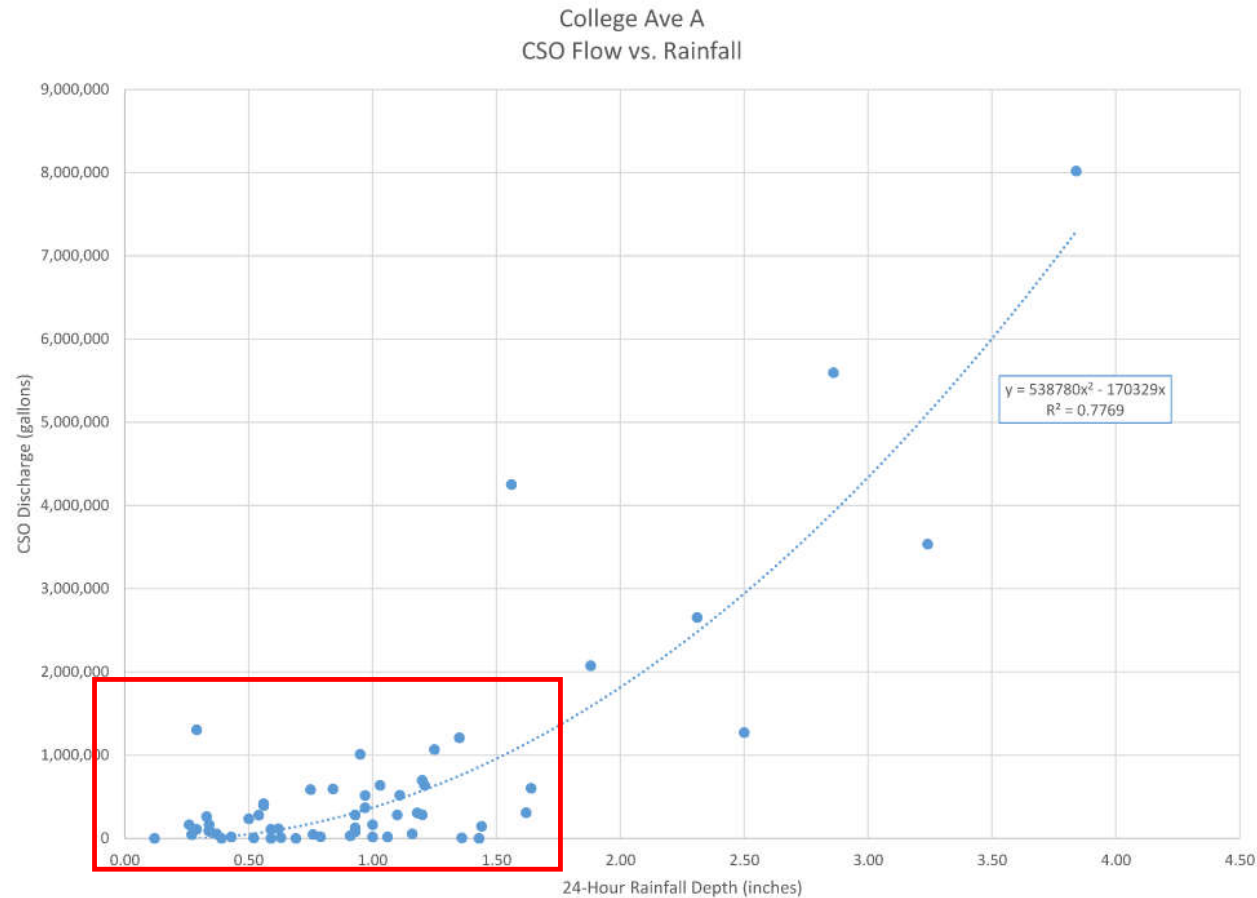


Elmira Sewer District



Current CSO Activity

- 14 Permitted Combined Sewer Outfalls (CSOs) - 8 internal, 6 external to Chemung River
- System currently meets 85% capture rate regulation
- Many of the external CSOs currently discharge 20 to 40 times per year
 - EPA pushing for 6 or less discharges per year



CSO Mitigation

Need to **proactively** mitigate CSOs to:

- Protect CCSD investments
- Stay ahead of tighter regulations



Recent path to CSO Mitigation

- 2020-2021: Preliminary Engineering Study to evaluate CSO system and different CSO mitigation strategies – recommended **Green Infrastructure** as most cost-effective option
- 2024-2025: Preliminary Engineering Study to evaluate specific project options to implement a **Green Infrastructure Pilot Project**
- 2025: Submitted grant applications to
 - NYSEFC Green Innovation Grant Program (GIGP)
 - National Fish and Wildlife Federation (NFWF)

NY
NYS

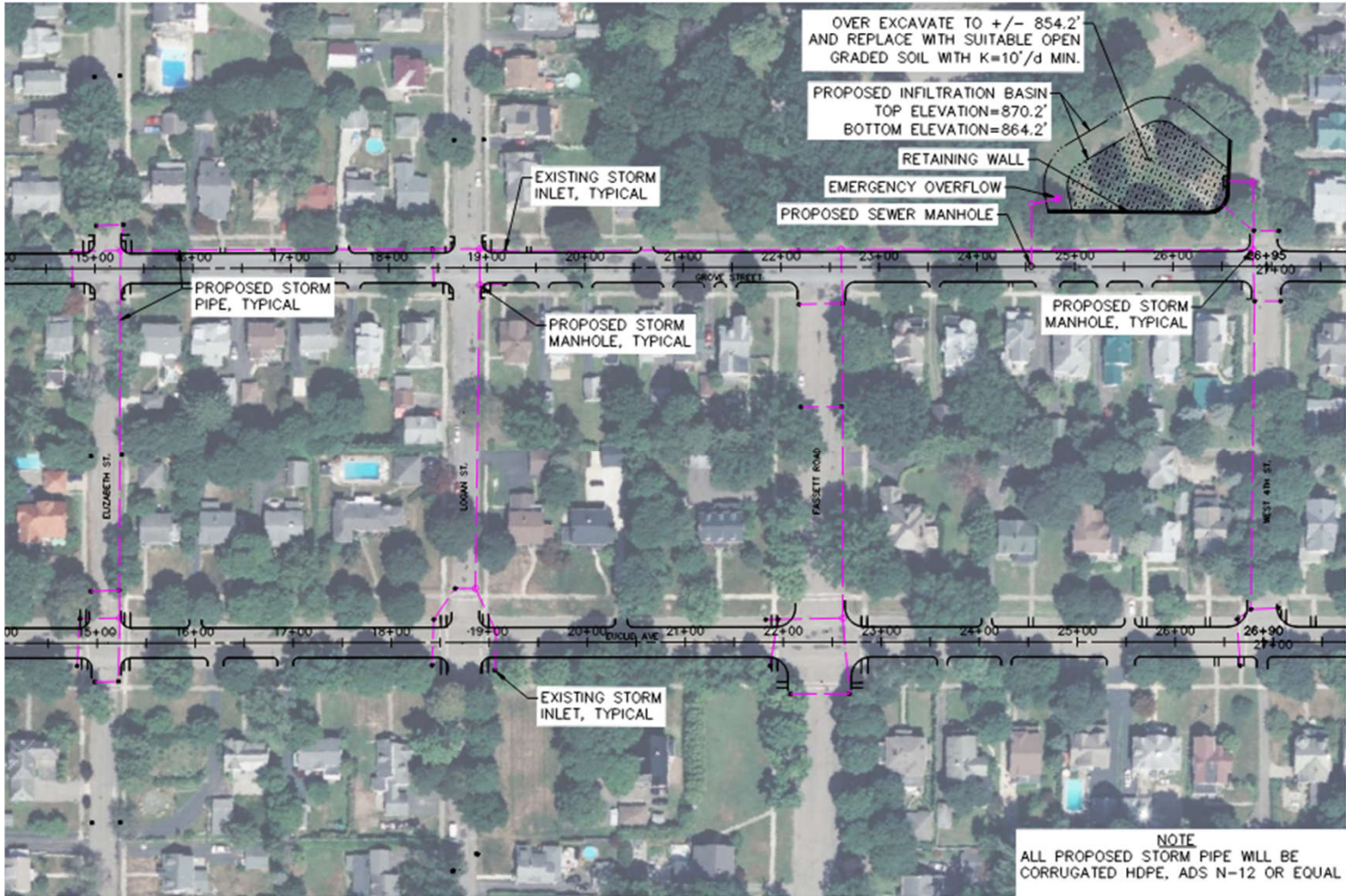
What Is Green Infrastructure?

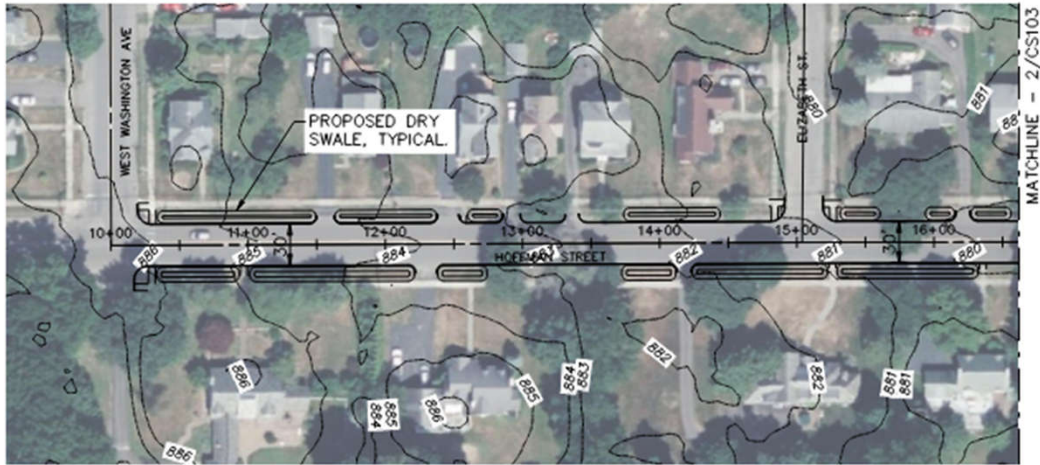


Green Infrastructure is a range of measures that uses plant or soil systems, permeable pavement or engineered substrates, stormwater harvesting and reuse techniques, or other methodologies to **infiltrate** or provide **evapotranspiration** of stormwater to reduce flows to sewer systems or to surface waters.

Other Benefits:

- City Beautification
- Reduced Heat Island Affect
- Improved Soil Health
- Improved Flood Resiliency

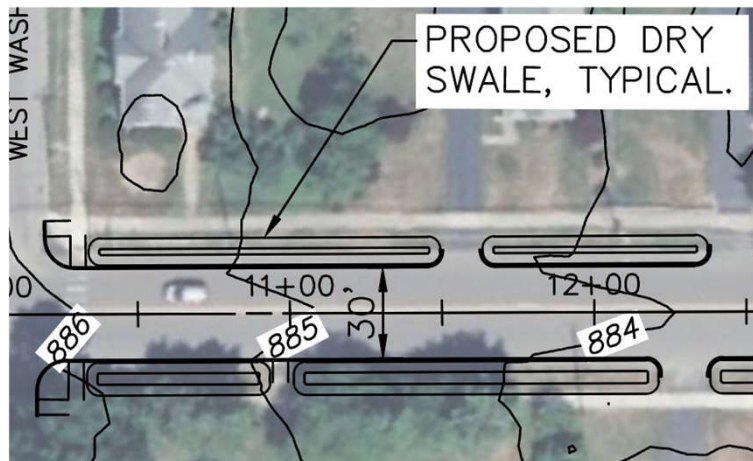
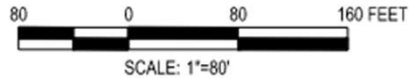




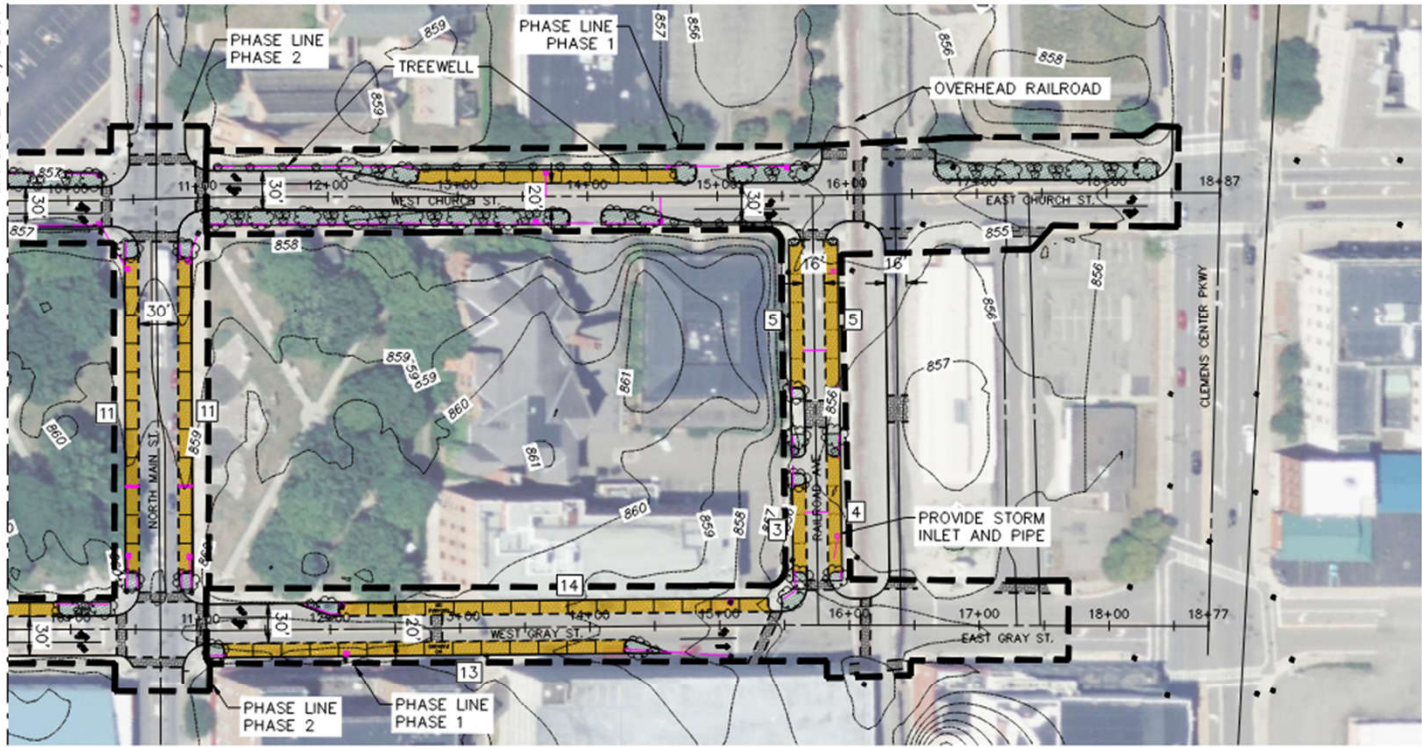
MATCHLINE - 2/CS103

1 HOFFMAN STREET

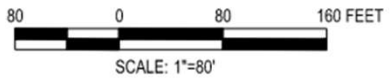
SCALE: 1"=80'



MATCHLINE - 1/CS301



**1 WEST CHURCH STREET
WEST GRAY STREET**
SCALE: 1"=80'



LEGEND			
	LANDSCAPE AREAS		CENTERLINE OF ROAD
	IMPERMEABLE CROSSWALK PAVERS		CONCRETE CURB
	PERMEABLE PARKING PAVERS		FLUSH CONCRETE CURB



Larson Design Group
3030 WESTMICHIGAN DRIVE
SUITE 400
CRANFORD TWP, PA 18038
877-323-6633

MARK	DATE	COMMENTS

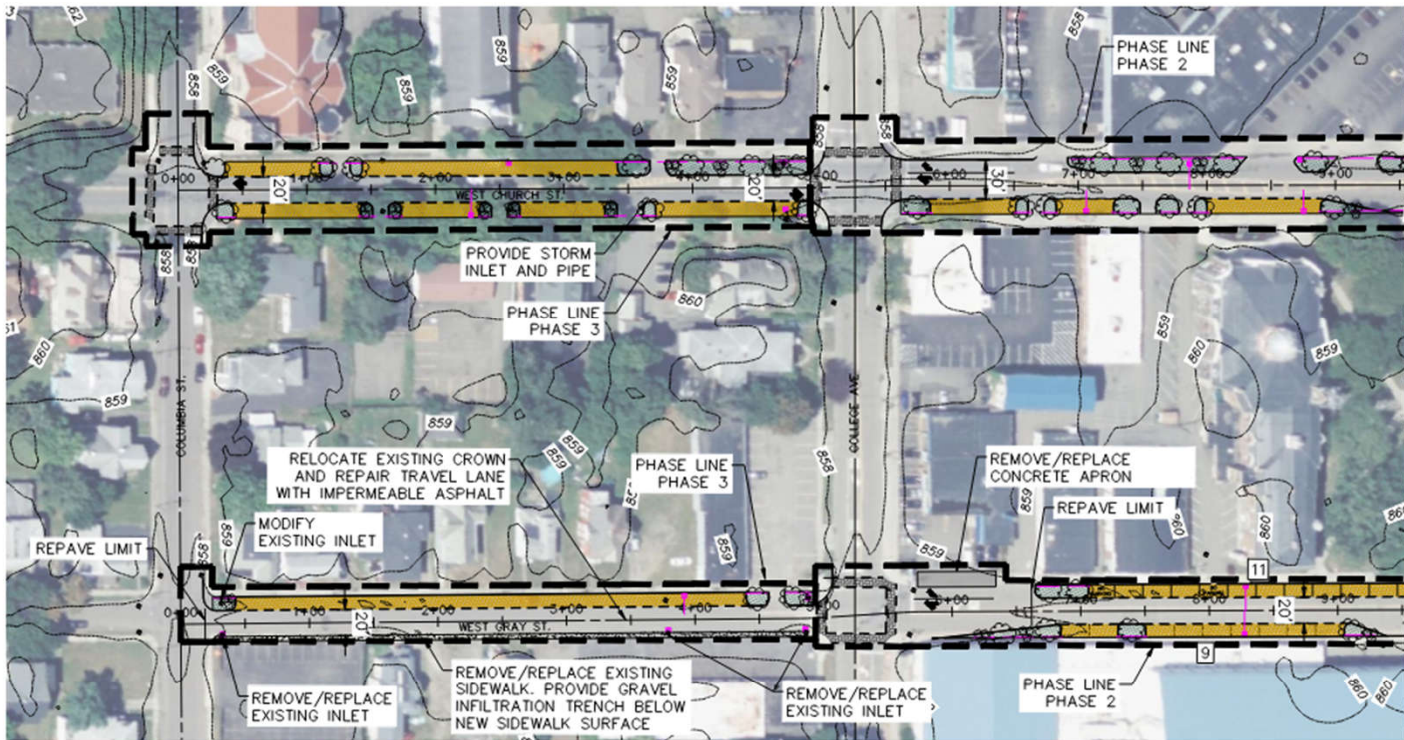
CC SEWER DISTRICT
600 MILTON ST
ELMIRA, NY 14904

GI PILOT STUDY
ELMIRA, NY 14901
**WEST CHURCH STREET
WEST GRAY STREET
ALTERNATIVE 3**

Date: 2025-03-17
Project No.: 7077-011
Sheet No.:

CS302

CONCEPT PLAN - NOT FOR CONSTRUCTION



1 WEST CHURCH STREET
WEST GRAY STREET
SCALE: 1"=80'

LEGEND			
	LANDSCAPE AREAS		CENTERLINE OF ROAD
	IMPERMEABLE CROSSWALK PAVERS		CONCRETE CURB
	PERMEABLE PARKING PAVERS		FLUSH CONCRETE CURB



Larson Design Group
3030 WESTINGHOUSE DRIVE
SUITE 400
CRANFORD TWP, PA 18828
(877) 303-6813

MARK	DATE	COMMENTS

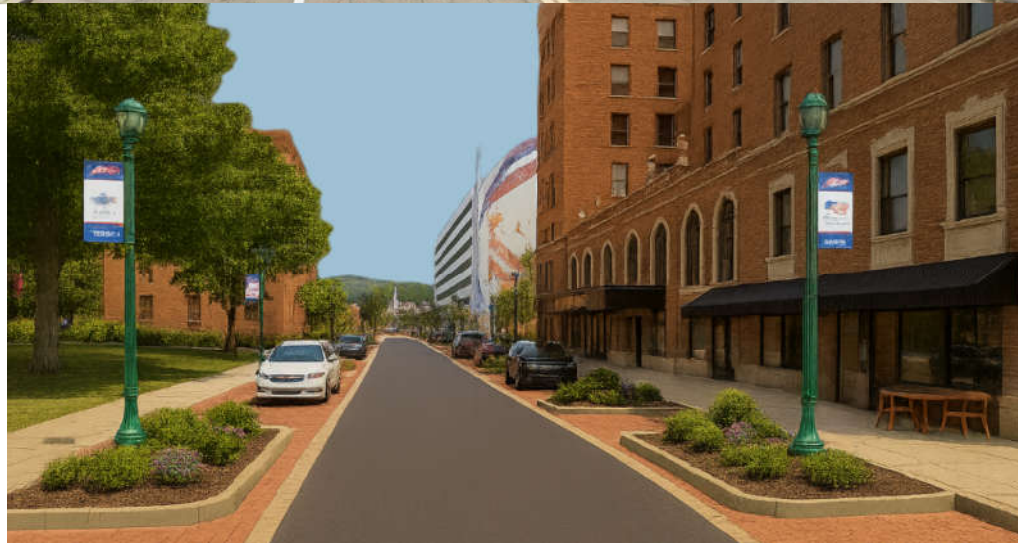
CC SEWER DISTRICT
600 MILTON ST
ELMIRA, NY 14804

GI PILOT STUDY
ELMIRA, NY 14901
**WEST CHURCH STREET
WEST GRAY STREET
ALTERNATIVE 3**

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CONCEPT PLAN - NOT FOR CONSTRUCTION



Funding and Path Forward

Short Term (2026 – 2029)

- Green Infrastructure Pilot Project
- ~\$3.5M Pilot Project
 - \$3M GIGP Grant Secured (90% grant)
 - \$300k Local Match
 - \$150k NFWF Grant (100% Grant) for funding

Long Term

Continue to leverage these and other low-match grant funds to:

- Mitigate CSOs
- Fund streetscape redevelopment projects that will beautify urban corridors and improve economics

Thank you

We look forward to our continued collaboration.

Ali Rennie, PE

Executive Director, CCSD

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Brad Sick, PE

Project Manager, Larson Design Group

bsick@larsondesigngroup.com

