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Since 1946

# South Central Interceptor Stabilization Project

City of Naperville, IL



**Kelsey Gattone, C.F.M, Strand Associates, Inc.®**







# Presentation Outline



**City and River Profile**



**Development of the  
South Central  
Interceptor Sewer**



**River Corridor  
Evaluation**



**Interceptor Evaluation**

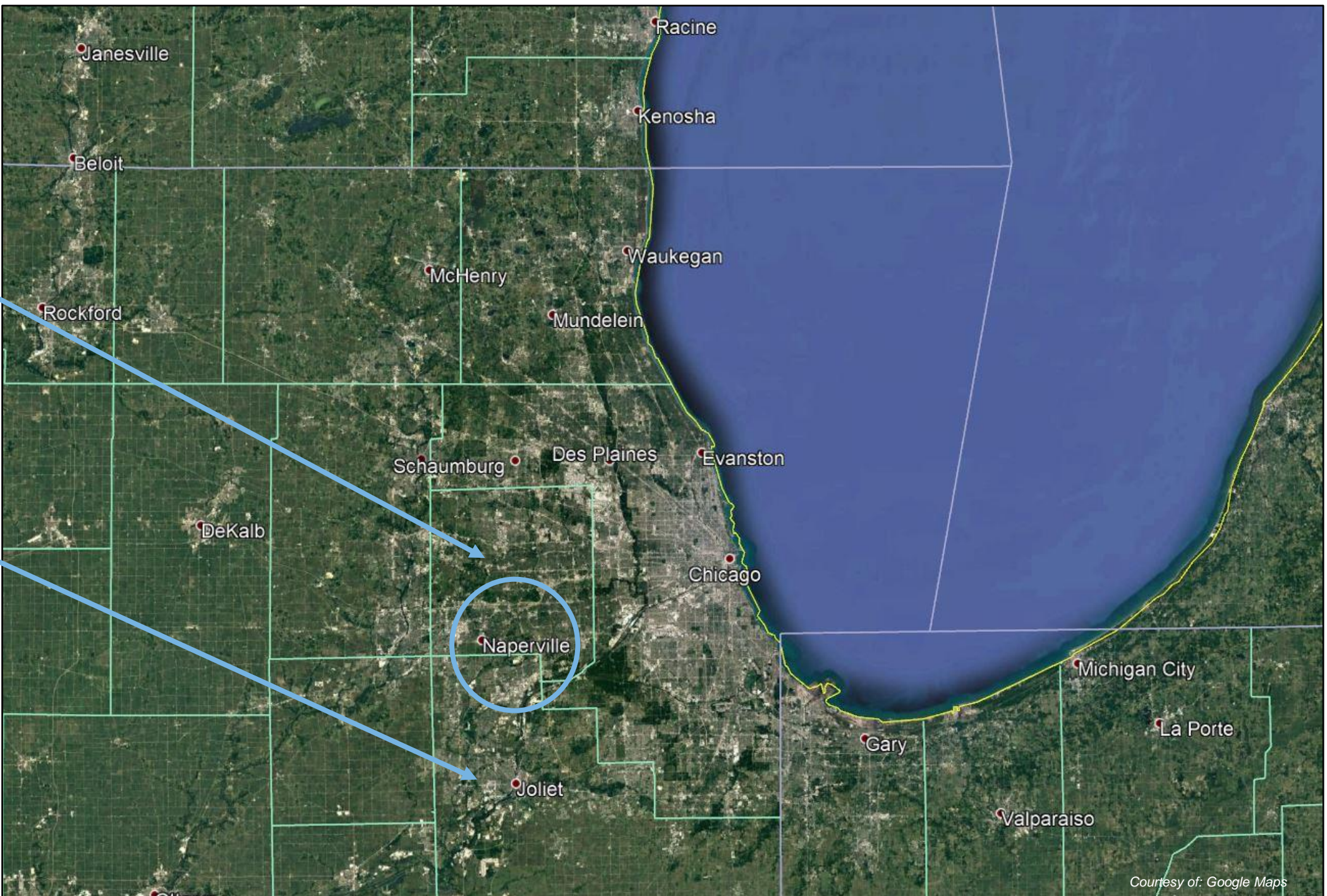


**Stage 1 Construction**

# City of Naperville and the West Branch of the DuPage River

DuPage  
County

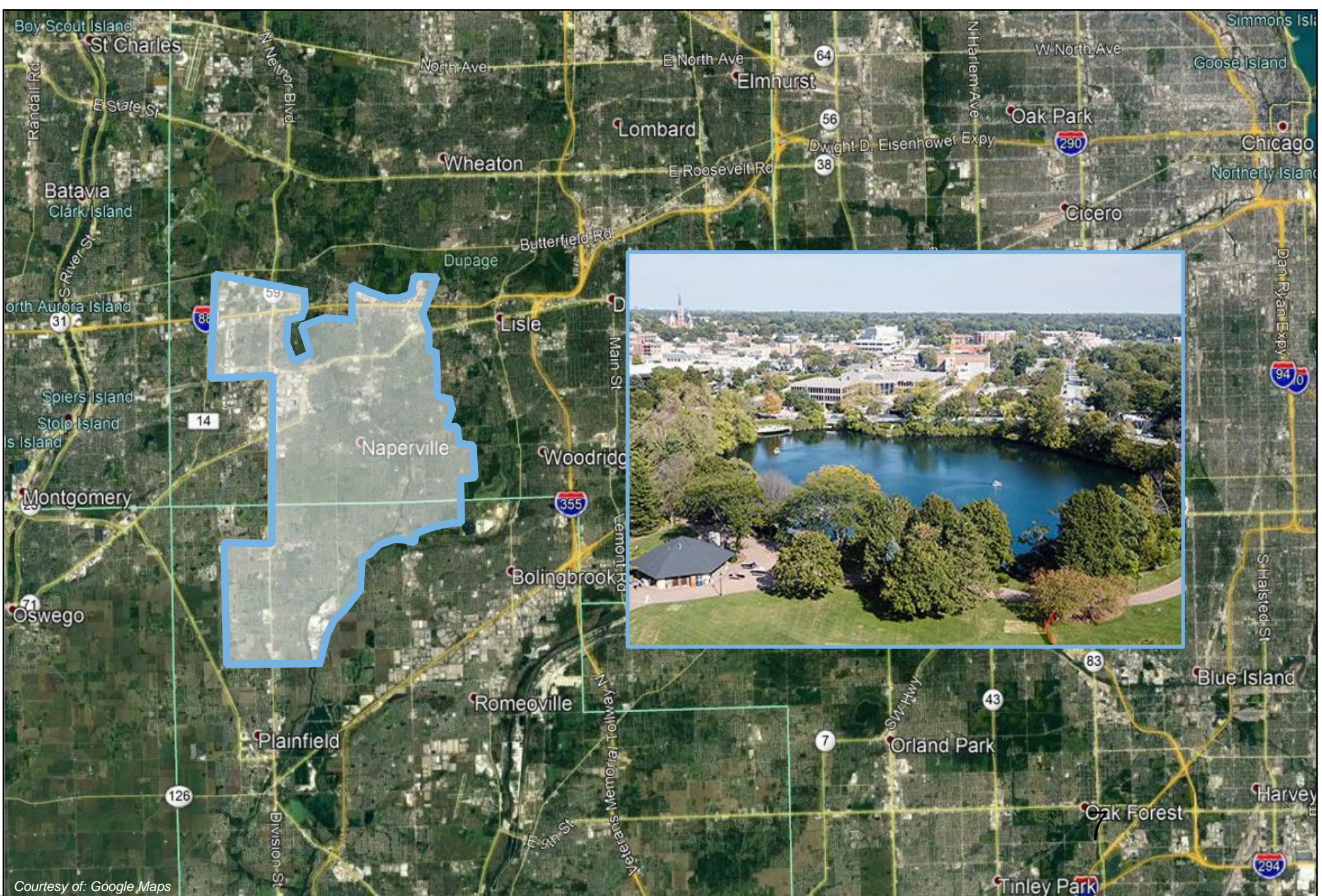
Will  
County





38 Square  
Miles

Population  
148,000



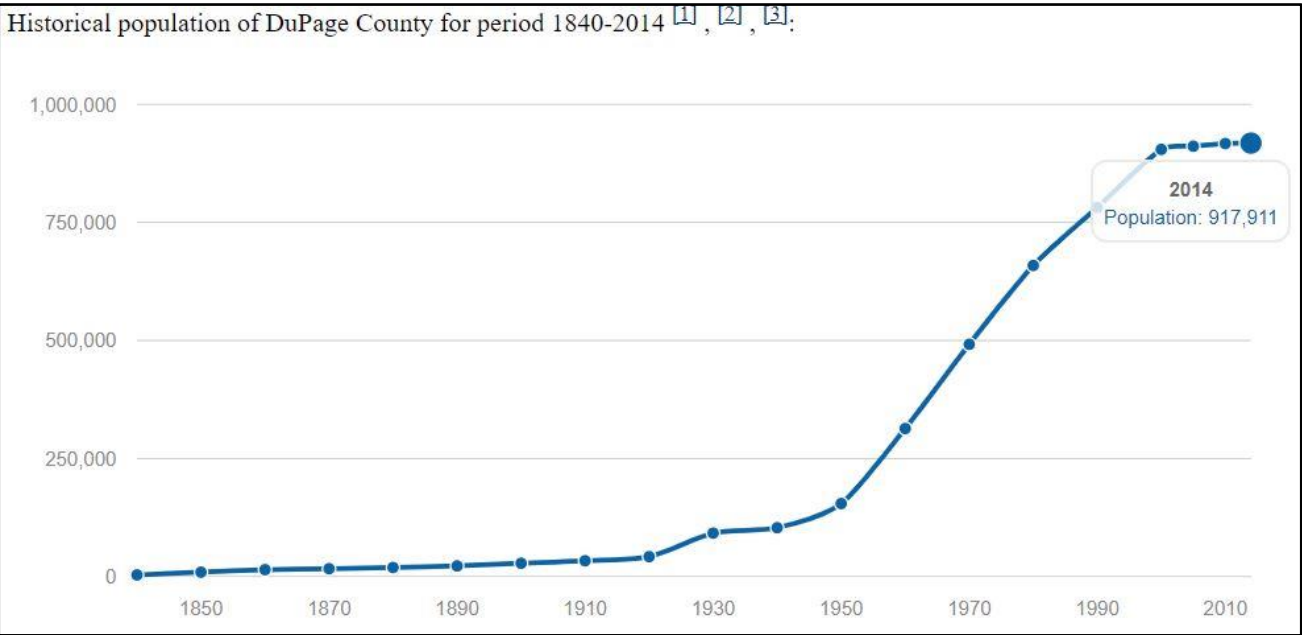
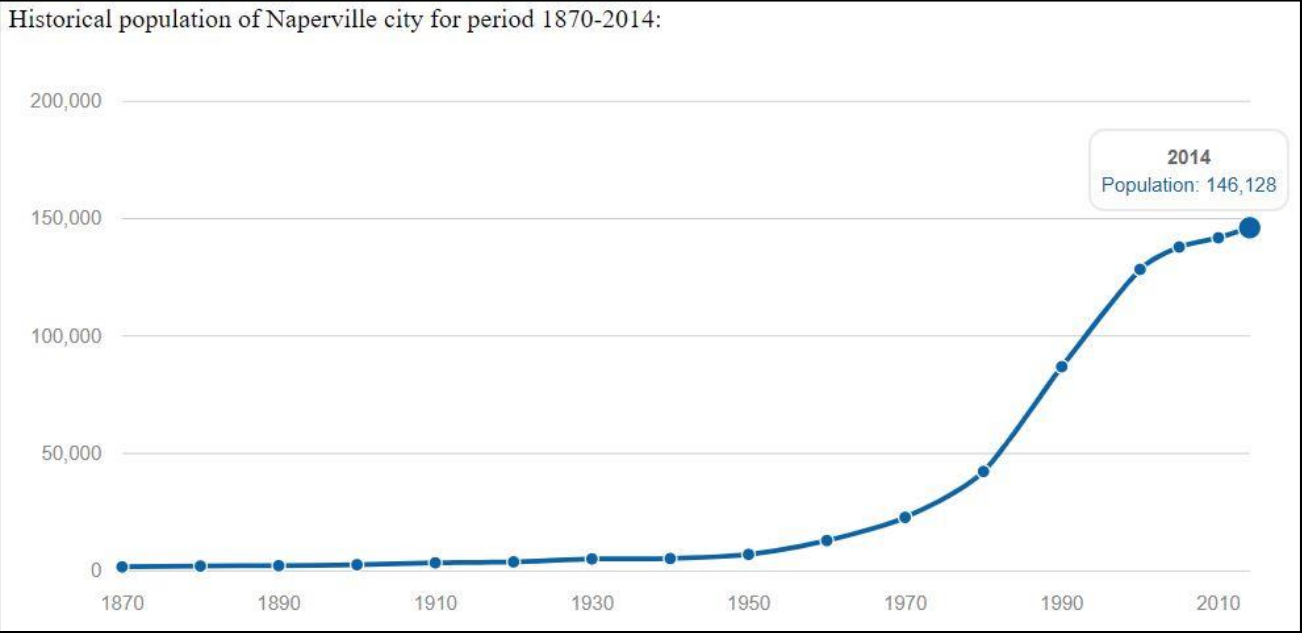




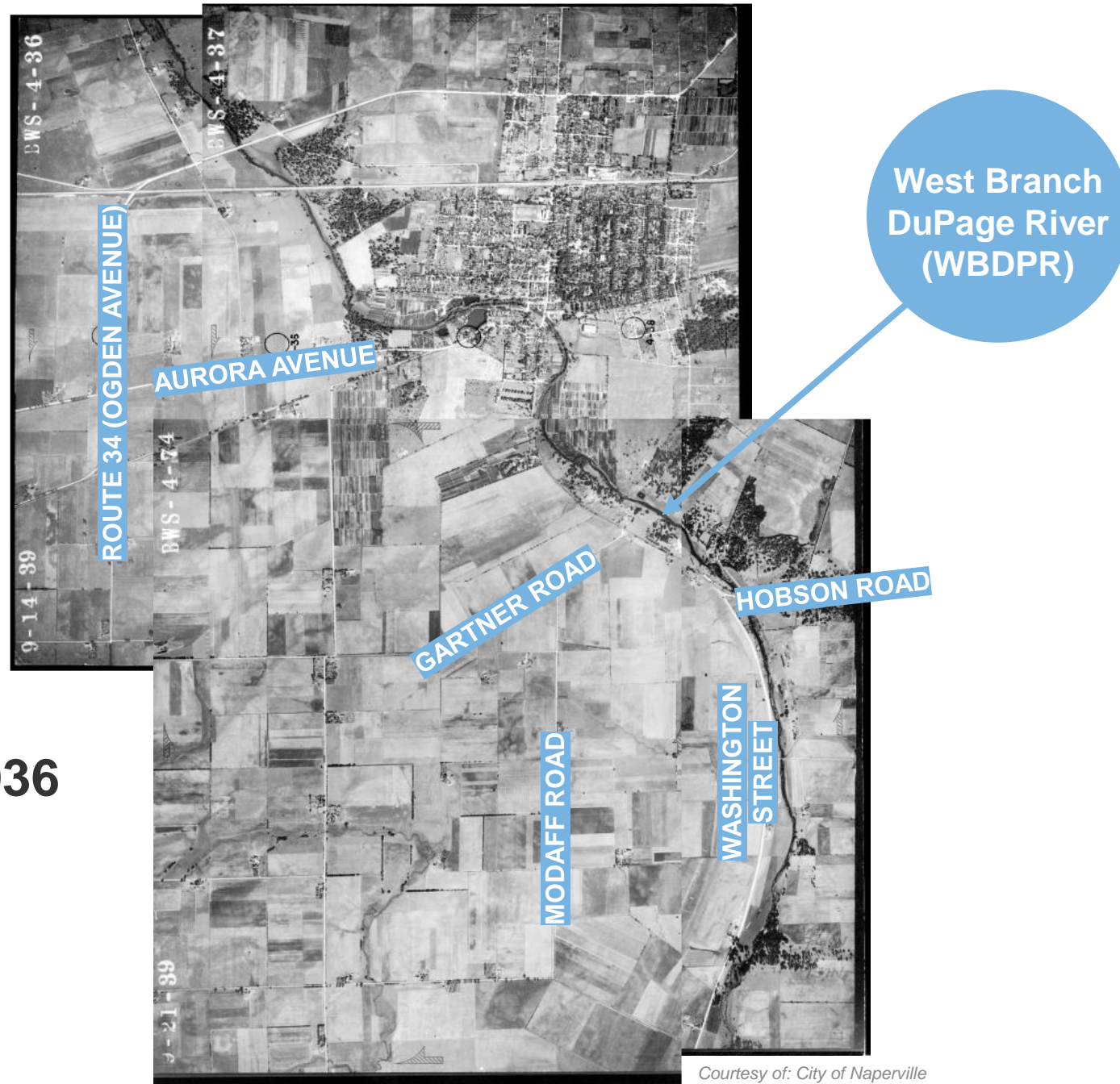
Courtesy of: City of Naperville

## Naper Settlement

**Although founded in 1831, most of Naperville's growth occurred after 1970.**



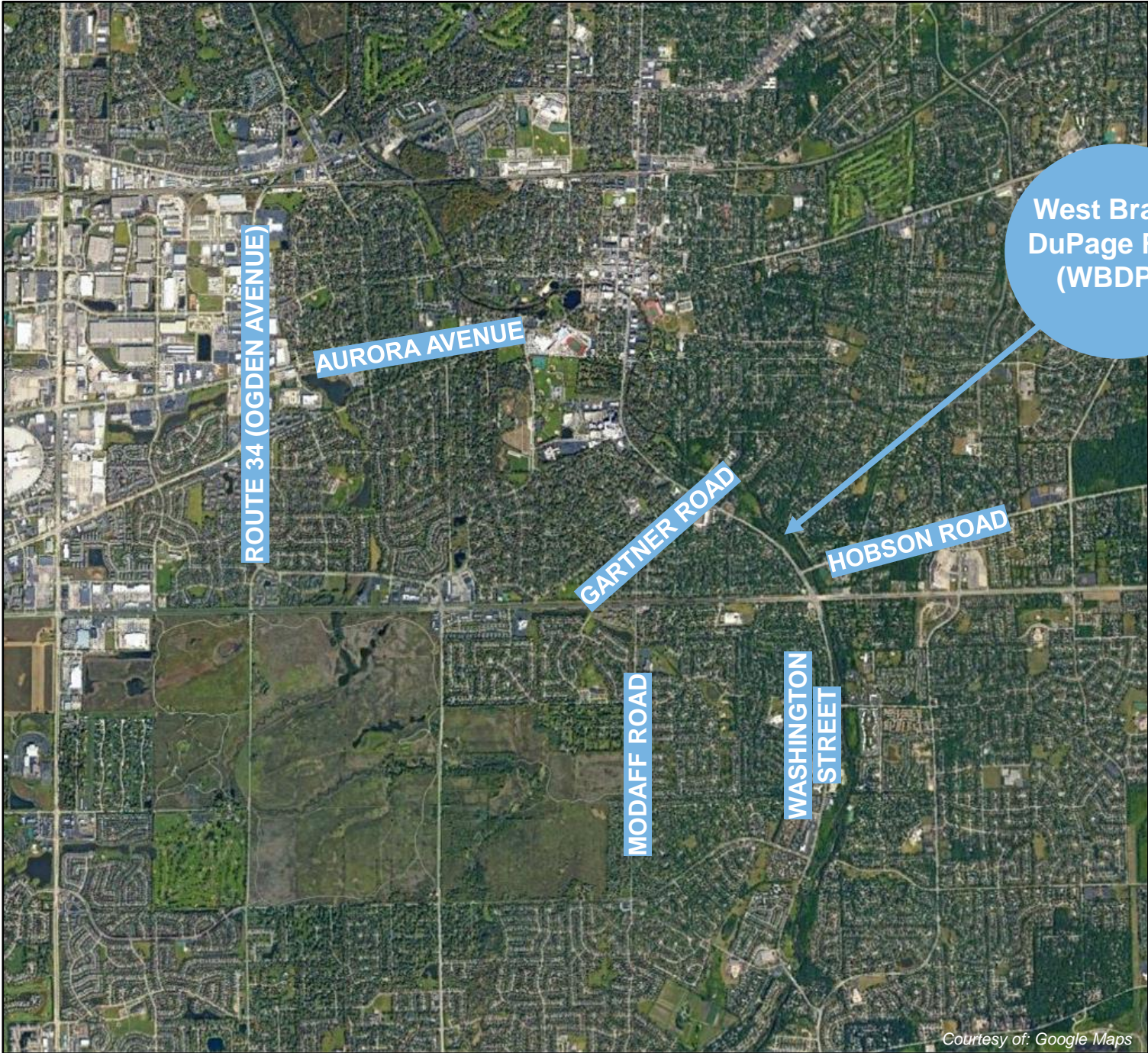
# Naperville circa 1936 Population 5,200



West Branch  
DuPage River  
(WBDPR)



**Naperville circa 2020  
Population 148,000**



*Courtesy of: Google Maps*









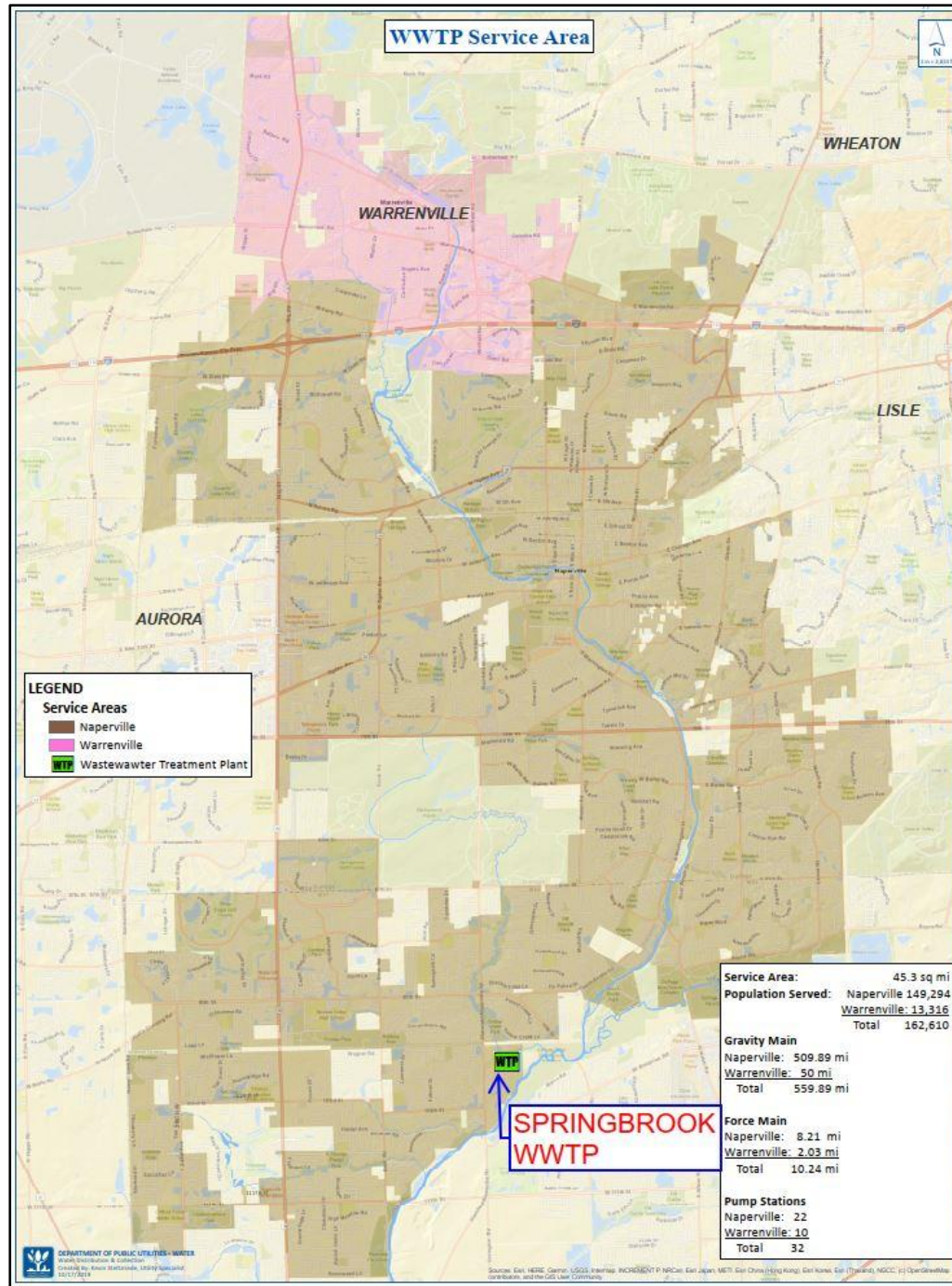
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# Development of the South Central Interceptor





# Naperville Sanitary Sewer System



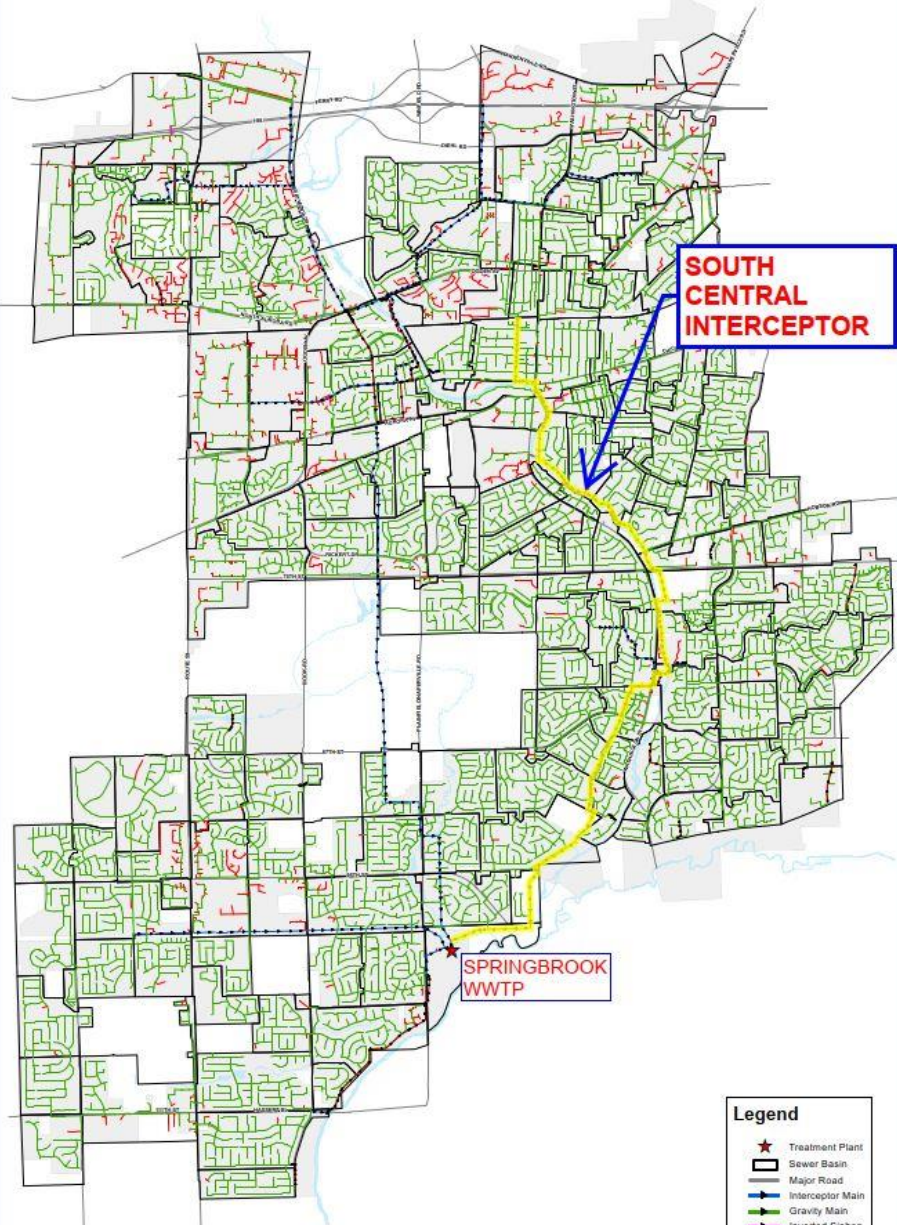
SPRINGBROOK  
WWTP

- Legend**
- ★ Treatment Plant
  - ▭ Sewer Basin
  - ▬ Major Road
  - ▬ Interceptor Main
  - ▬ Gravity Main
  - ▬ Inverted Siphon
  - ▬ Force Main
  - ▬ Private Main





# Naperville Sanitary Sewer System



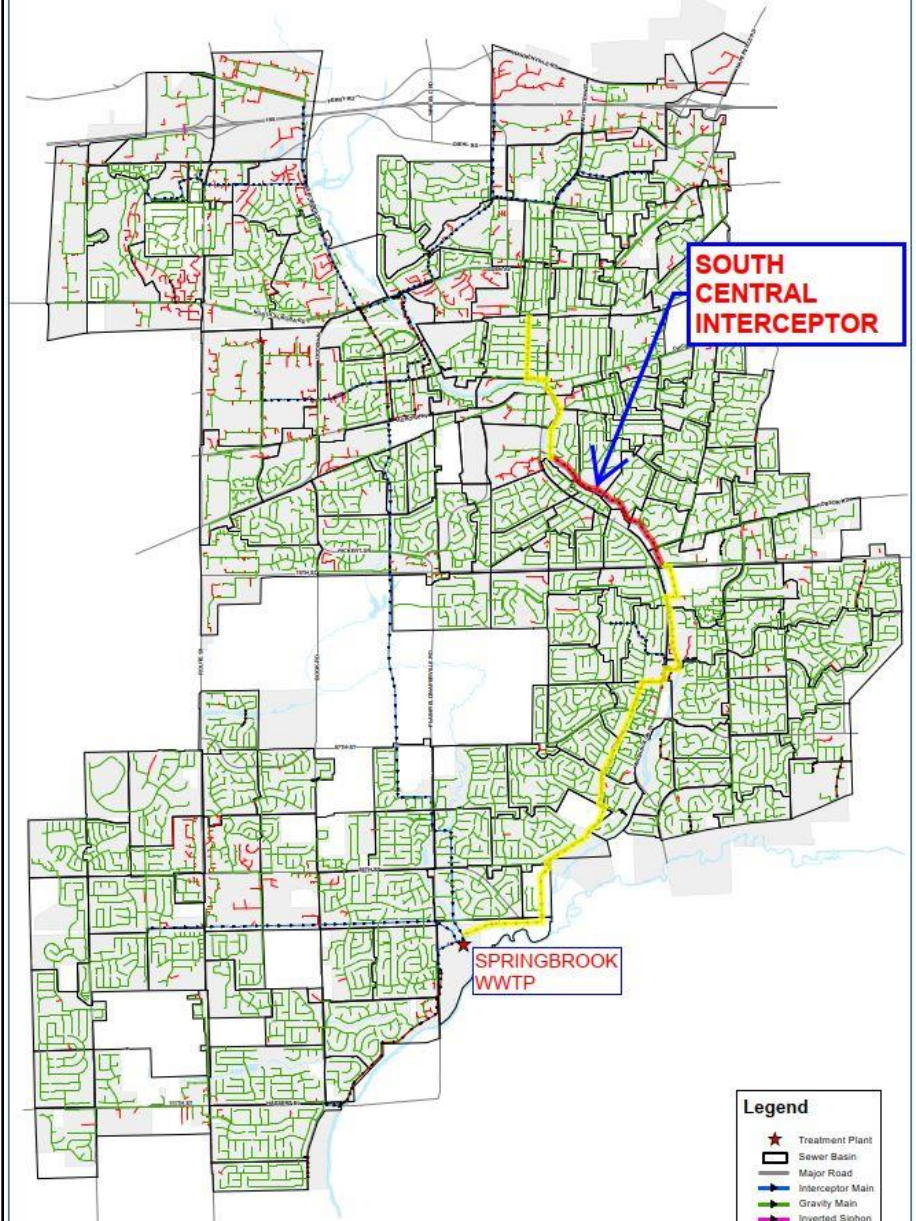
**SOUTH  
CENTRAL  
INTERCEPTOR**

**SPRINGBROOK  
WWTP**

- Legend**
- ★ Treatment Plant
  - Sewer Basin
  - Major Road
  - Interceptor Main
  - Gravity Main
  - Inverted Siphon
  - Force Main
  - Private Main

DEPARTMENT OF PUBLIC UTILITIES - 80024  
Water Distribution & Collection  
Created by Strand Associates, Inc. 05/12/2014

# Naperville Sanitary Sewer System



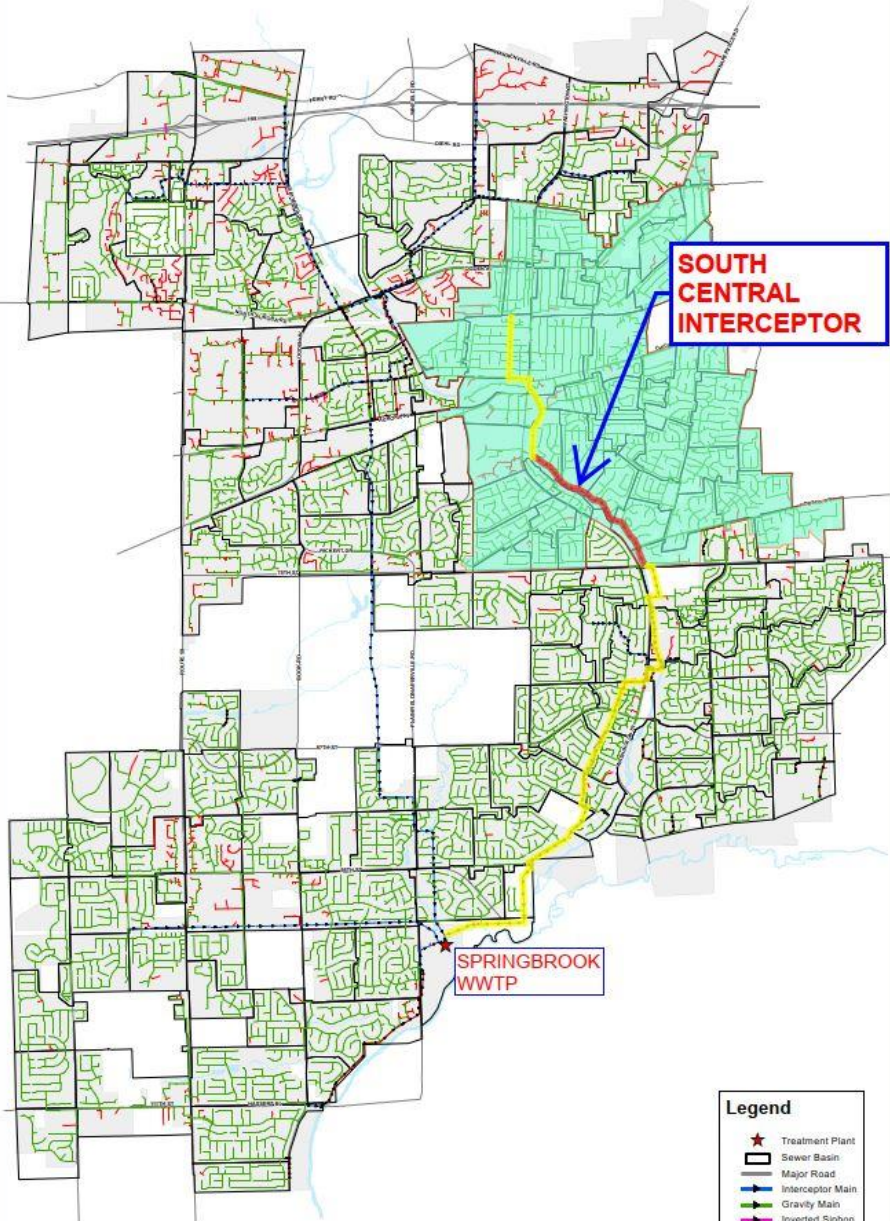
**SOUTH  
CENTRAL  
INTERCEPTOR**

**SPRINGBROOK  
WWTP**

- Legend**
- ★ Treatment Plant
  - ▭ Sewer Basin
  - ▬ Major Road
  - ▬ Interceptor Main
  - ▬ Gravity Main
  - ▬ Inverted Siphon
  - ▬ Force Main
  - ▬ Private Main



# Naperville Sanitary Sewer System

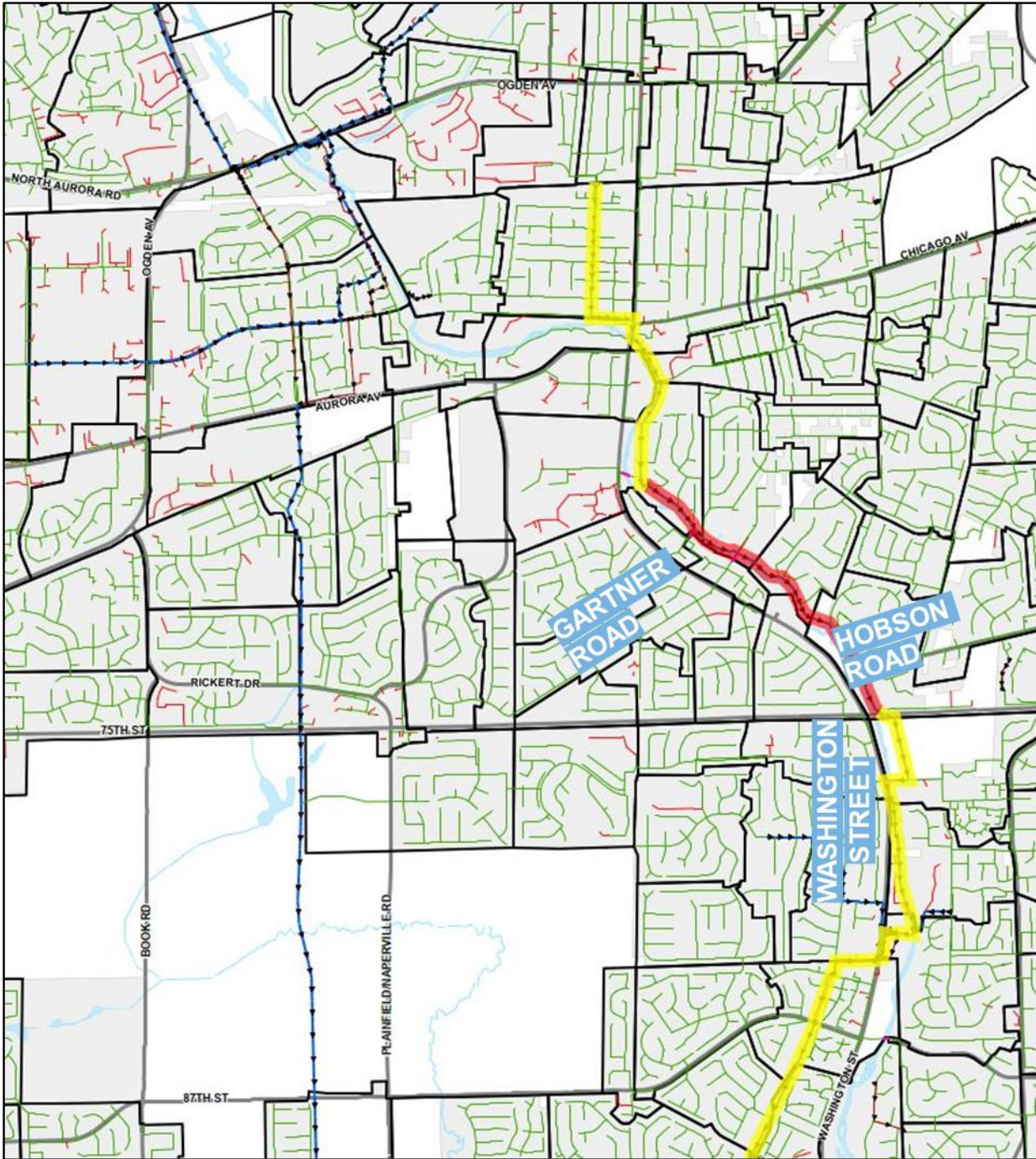


**SOUTH  
CENTRAL  
INTERCEPTOR**

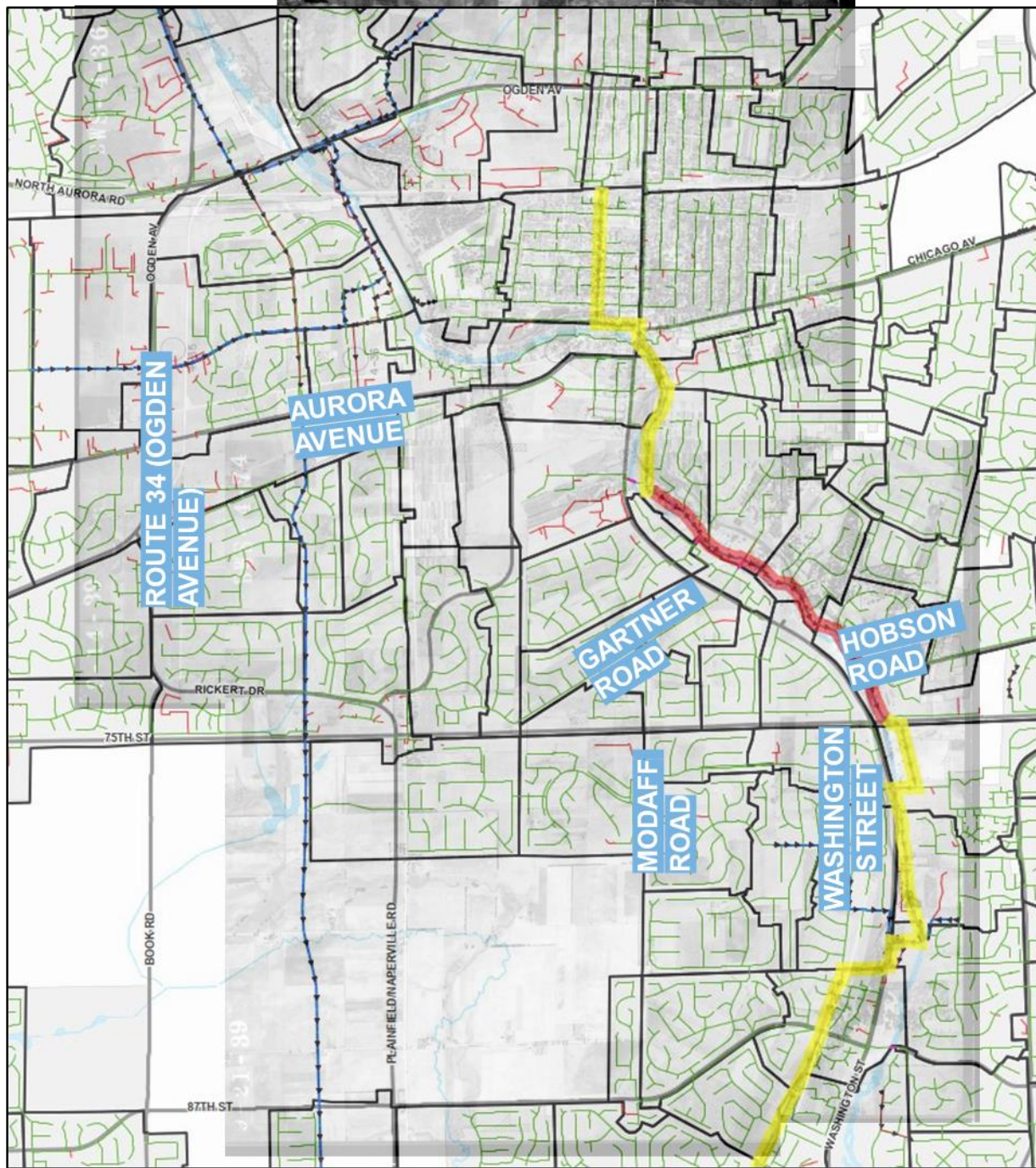
**SPRINGBROOK  
WWTP**

- Legend**
- ★ Treatment Plant
  - Sewer Basin
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  - Force Main
  - Private Main

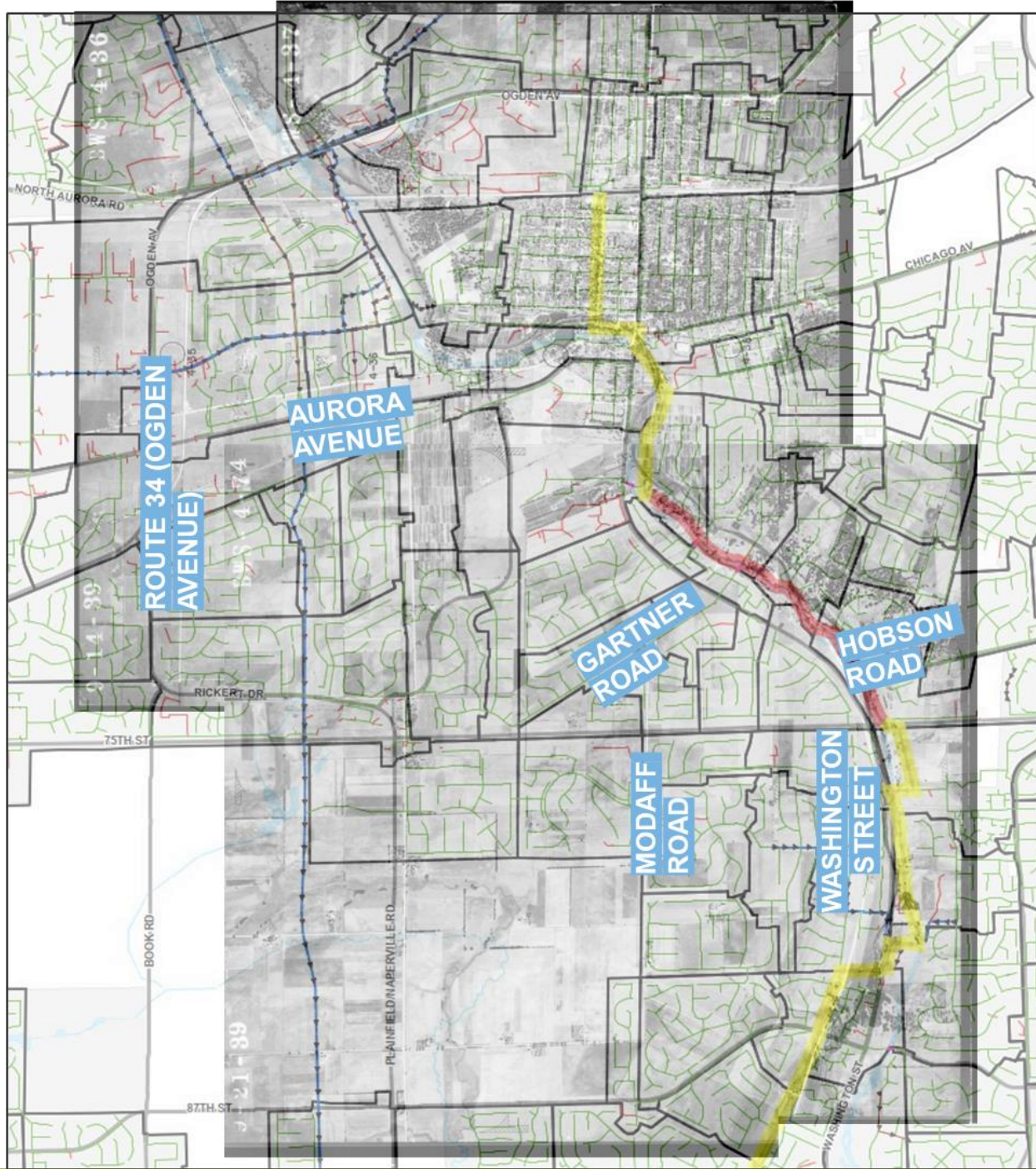




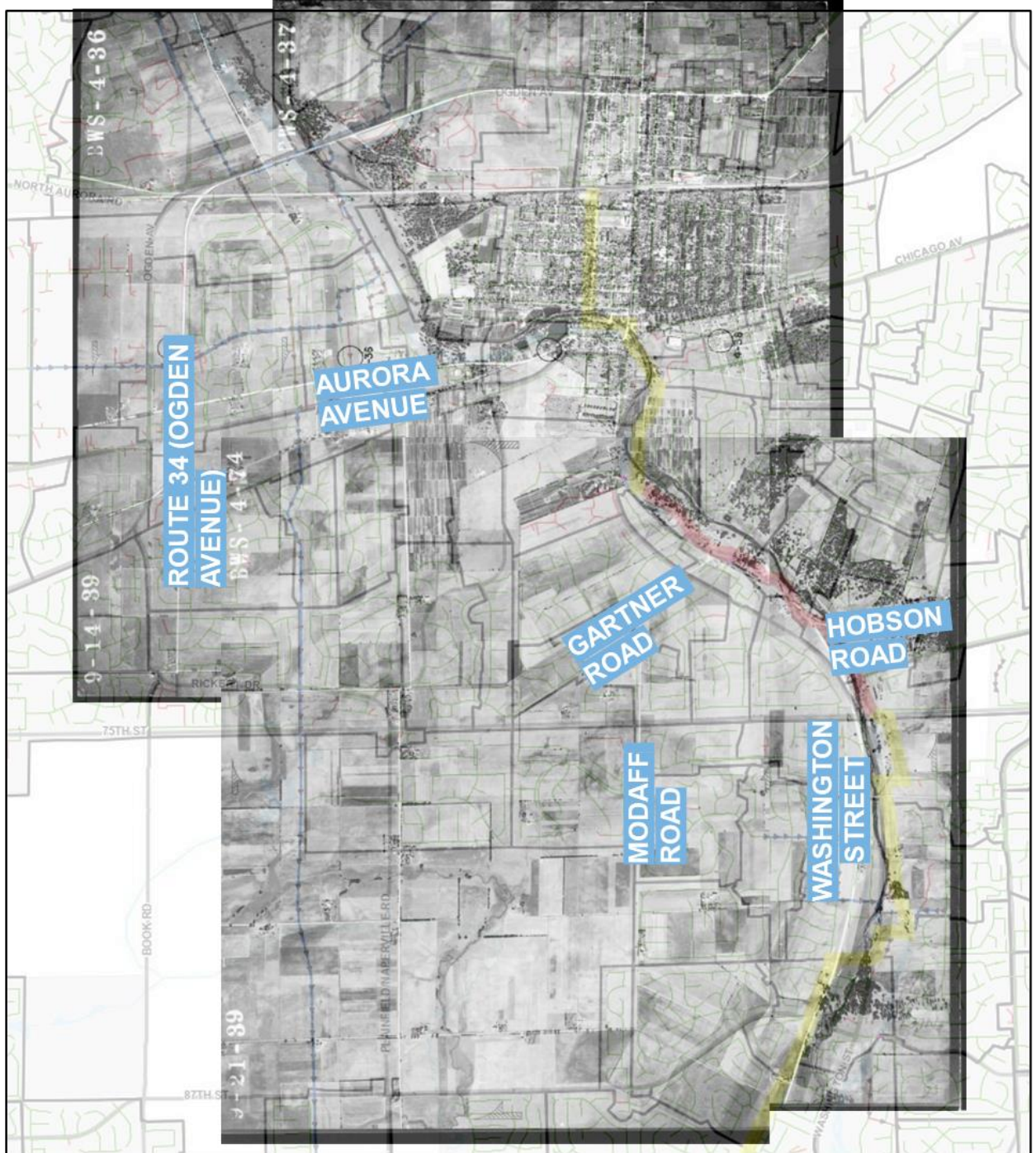




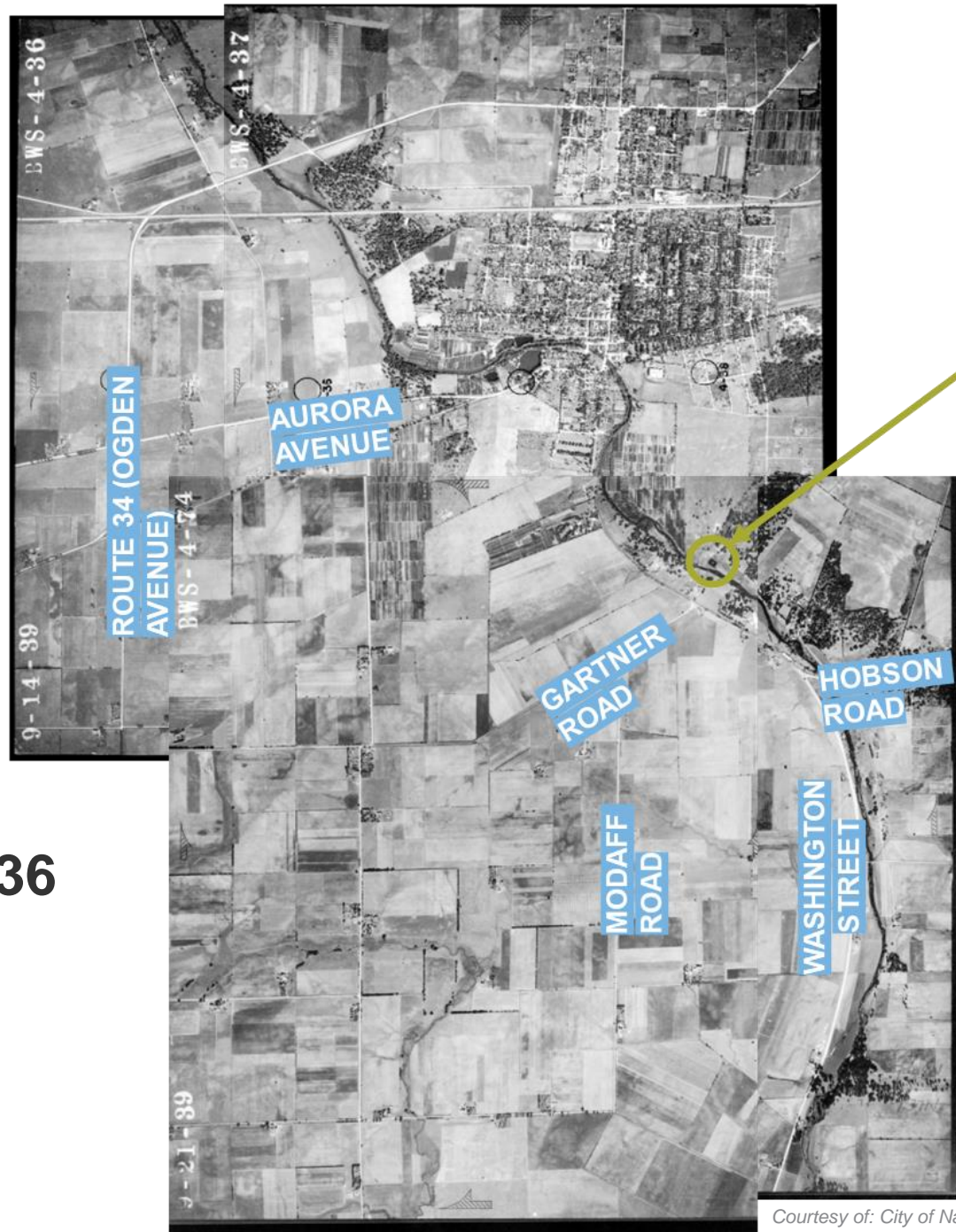








# Naperville circa 1936 Population 5,200



Central Sewage  
Treatment  
Plant



Central Sewage Treatment Plant

# INTERCEPTOR SANITARY SEWER WASHINGTON STREET AT BLUEBIRD LANE TO CENTRAL SEWAGE TREATMENT PLANT

NAPERVILLE, ILLINOIS

CITY OF NAPERVILLE

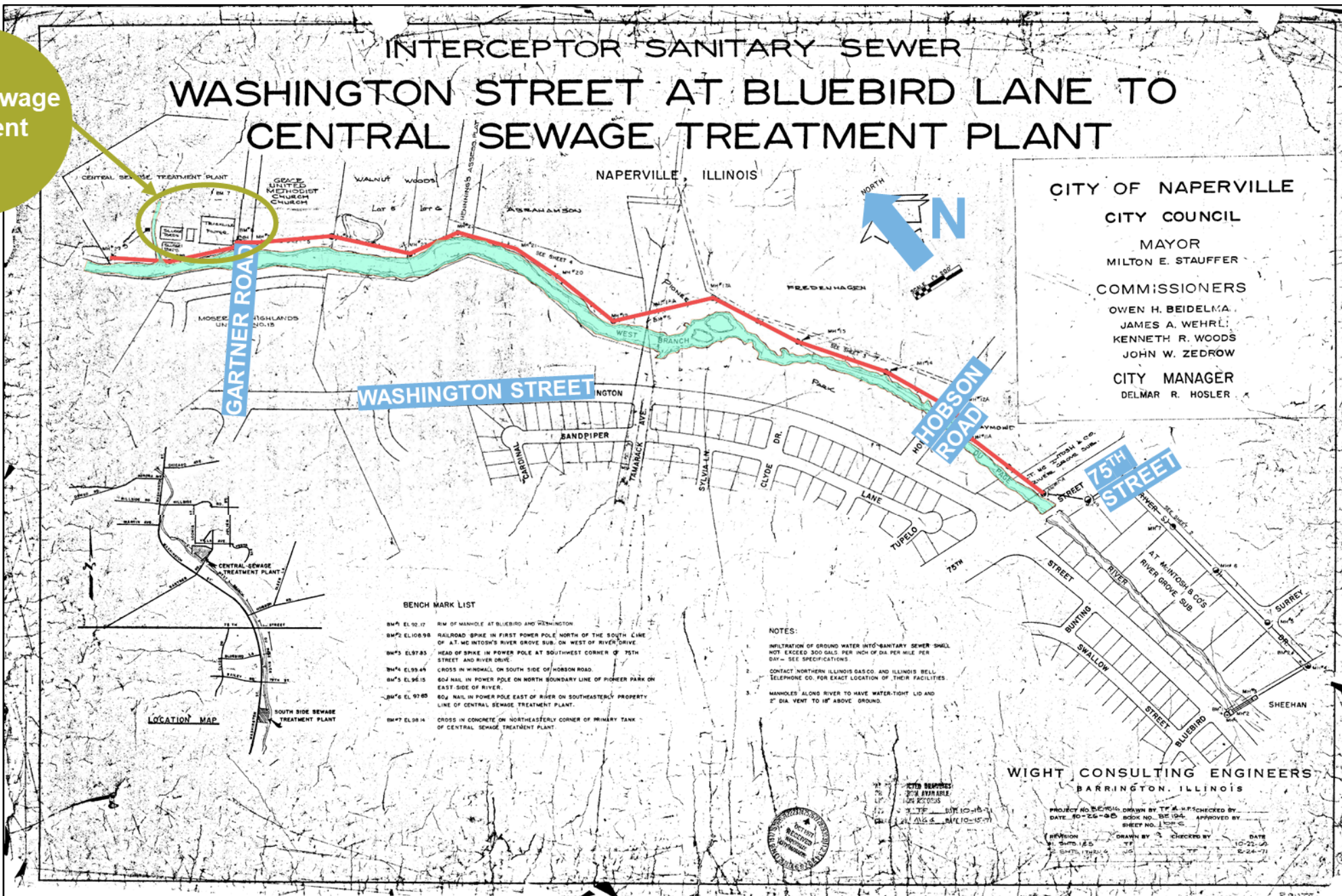
CITY COUNCIL

MAYOR  
MILTON E. STAUFFER

COMMISSIONERS

OWEN H. BEIDELMA  
JAMES A. WEHRLI  
KENNETH R. WOODS  
JOHN W. ZEDROW

CITY MANAGER  
DELMAR R. HOSLER



**BENCH MARK LIST**

- BM#1 EL 92.17 RW of MANHOLE at BLUEBIRD and WASHINGTON
- BM#2 EL 108.98 RAILROAD SPIKE IN FIRST POWER POLE NORTH of the SOUTH LINE of AT. MC INTOSH'S RIVER GROVE SUB. ON WEST of RIVER DRIVE
- BM#3 EL 97.83 HEAD of SPIKE IN POWER POLE at SOUTHWEST CORNER of 75th STREET and RIVER DRIVE
- BM#4 EL 99.44 CROSS IN WINDMILL ON SOUTH SIDE of HOBSON ROAD
- BM#5 EL 96.15 80# NAIL IN POWER POLE ON NORTH BOUNDARY LINE of PIONEER PARK ON EAST SIDE of RIVER
- BM#6 EL 97.85 80# NAIL IN POWER POLE EAST of RIVER ON SOUTHEASTLY PROPERTY LINE of CENTRAL SEWAGE TREATMENT PLANT
- BM#7 EL 98.14 CROSS IN CONCRETE on NORTHEASTLY CORNER of PRIMARY TANK of CENTRAL SEWAGE TREATMENT PLANT

**NOTES:**

1. INFILTRATION of GROUND WATER INTO SANITARY SEWER SHALL NOT EXCEED 300 GALS PER INCH of DIA PER MILE PER DAY - SEE SPECIFICATIONS
2. CONTACT NORTHERN ILLINOIS GAS CO and ILLINOIS BELL TELEPHONE CO. FOR EXACT LOCATION of THEIR FACILITIES
3. MANHOLES ALONG RIVER to HAVE WATER-TIGHT LID and 2" DIA VENT TO 18" ABOVE GROUND.

LOCATION MAP

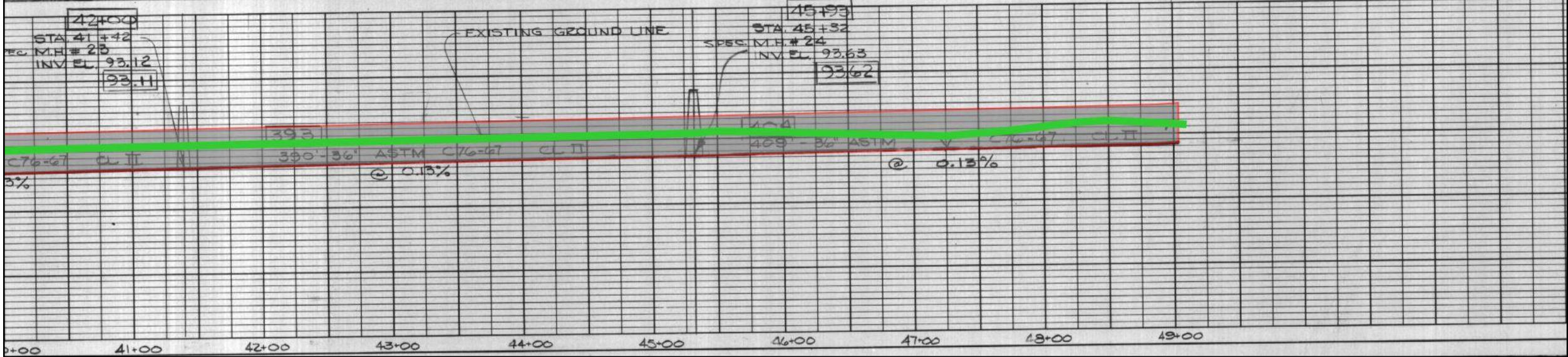
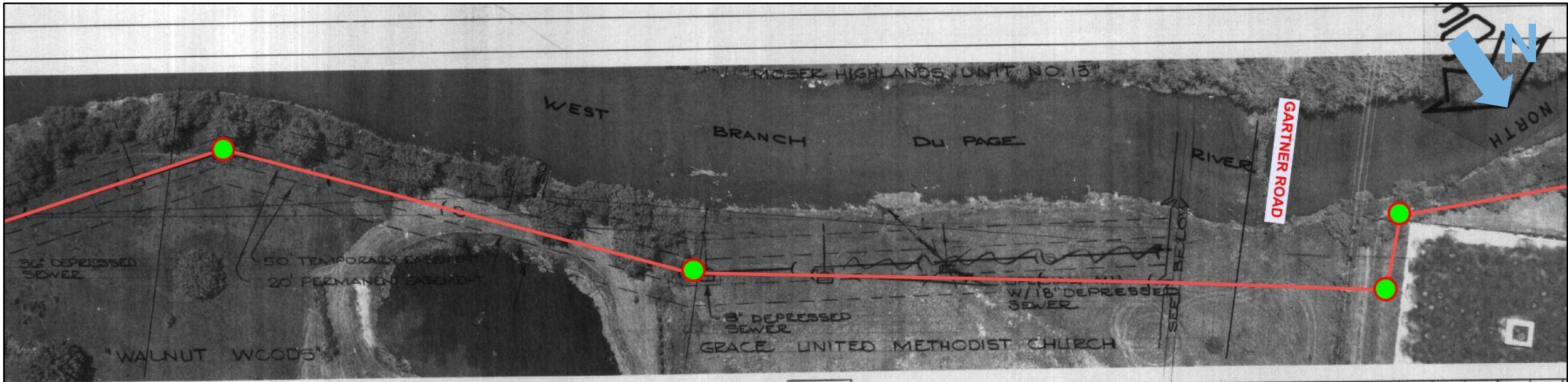
WIGHT CONSULTING ENGINEERS  
BARRINGTON, ILLINOIS

PROJECT NO. 85-110-01 DRAWN BY T.F. & H.F. CHECKED BY  
DATE 8-26-85 SHEET NO. 104 APPROVED BY

DRAWN BY T.F. CHECKED BY H.F. DATE 10-21-85







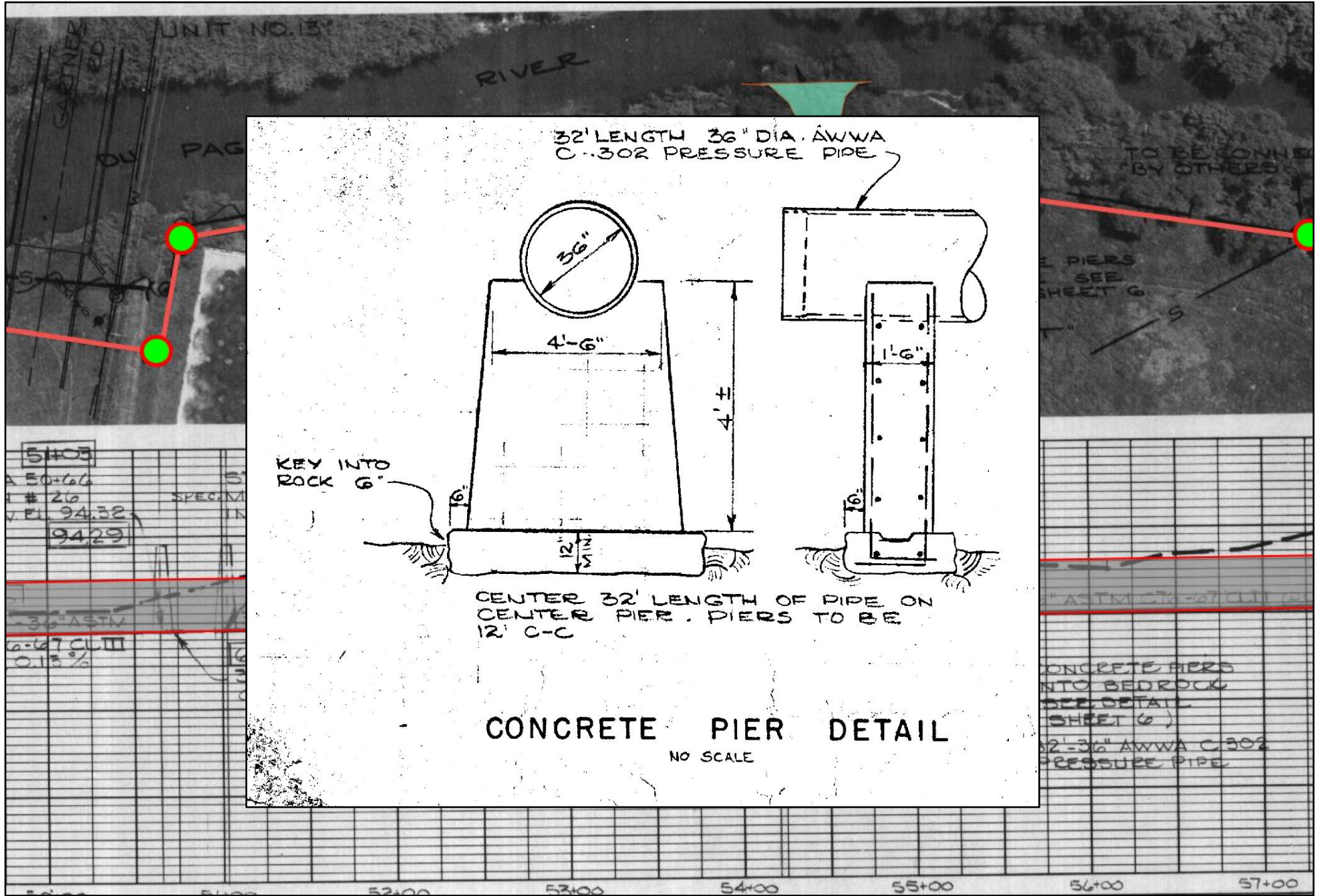












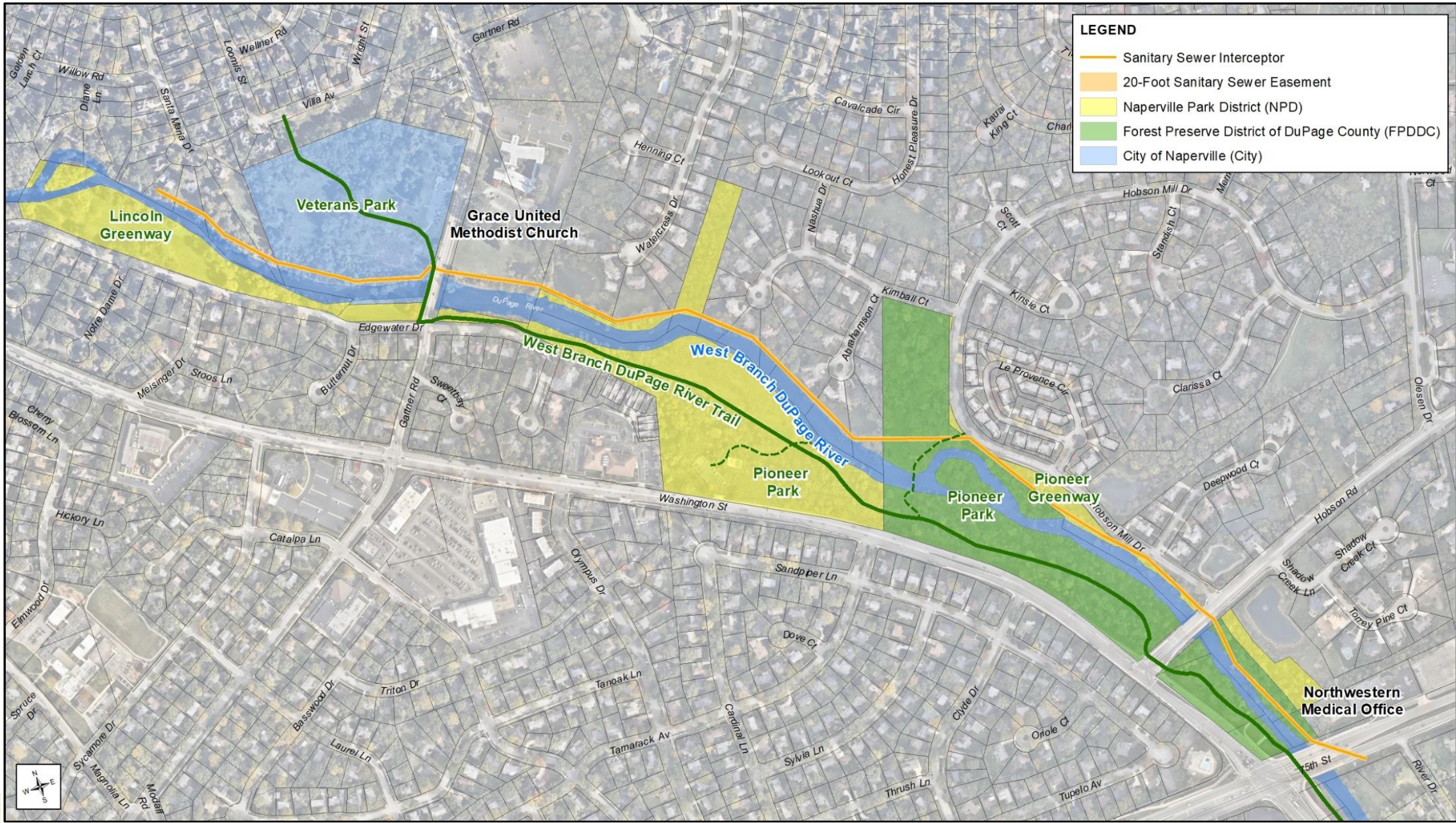






# The River Corridor Evaluation









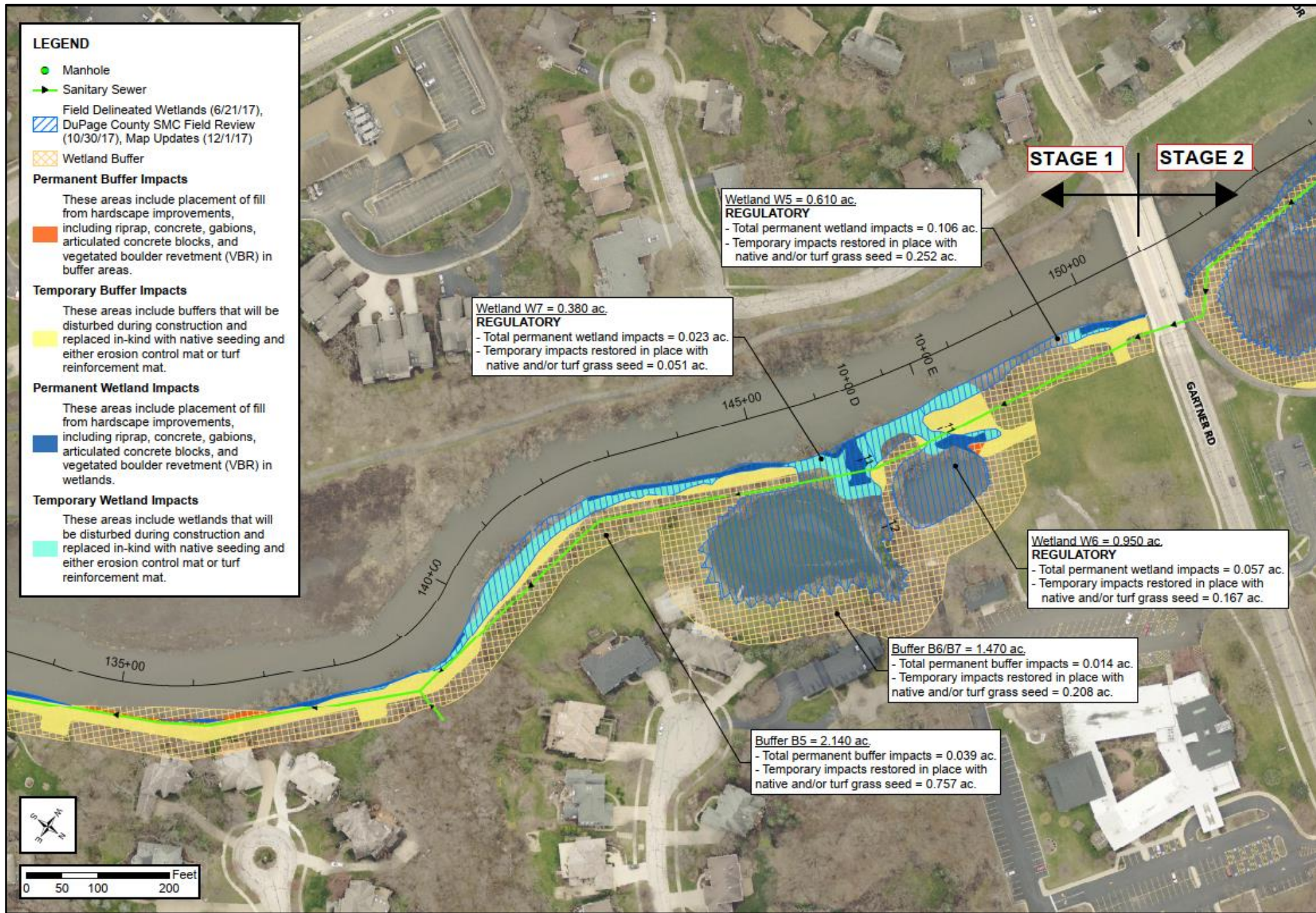
**LEGEND**

- Sanitary Sewer Interceptor
- 20-Foot Sanitary Sewer Easement
- Naperville Park District (NPD)
- Forest Preserve District of DuPage County (FPDDC)
- City of Naperville (City)



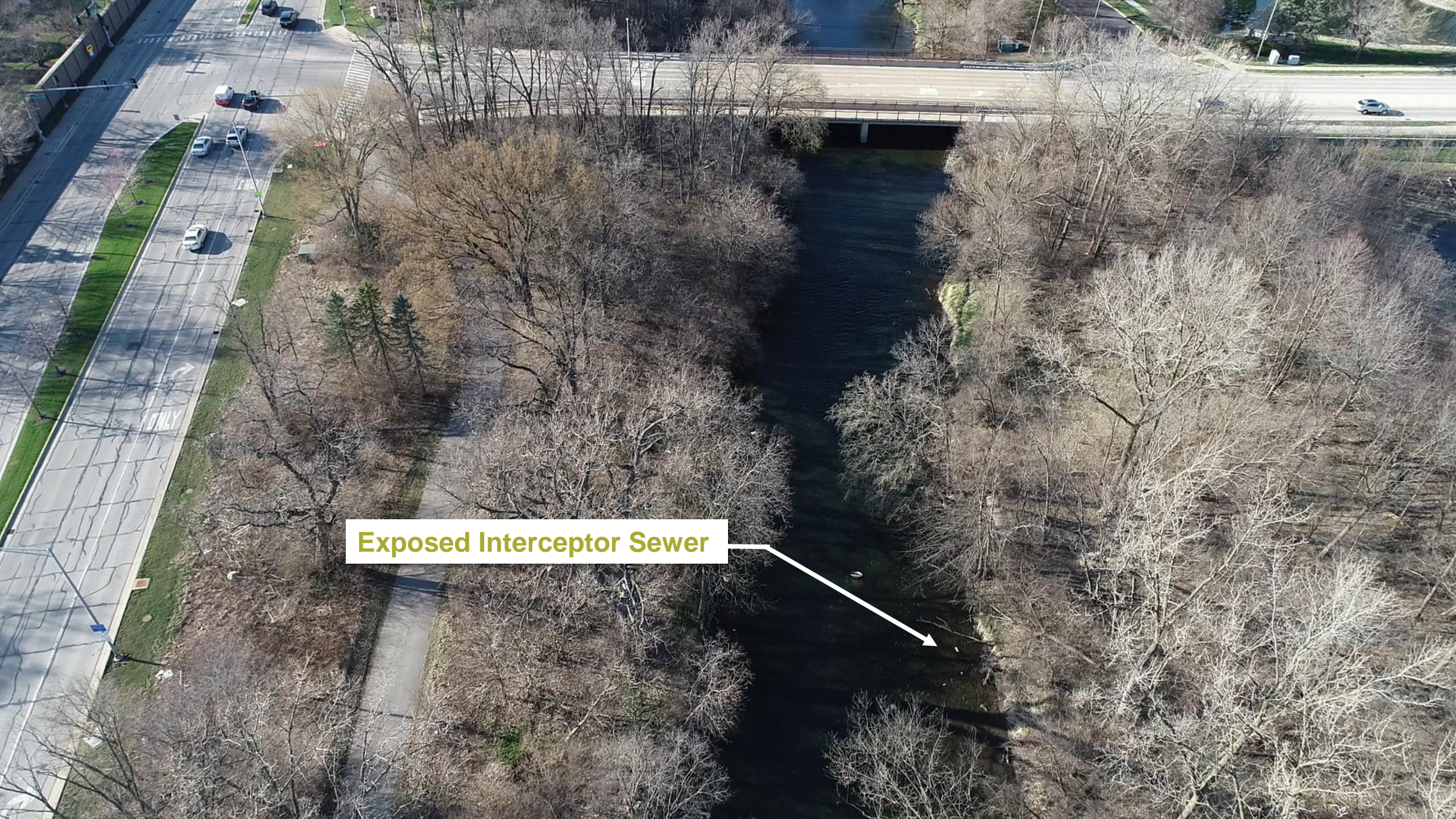
**LEGEND**

-  Manhole
  -  Sanitary Sewer
  -  Field Delineated Wetlands (6/21/17), DuPage County SMC Field Review (10/30/17), Map Updates (12/1/17)
  -  Wetland Buffer
- Permanent Buffer Impacts**
- These areas include placement of fill from hardscape improvements, including riprap, concrete, gabions, articulated concrete blocks, and vegetated boulder revetment (VBR) in buffer areas.
- Temporary Buffer Impacts**
- These areas include buffers that will be disturbed during construction and replaced in-kind with native seeding and either erosion control mat or turf reinforcement mat.
- Permanent Wetland Impacts**
- These areas include placement of fill from hardscape improvements, including riprap, concrete, gabions, articulated concrete blocks, and vegetated boulder revetment (VBR) in wetlands.
- Temporary Wetland Impacts**
- These areas include wetlands that will be disturbed during construction and replaced in-kind with native seeding and either erosion control mat or turf reinforcement mat.





**Exposed Interceptor Sewer**







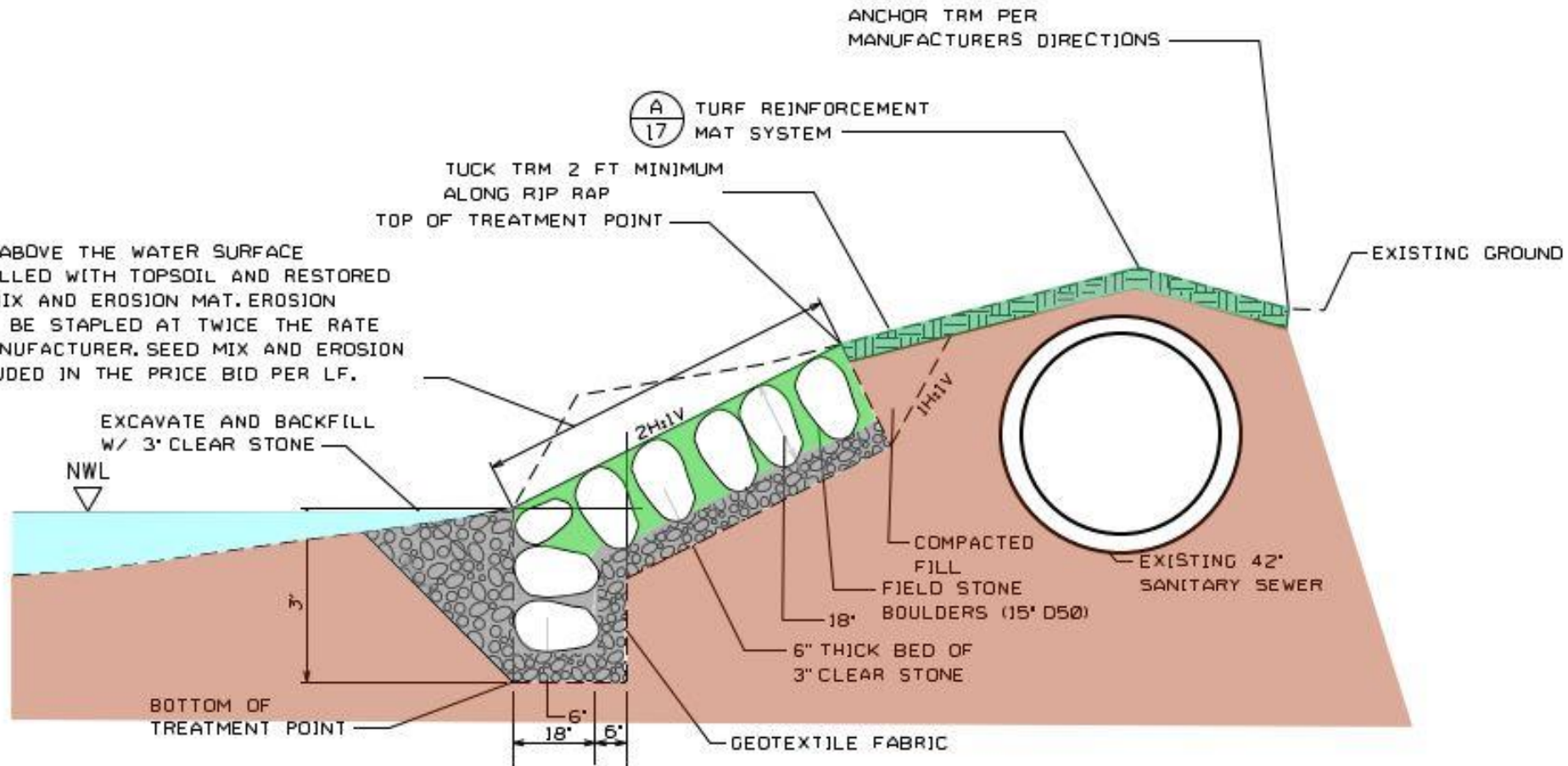




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VOIDS IN BOULDERS ABOVE THE WATER SURFACE ELEVATION TO BE FILLED WITH TOPSOIL AND RESTORED WITH NATIVE SEED MIX AND EROSION MAT. EROSION CONTROL MAT SHALL BE STAPLED AT TWICE THE RATE RECOMMENDED BY MANUFACTURER. SEED MIX AND EROSION MAT SHALL BE INCLUDED IN THE PRICE BID PER LF.



NOTE: CLEAR TRESS 10-FT EAST OF CENTERLINE INTERCEPTOR.

**A**  
16 VEGETATED BOULDER REVETMENT

SCALE: 1"=4'



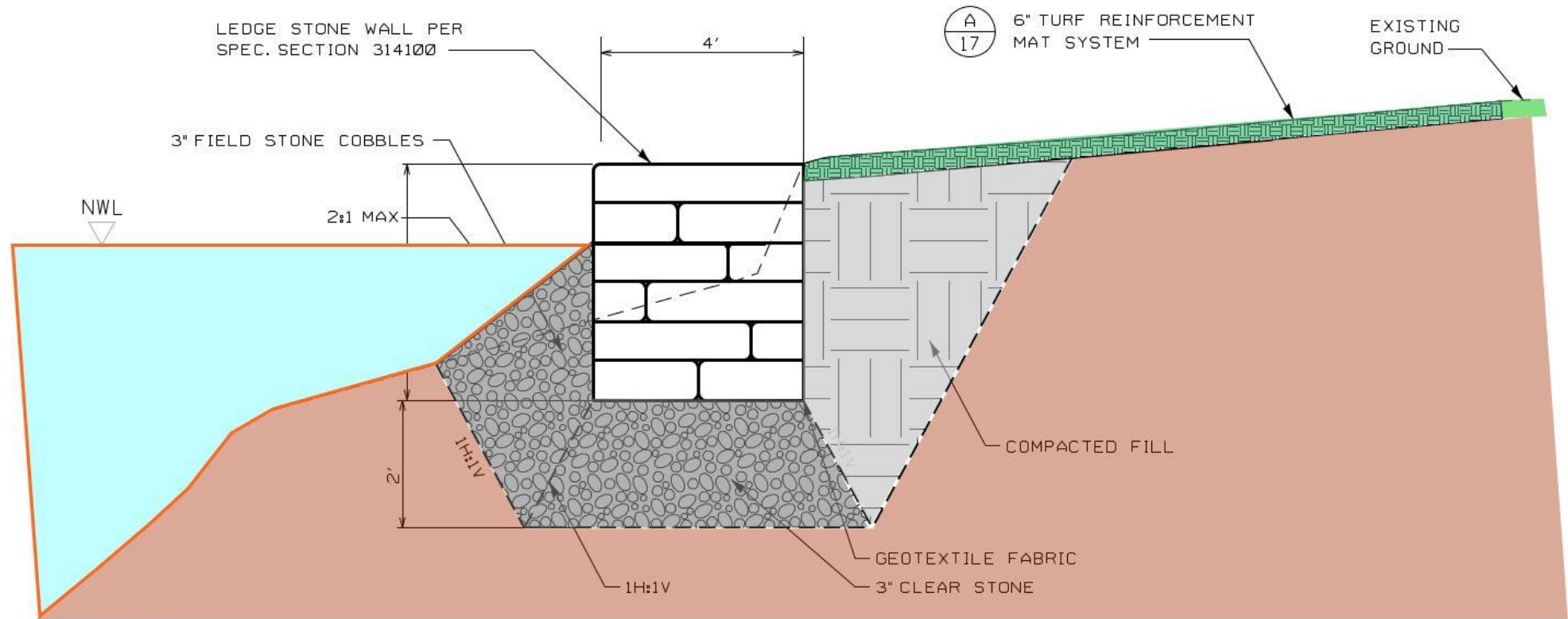


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C  
15

**LEDGE STONE WALL W/ COBBLES**

SCALE: 1"=4'

(STA. 129+45 - 134+45)



# The Interceptor Evaluation









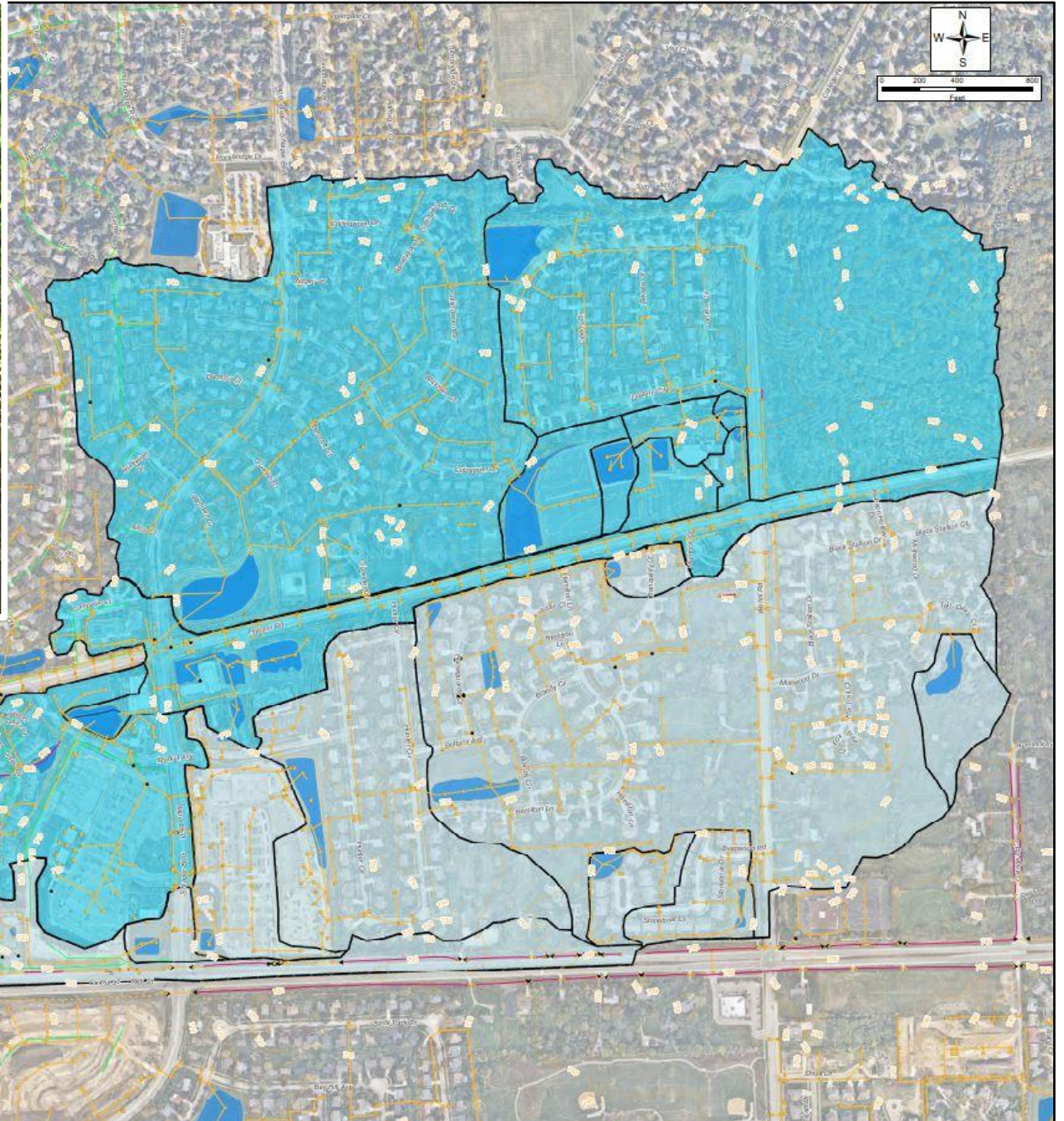




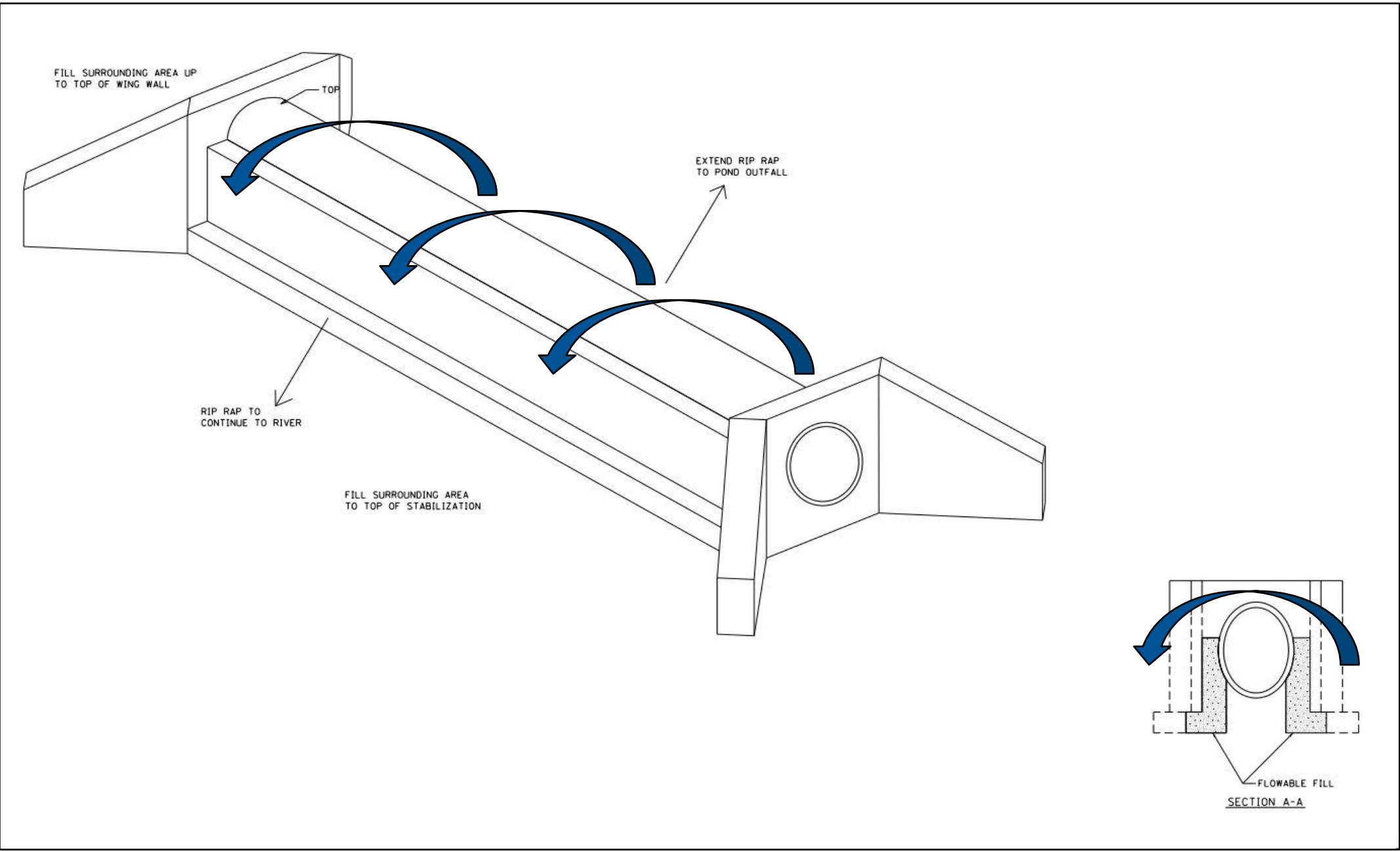
















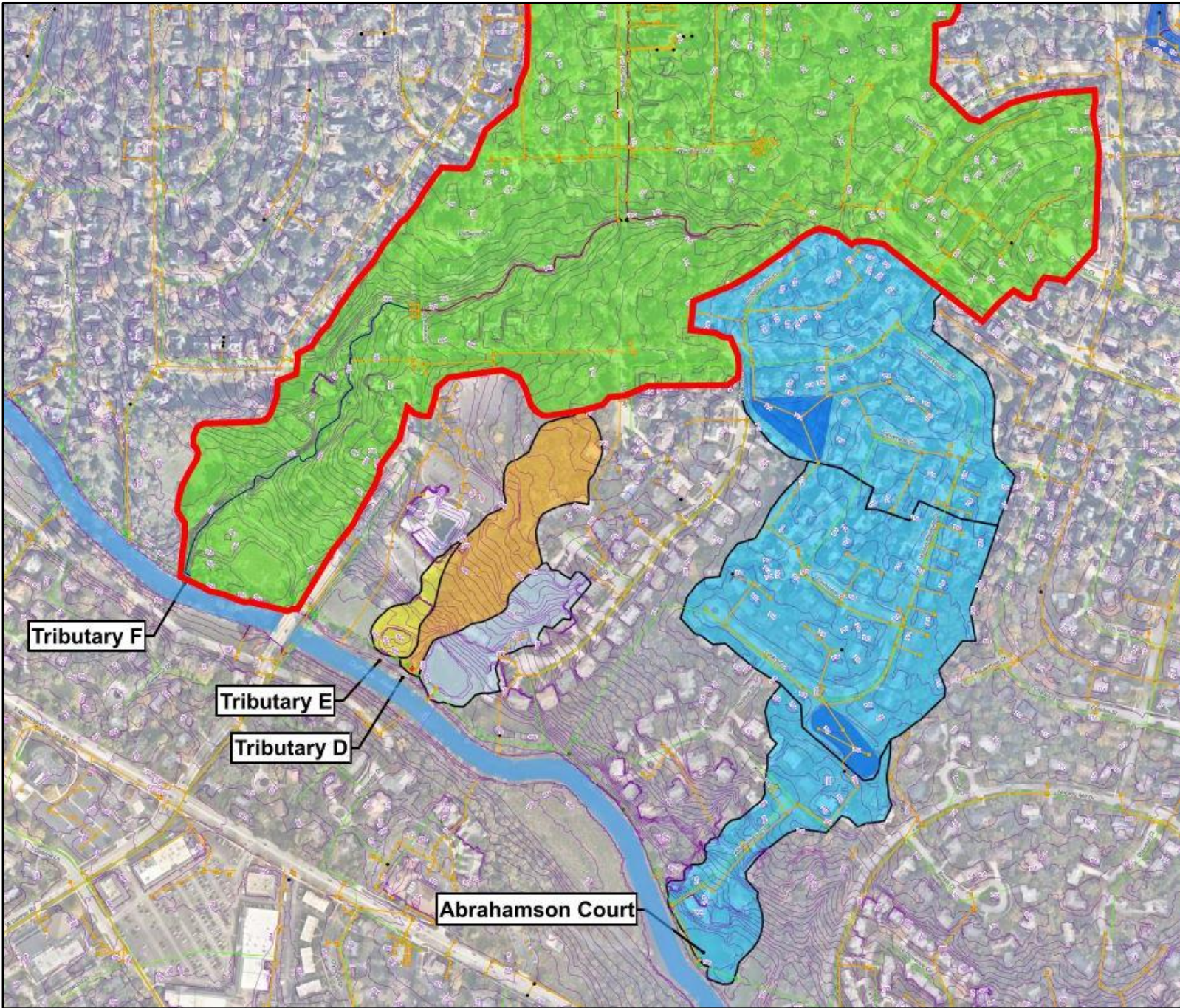
**LEGEND**

- Sanitary Sewer Interceptor
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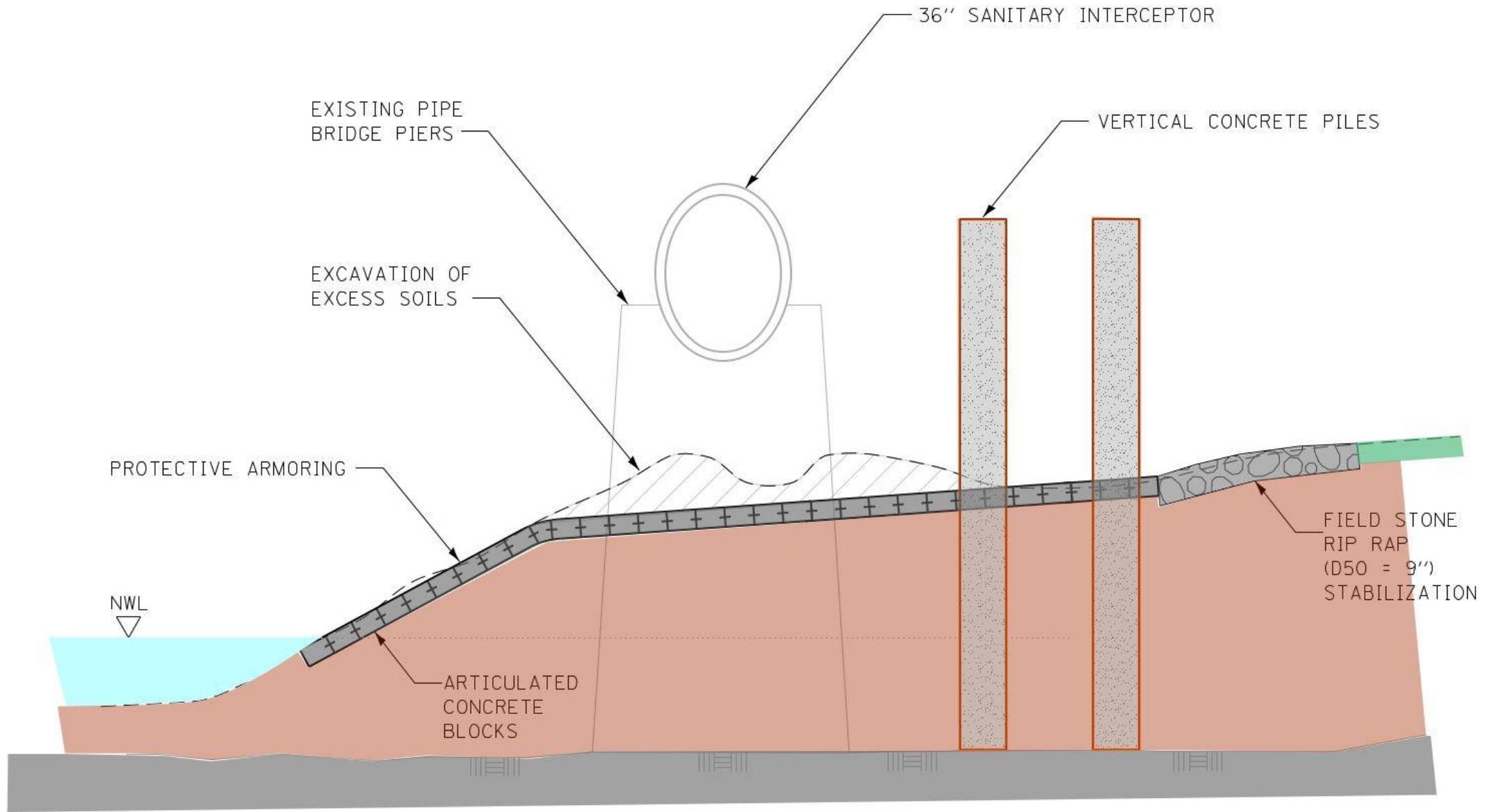














# Construction Stage 1



















# Pipe Dam









































# Vegetated Boulder Revetment







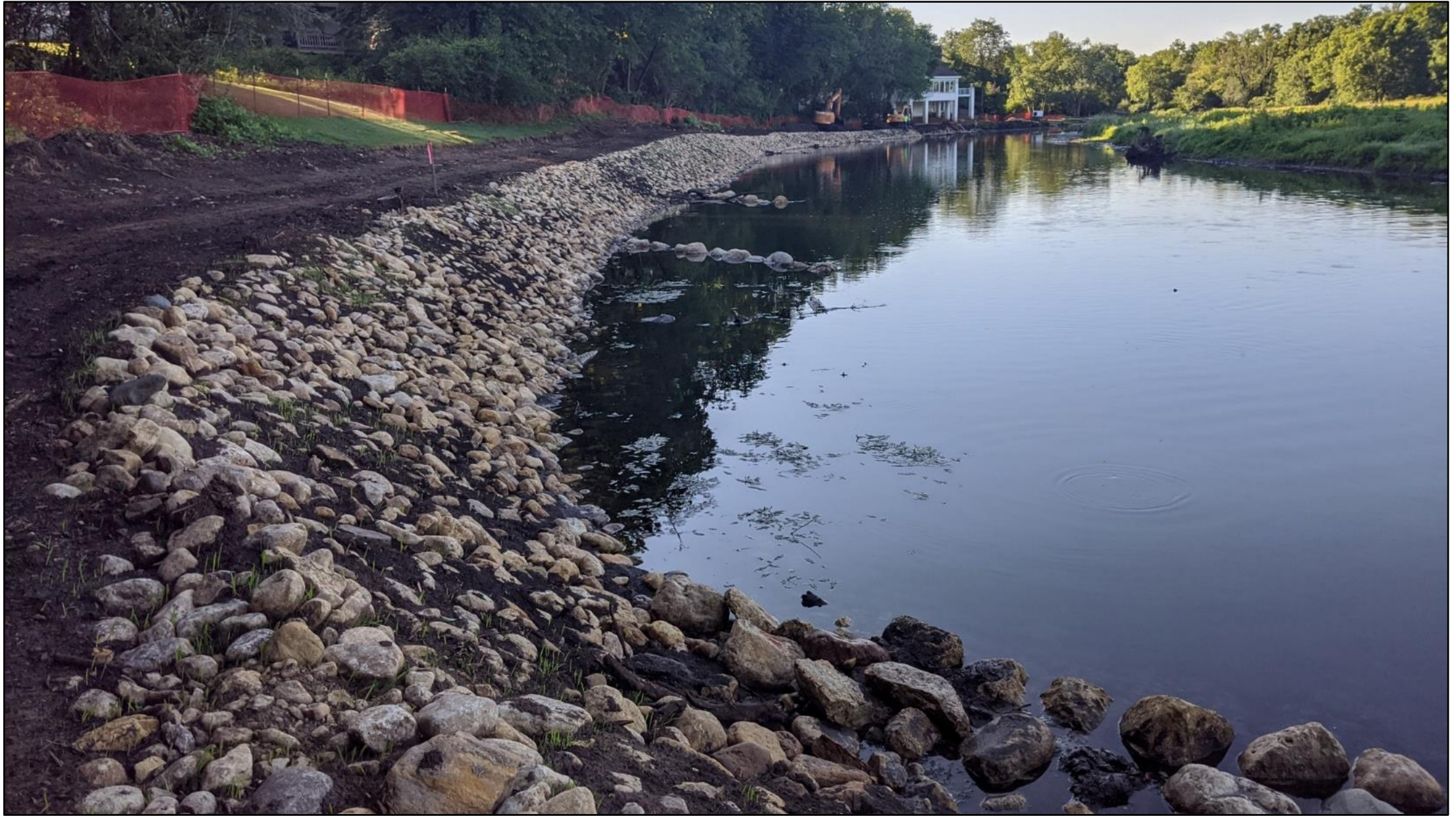


















































# Ledge Stone Wall





























































# Local Storm Sewer













# Tree Removal and Fish Habitat





































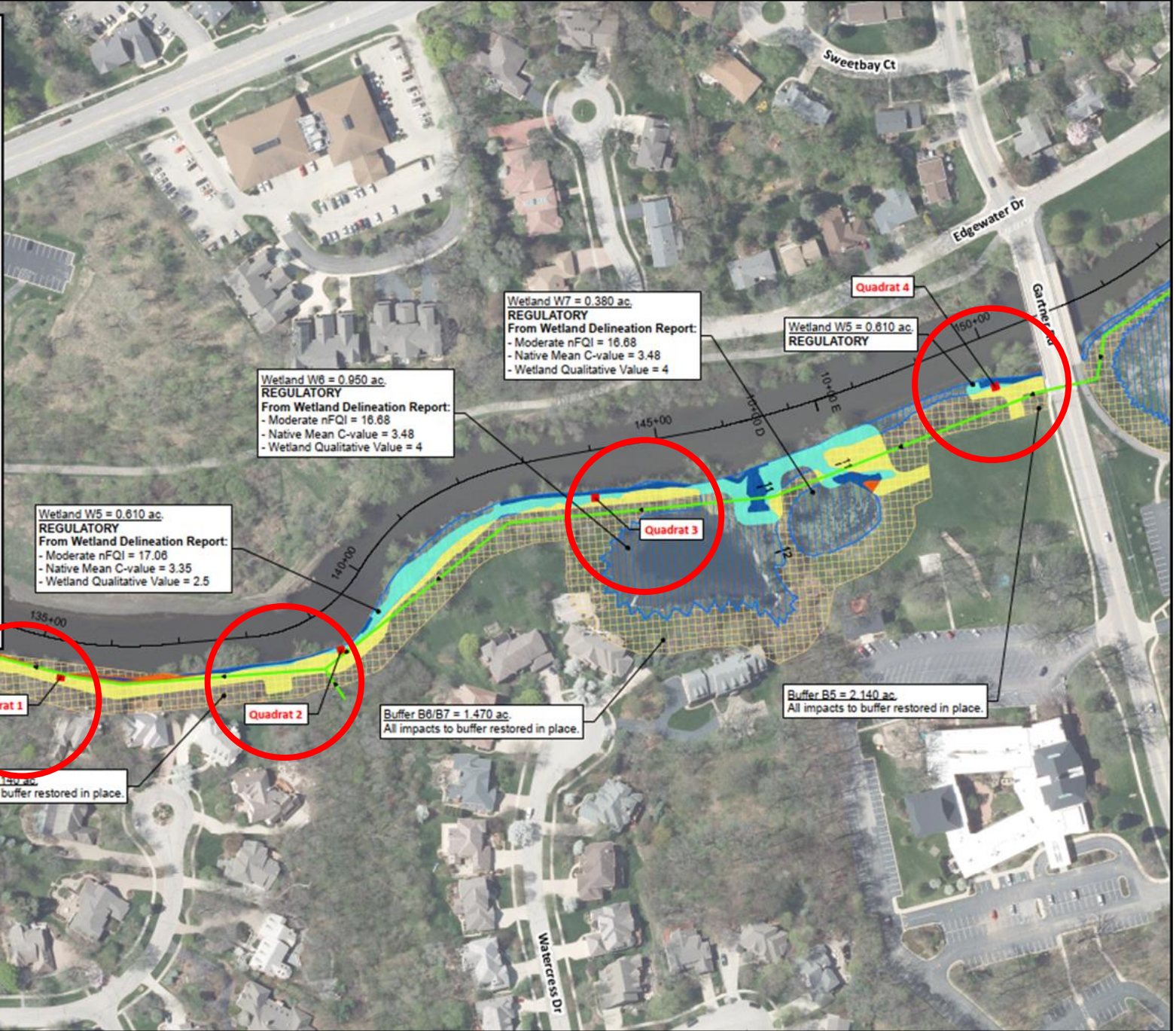
# Bonus: Stage 1 Restoration Maintenance and Monitoring



**LEGEND**

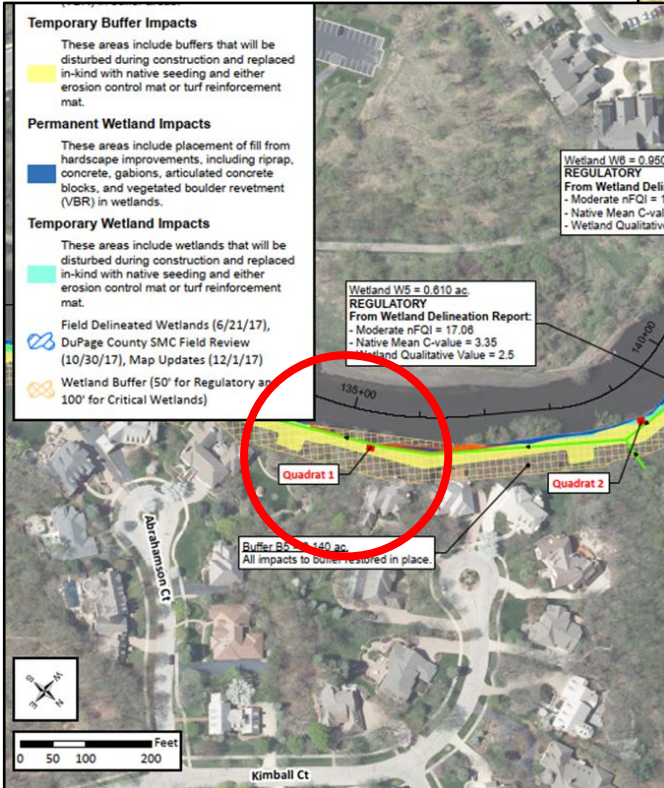
- Sanitary Sewer
- Approximate 10' x 10' Quadrat Location (Field Review 10/14/21)
- Permanent Buffer Impacts**  
These areas include placement of fill from hardscape improvements, including riprap, concrete, gabions, articulated concrete blocks, and vegetated boulder revetment (VBR) in buffer areas.
- Temporary Buffer Impacts**  
These areas include buffers that will be disturbed during construction and replaced in-kind with native seeding and either erosion control mat or turf reinforcement mat.
- Permanent Wetland Impacts**  
These areas include placement of fill from hardscape improvements, including riprap, concrete, gabions, articulated concrete blocks, and vegetated boulder revetment (VBR) in wetlands.
- Temporary Wetland Impacts**  
These areas include wetlands that will be disturbed during construction and replaced in-kind with native seeding and either erosion control mat or turf reinforcement mat.
- Field Delineated Wetlands (6/21/17), DuPage County SMC Field Review (10/30/17), Map Updates (12/1/17)
- Wetland Buffer (50' for Regulatory and 100' for Critical Wetlands)

0 50 100 200 Feet



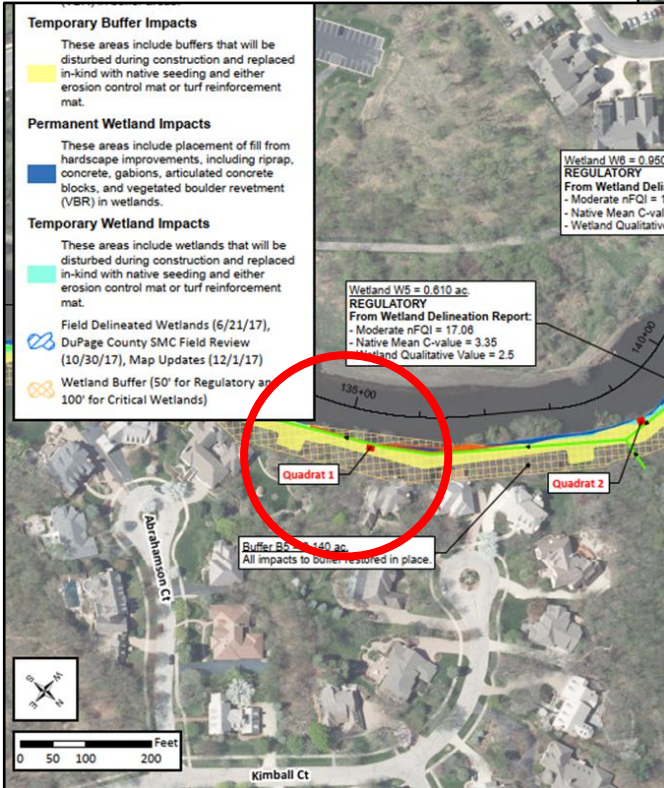


# Quadrat 1



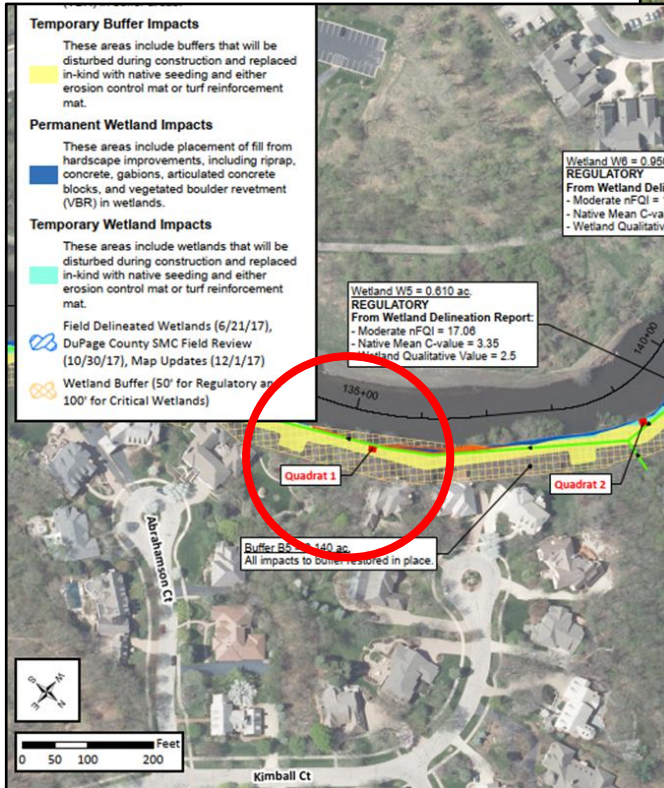


# Quadrat 1



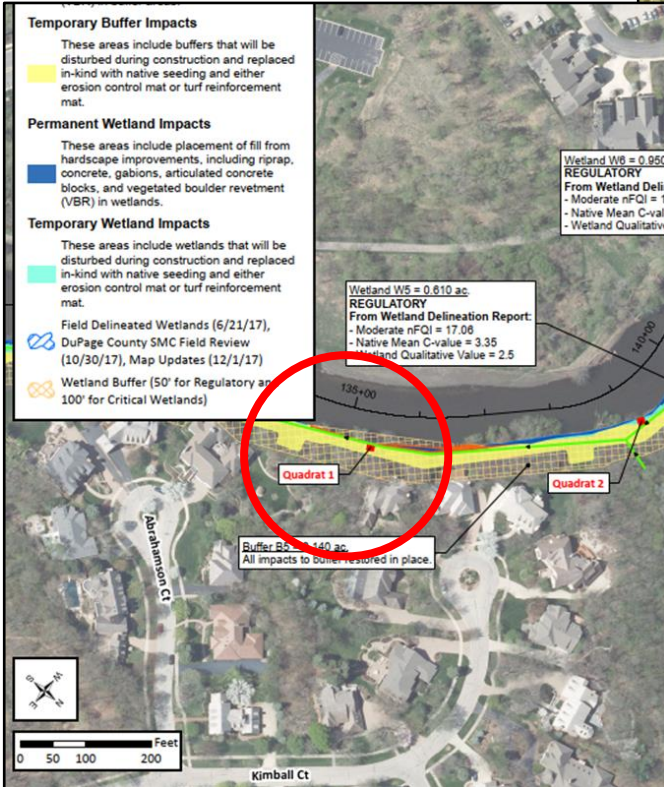


# Quadrat 1



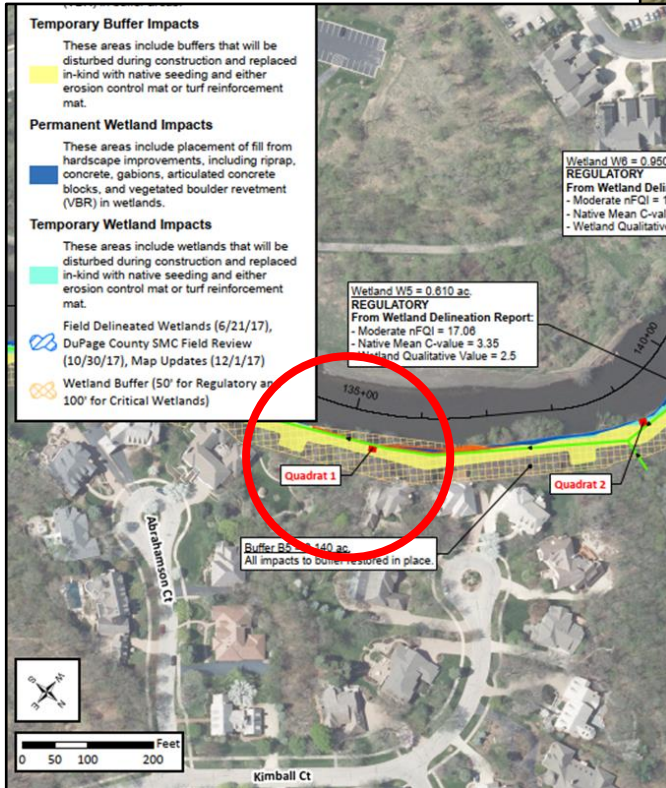


# Quadrat 1





# Quadrat 1


















**Thank you!**



 **Kelsey Gattone, CFM**

 **(815) 744-4200**

 **kelsey.gattone@strand.com**

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