



# NATALIE CREEK FINAL DESIGN ENGINEERING PROJECT



- ▶ **Project Overview**
- ▶ **Design Improvements**
  - Flood Control Structure Sizes
  - Updated Inundation Maps
- ▶ **Coordination Effort**
  - Resident Coordination Effort
  - Associated Traffic Access/Detours
- ▶ **Village of Midlothian's Natalie Creek Trail Steering Committee**
- ▶ **Summary**



# NATALIE CREEK FINAL DESIGN PROJECT OVERVIEW



- ▶ **Project Limits:** North end of Central Park Detention Basin in Oak Forest to 146<sup>th</sup> Street & Pulaski Road in Midlothian, Roughly 15,800 lineal feet
- ▶ **Scope of Work:** To develop Bidding Plans and Documents for a 2017 “Letting” of the “Flood Control Project on Natalie Creek in Midlothian and Oak Forest, IL, Contract 14-252-3F
- ▶ **Current Status:** 98% Completion Plans and Documents will soon be submitted to the Village of Midlothian and the City of Oak Forest for Review and Comments. Draft Intergovernmental Agreements were already provided for review by both municipalities



# NATALIE CREEK FINAL DESIGN PROJECT OVERVIEW (CON'T)

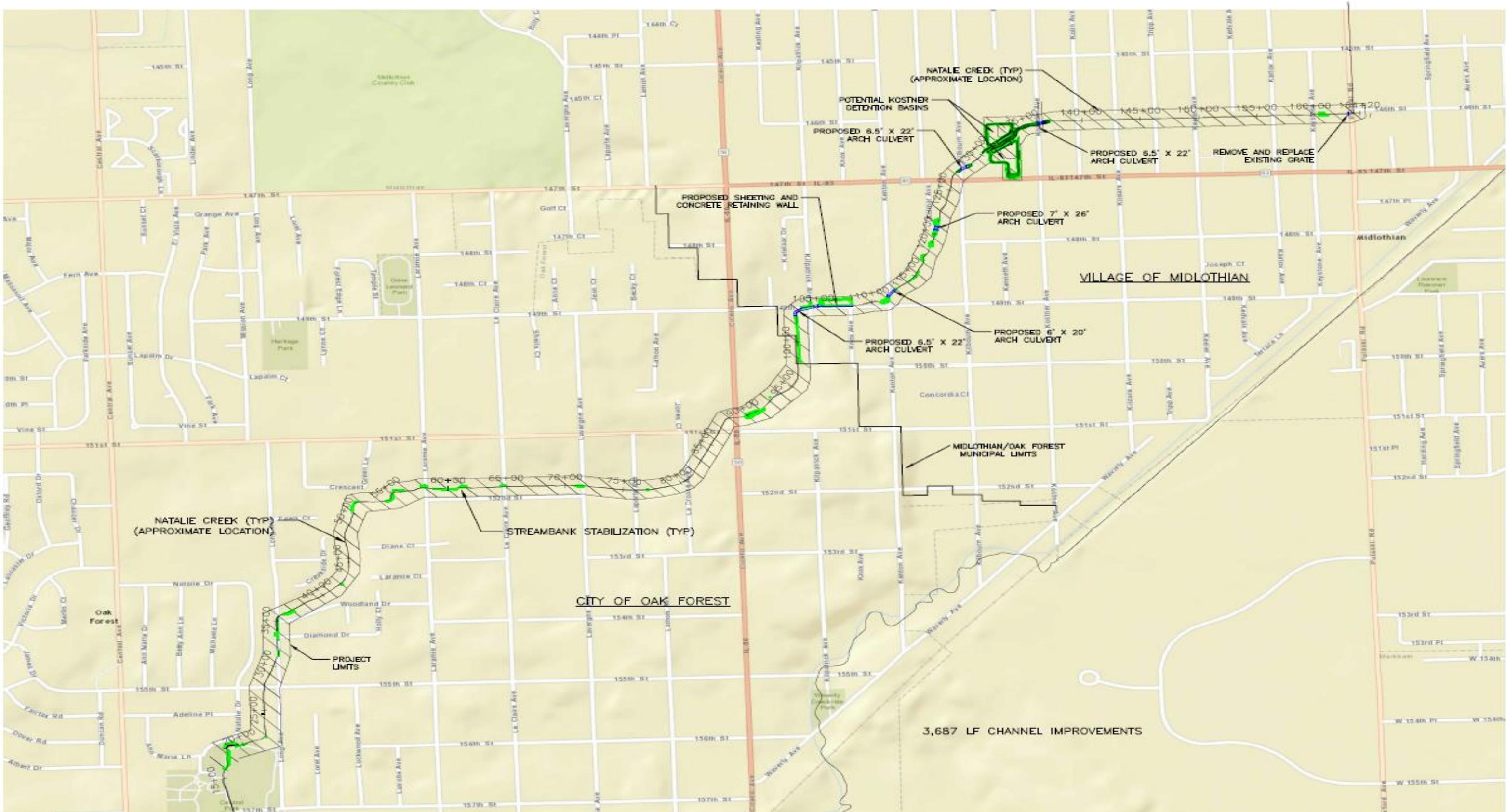


## ► Planned Construction Work

- **Oak Forest** – Misc. Channel Improvements, i.e. erosion control, channel widening or reshaping, etc., along the Creek, and Sediment Removal at Laporte & LaCrosse Avenues
- **Midlothian** – Installation of the following Flood Control Improvements:
  - ▶ Misc. Channel Improvements along the Creek
  - ▶ Concrete Channel Renovations and existing Detention Basin expansion at 149<sup>th</sup> Street & Kilpatrick
  - ▶ Upsizing of Culverts at 149<sup>th</sup> Street & Kilpatrick, Kenton, Kolmar, Kilbourn, & Kostner Avenues
  - ▶ New Detention Basin Facility in the vicinity of Kostner Avenue & 147<sup>th</sup> Street
  - ▶ 146<sup>th</sup> Street & Pulaski Road Conduit Outfall Grate Improvements
- **CONSTRUCTION ESTIMATE: \$8.3M (Current Working Estimate = \$7.9M)**



# NATALIE CREEK FINAL DESIGN PROJECT OVERVIEW (CON'T)



NOTE: CHANNEL IMPROVEMENTS MAY INCLUDE EROSION CONTROL BLANKET, VEGETATED GEOGRID, ROCK TOE AND COIR LOG, SEDIMENT REMOVAL, OR ANY COMBINATION THEREOF.

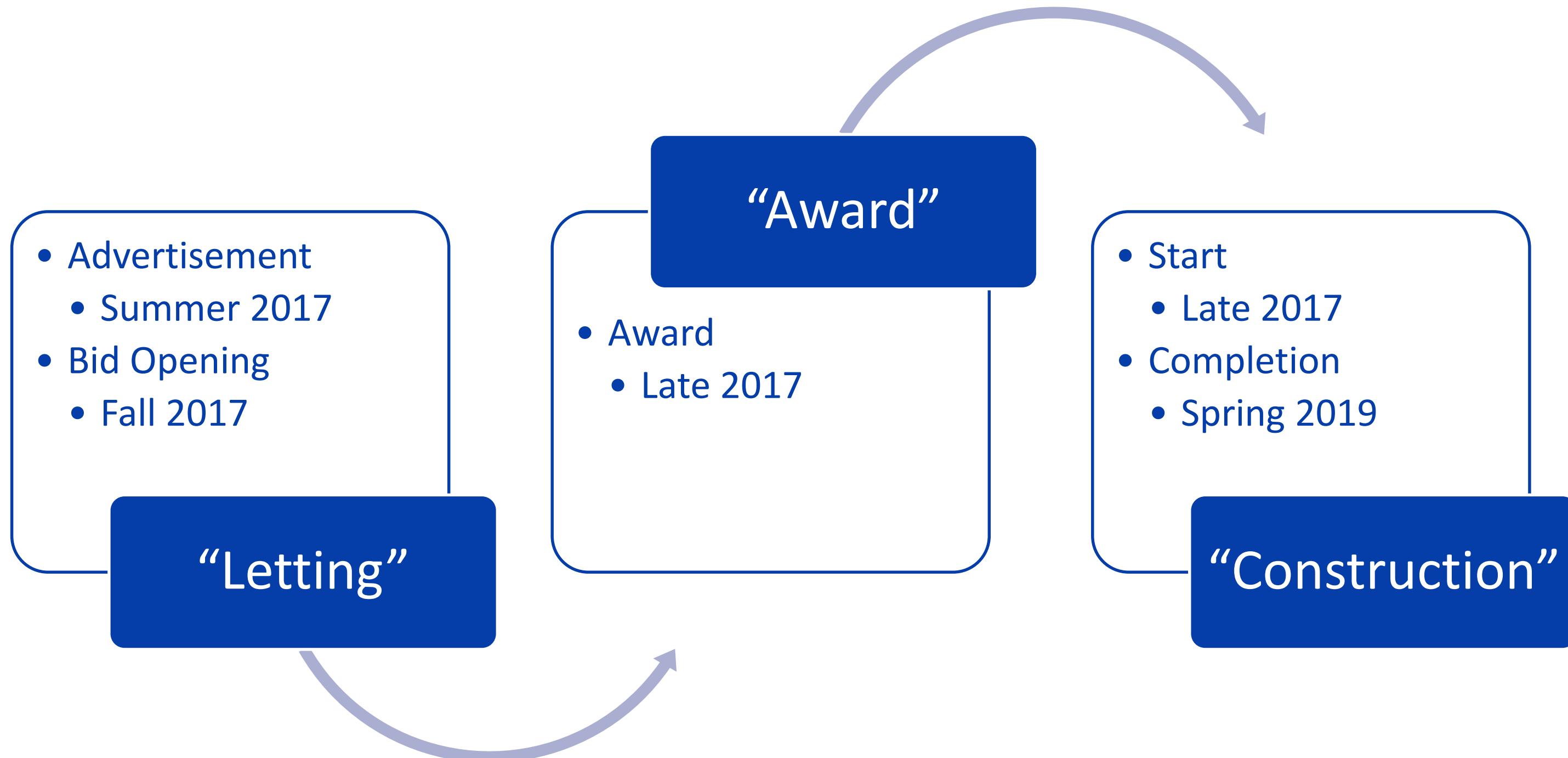
CHANNEL IMPROVEMENTS  
 STRUCTURAL IMPROVEMENTS



# NATALIE CREEK FINAL DESIGN PROJECT OVERVIEW (CON'T)



## Estimated “Letting”/Construction Schedule

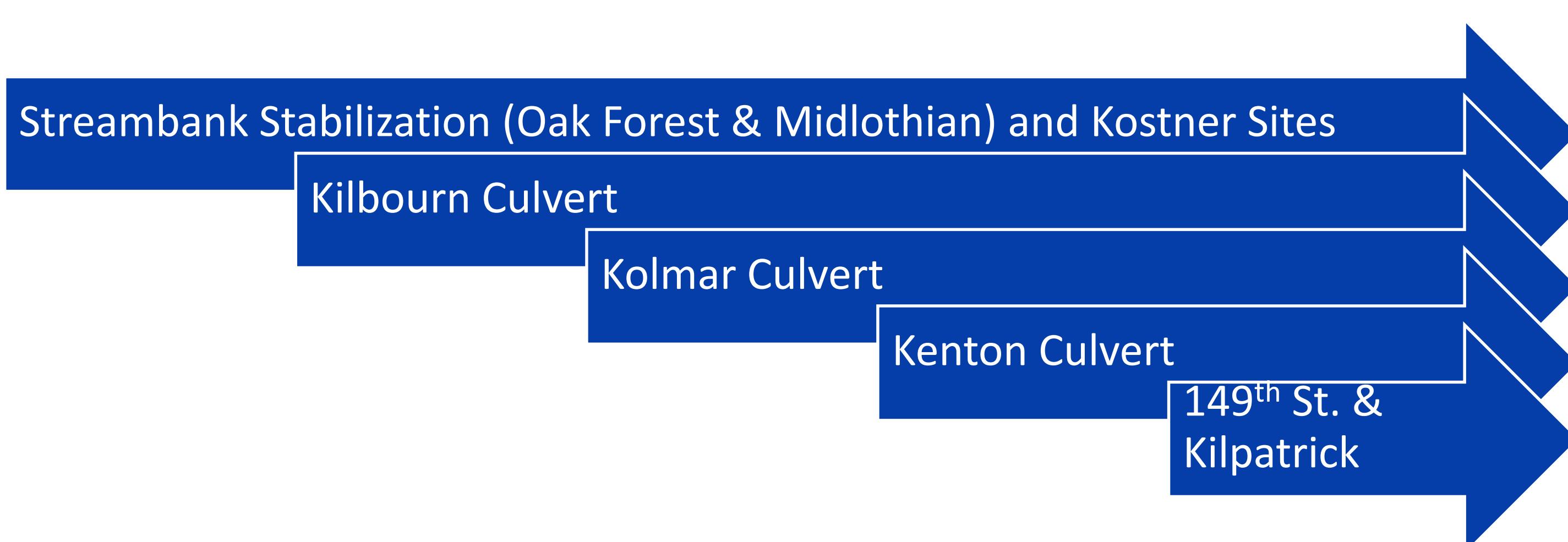




# NATALIE CREEK FINAL DESIGN PROJECT OVERVIEW (CON'T)



## Proposed Construction Staging



Restoration for all areas will be completed as each phase is done.

# NATALIE CREEK FINAL DESIGN- DESIGN IMPROVEMENTS



## ► Final Design Flood Control Structure Sizes:

- Six (6) Restrictive Culvert Locations will be Upsized and Reduced to Five (5)
  - ▶ 149<sup>th</sup> Street & Kilpatrick Avenue - 6.5' x 22' Arch Culvert (all with Headwalls)
  - ▶ Kenton Avenue – 6' x 20' Arch Culvert
  - ▶ Kolmar Avenue – 7' x 26' Arch Culvert
  - ▶ Kilbourn Avenue – 6.5'x 22' Arch Culvert
  - ▶ Kostner Avenue – 6.5' x 22' Arch Culvert
- 149<sup>th</sup> Street & Kilpatrick Avenue Concrete Channel Renovation & Existing Basin Expansion
- New 2.9 acre-feet Detention Basin has increased in size to 5.63 acre-feet



# NATALIE CREEK FINAL DESIGN- DESIGN IMPROVEMENTS

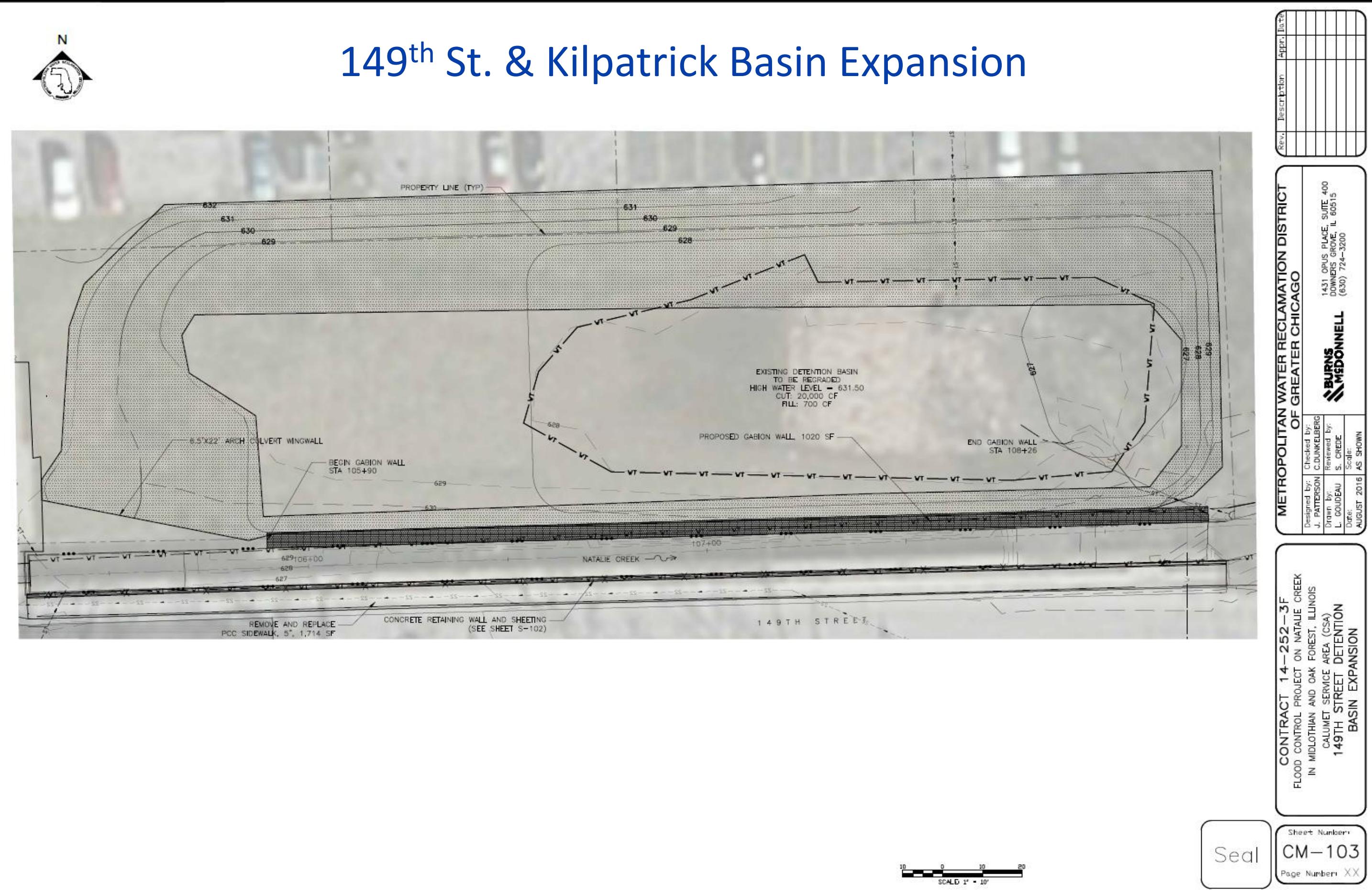




# NATALIE CREEK FINAL DESIGN- DESIGN IMPROVEMENTS



## 149<sup>th</sup> St. & Kilpatrick Basin Expansion



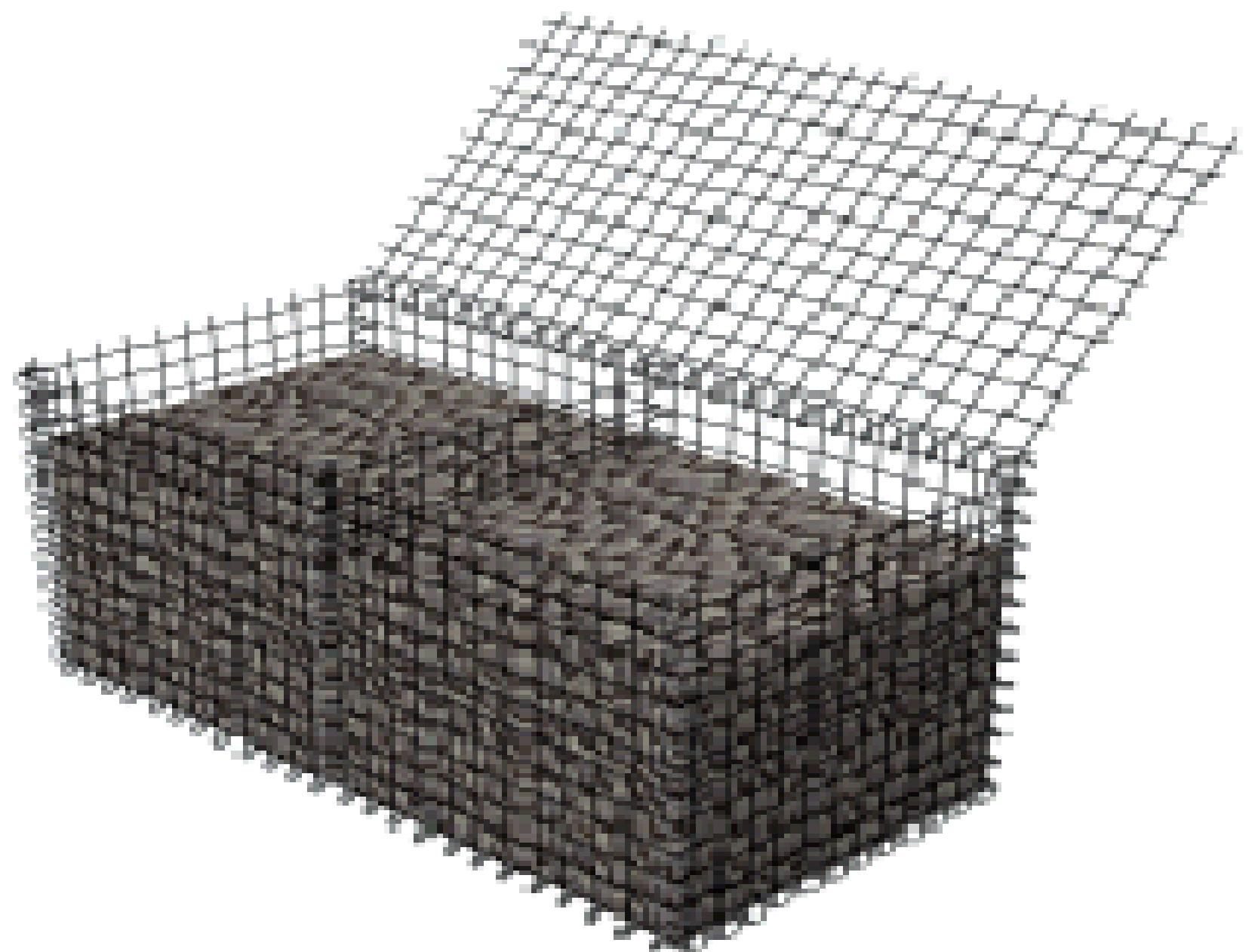
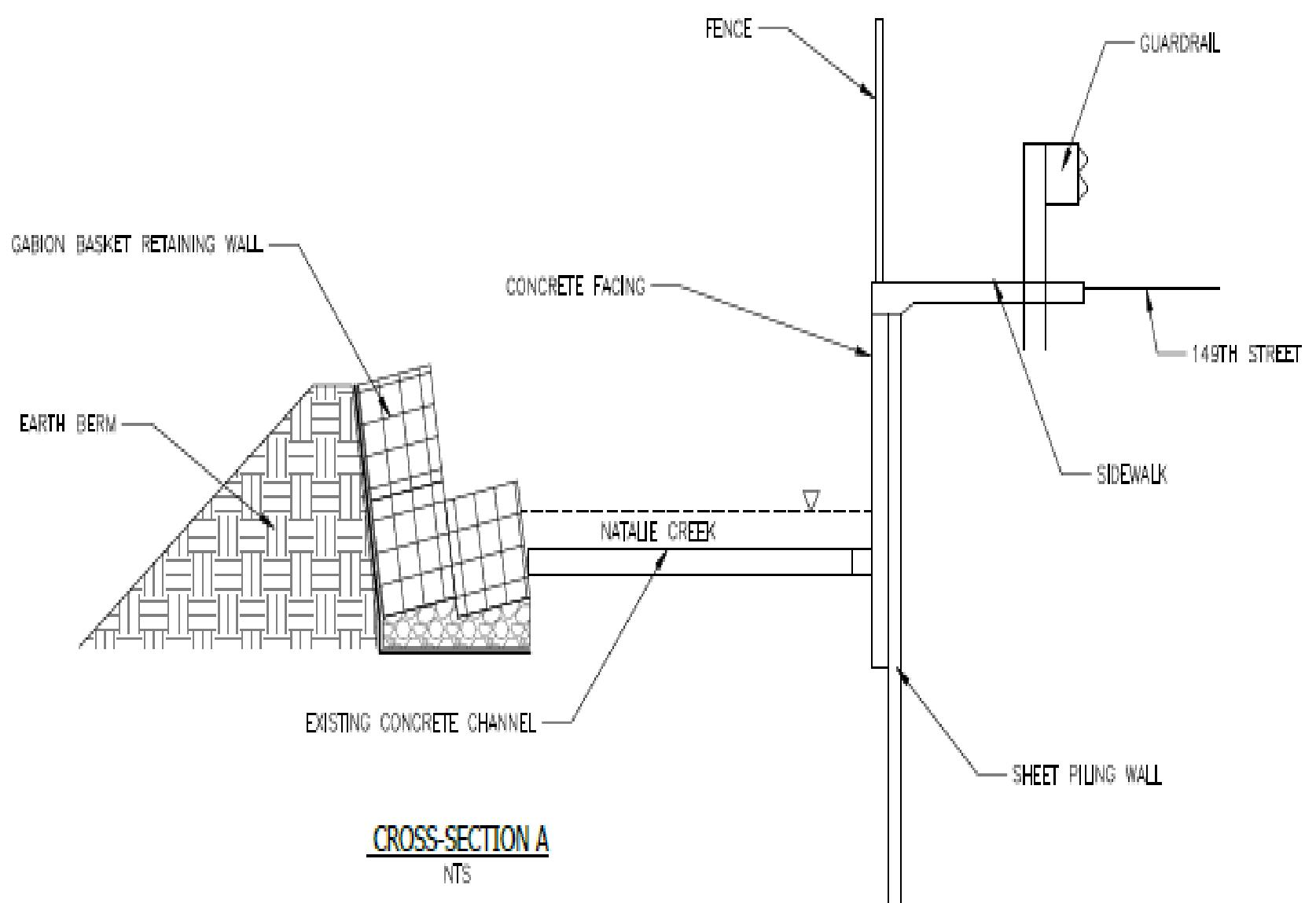


# NATALIE CREEK FINAL DESIGN- DESIGN IMPROVEMENTS



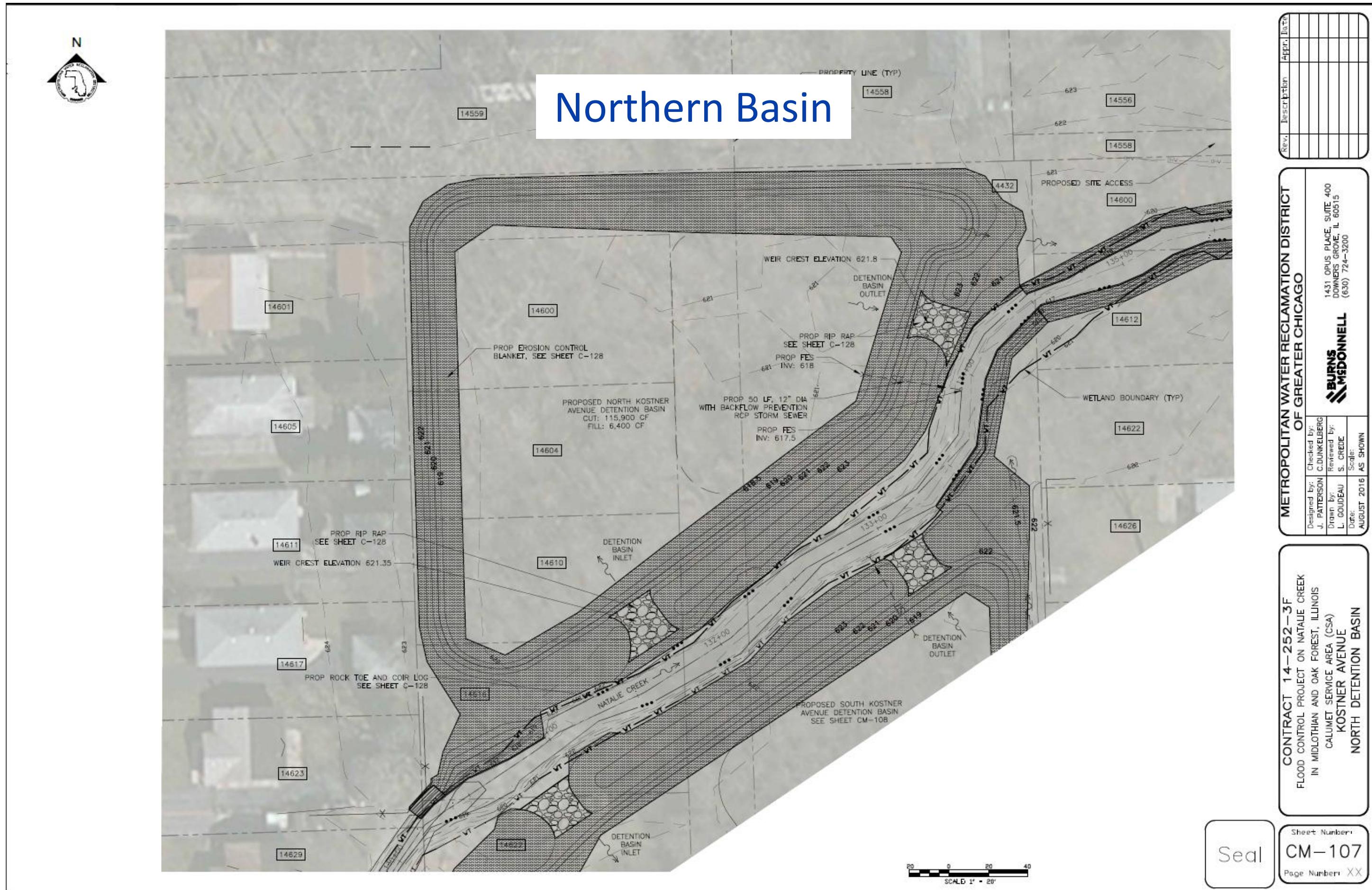
Proposed Cross Section of 149<sup>th</sup> St.  
& Kilpatrick "Concrete" Channel

Gabion Basket



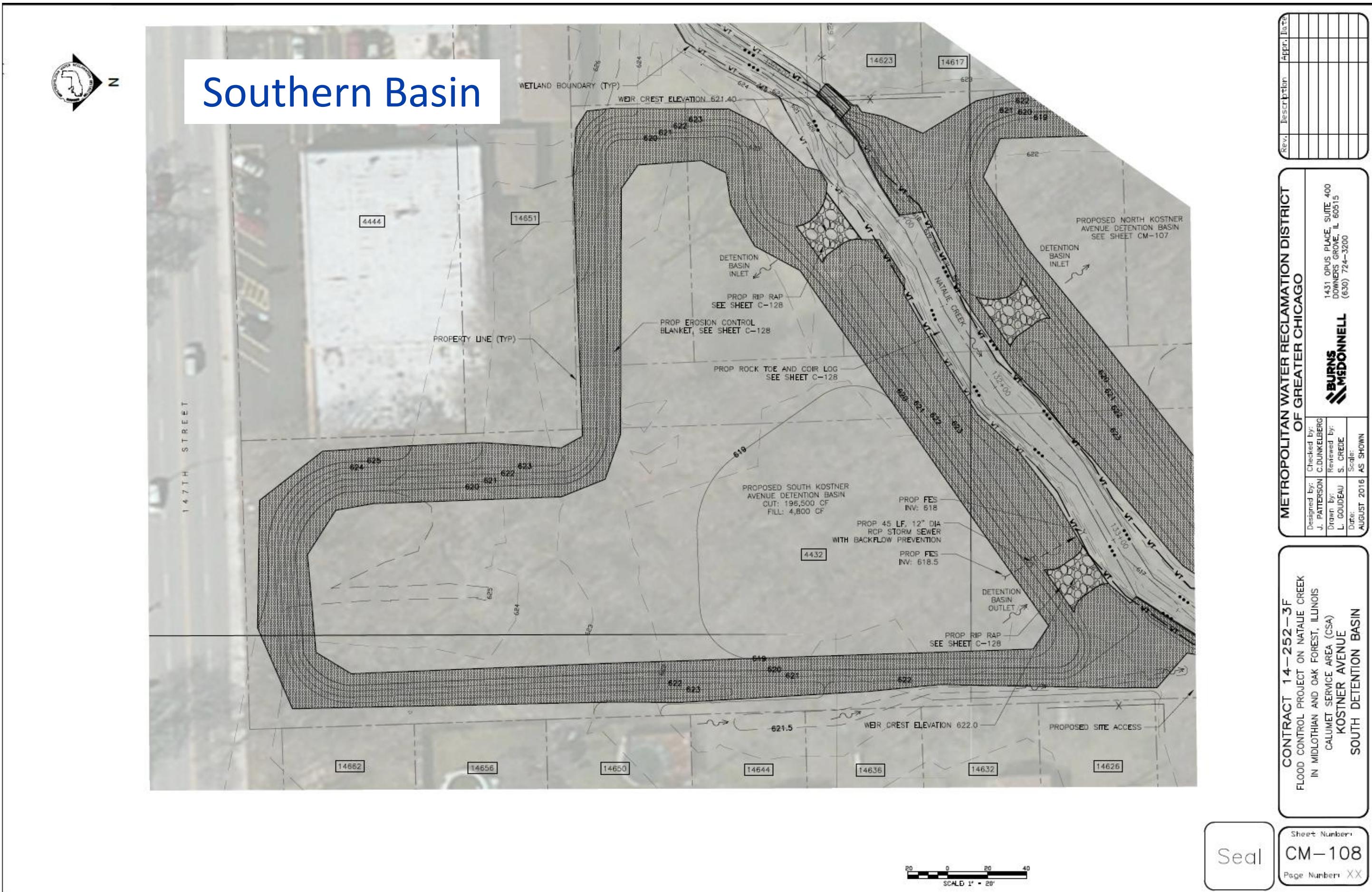


# NATALIE CREEK FINAL DESIGN- DESIGN IMPROVEMENTS



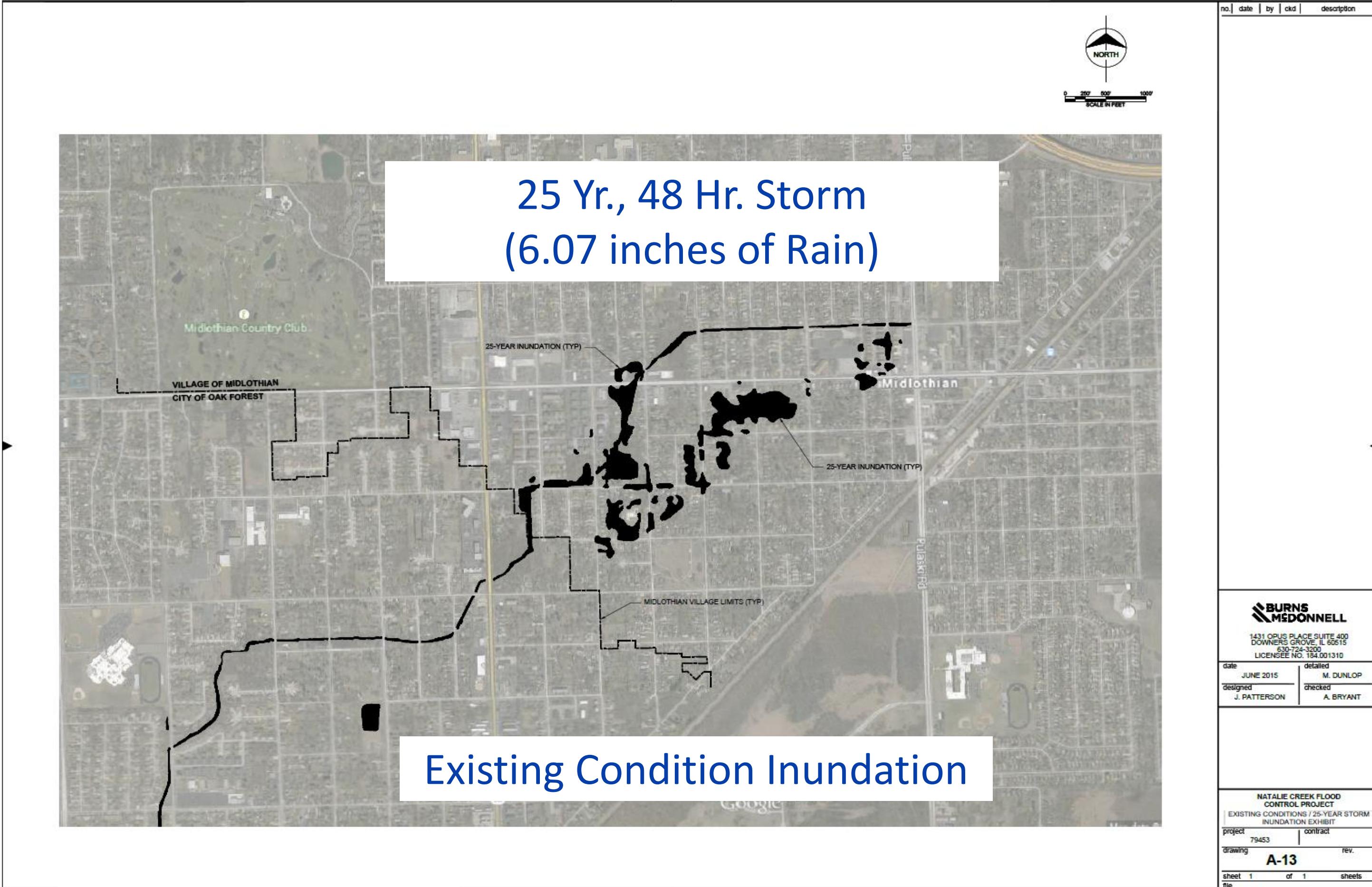


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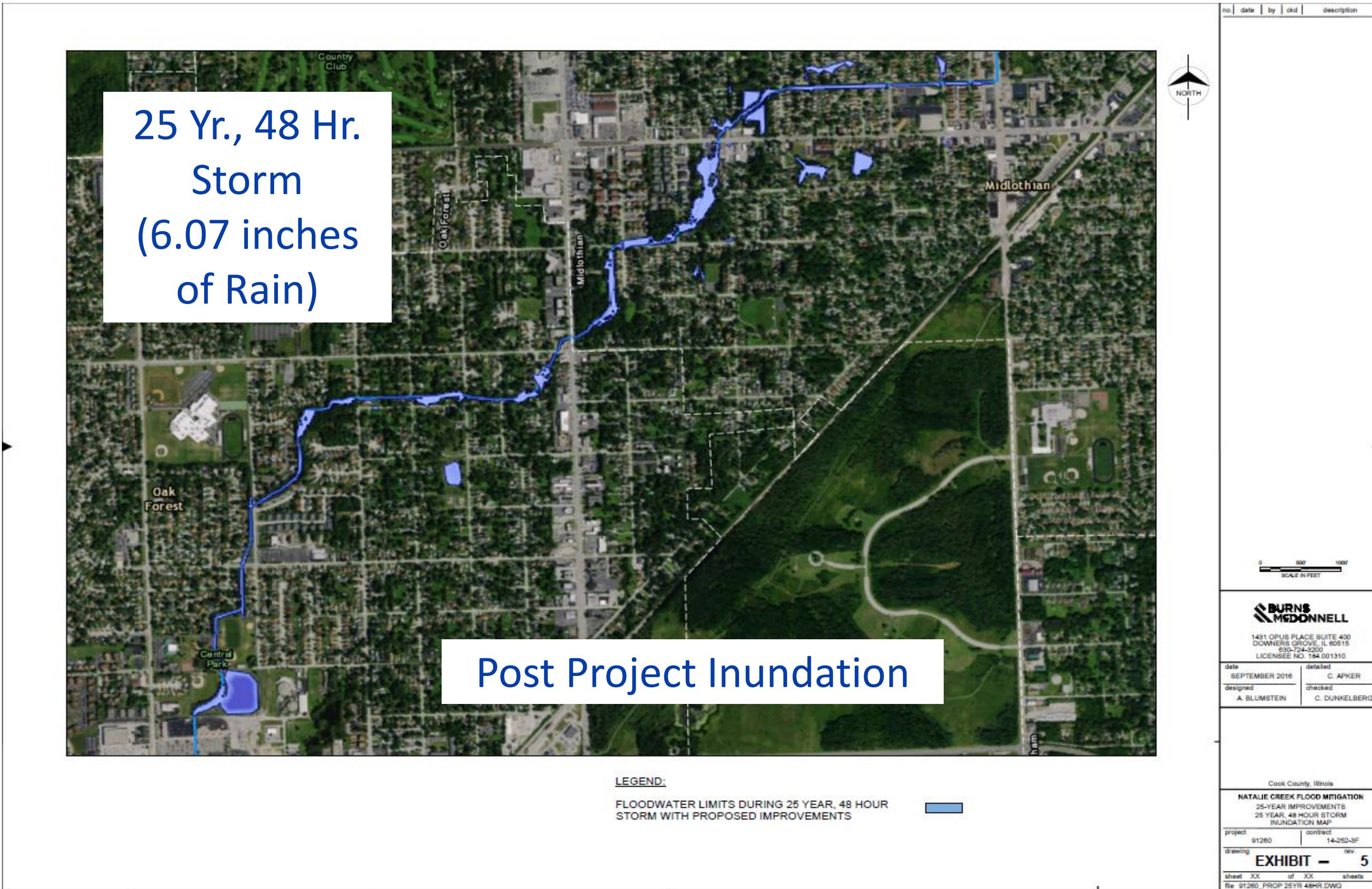


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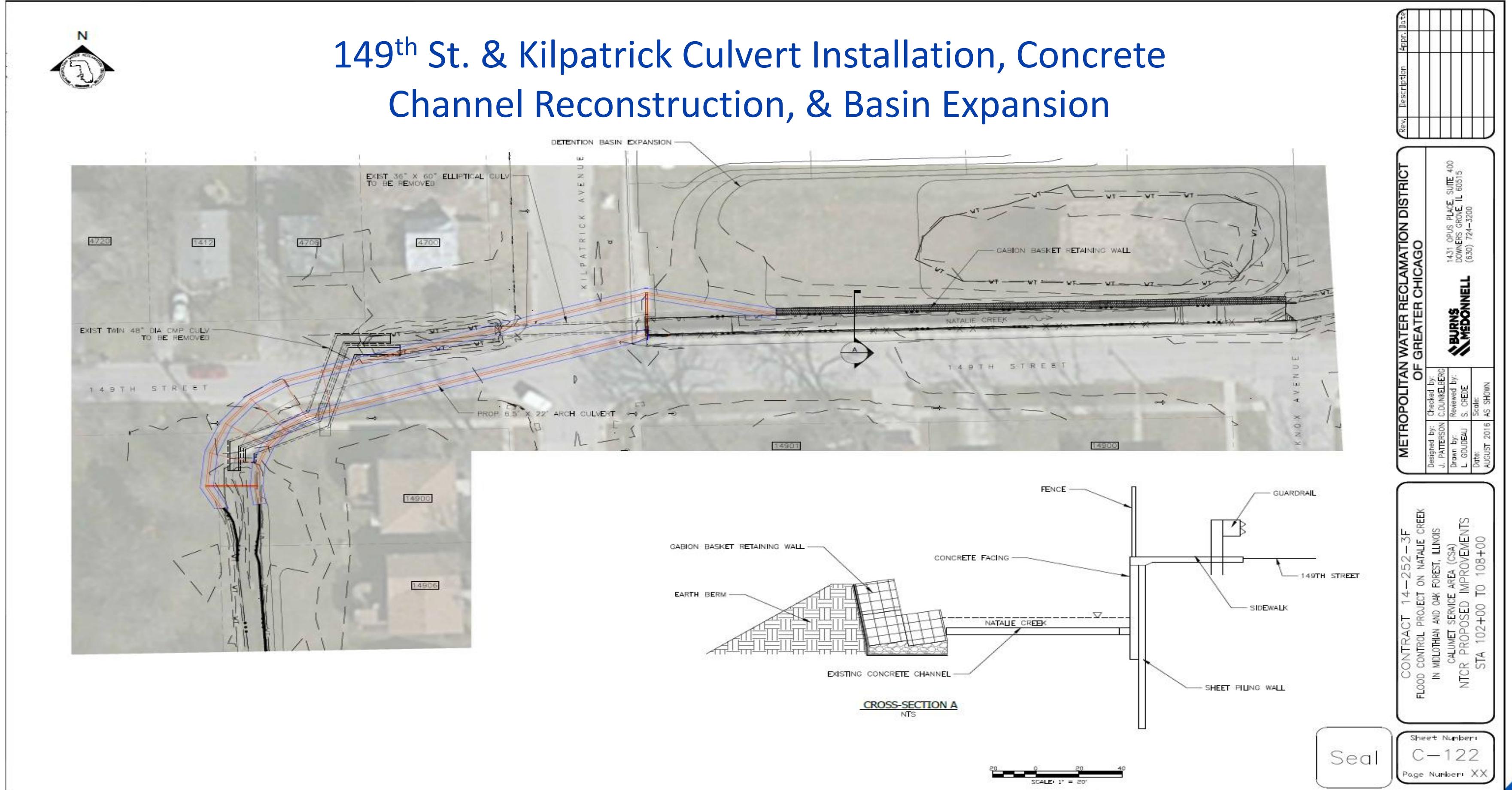
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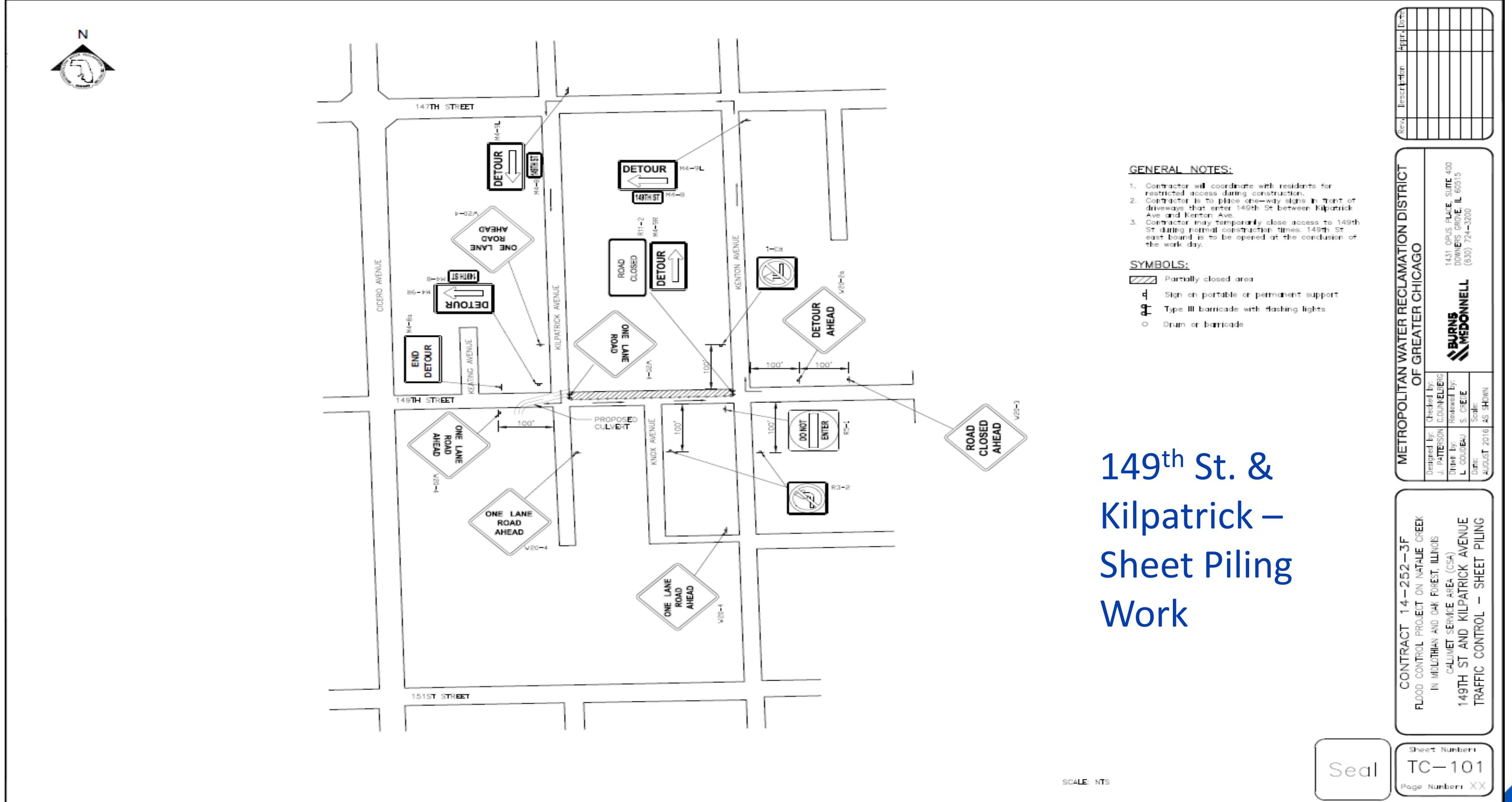
# NATALIE CREEK FINAL DESIGN- COORDINATION EFFORT



## 149<sup>th</sup> St. & Kilpatrick Culvert Installation, Concrete Channel Reconstruction, & Basin Expansion



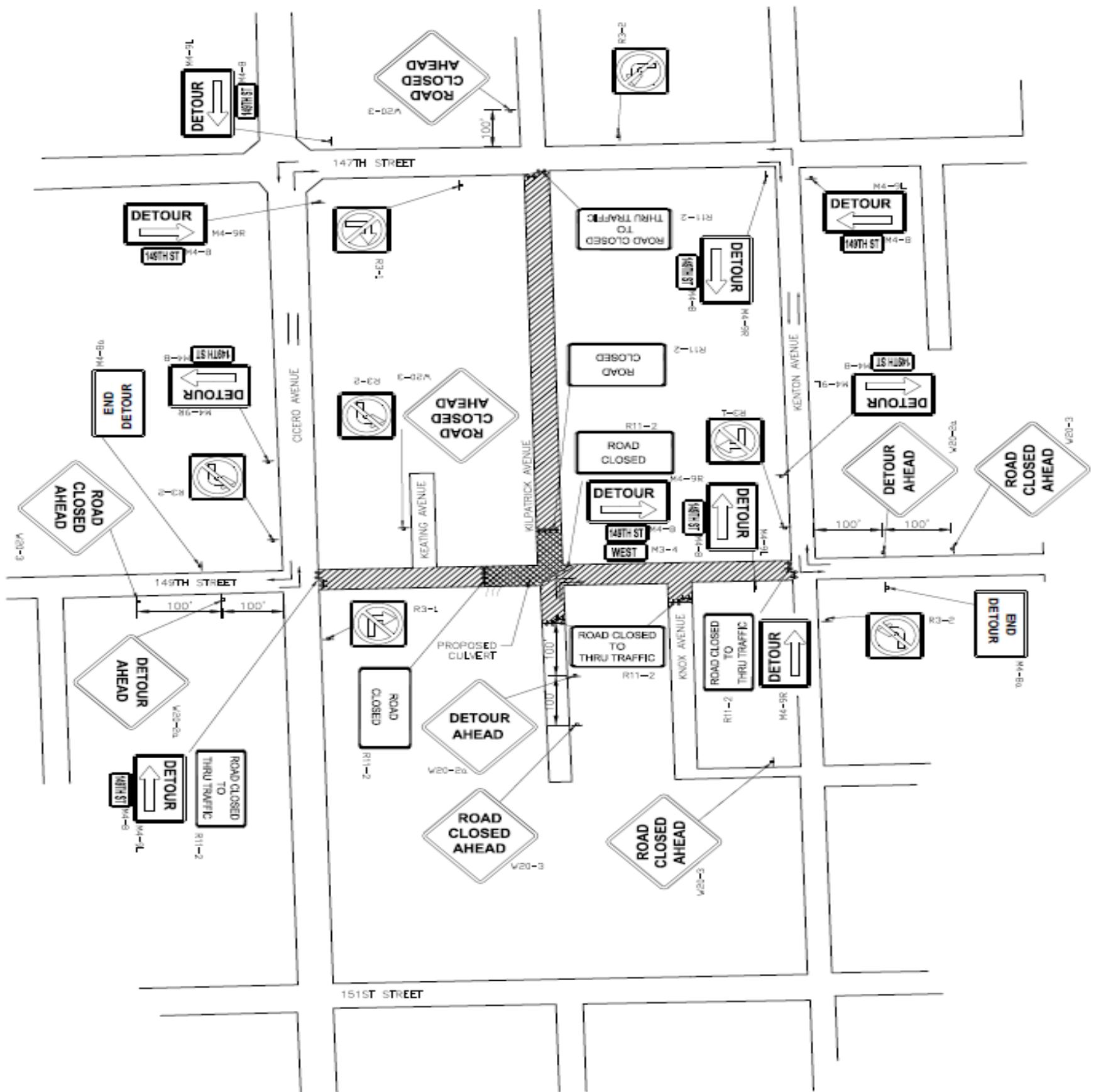
# NATALIE CREEK FINAL DESIGN- COORDINATION EFFORT



# NATALIE CREEK FINAL DESIGN- COORDINATION EFFORT



## 149<sup>th</sup> St. & Kilpatrick – Culvert Installation



### GENERAL NOTES:

1. Contractor will coordinate with residents for restricted access during construction.
2. Contractor will coordinate with residents of 4710 149th St for lack of access during construction.
3. Two-way access should be maintained to Kilpatrick Ave south of 149th St.

### SYMBOLS:

- Partially closed area
- Completely closed area
- Sign on portable or permanent support
- Type II barricade with flashing lights
- Jersey barrier



METROPOLITAN WATER RECLAMATION DISTRICT	
OF GREATER CHICAGO	
1431 CHICAGO PLACE, SUITE 400 DOWNTOWN GROVE, IL 60515 (630) 724-3200	BURNS MCDONNELL

CONTRACT 14-252-3F	
FLOOD CONTROL PROJECT ON NATALIE CREEK	
IN MIDLOTHIAN AND OAK FOREST, ILLINOIS	
CALMETTE SERVICE AREA (CSA)	
149TH ST AND KILPATRICK AVENUE	
TRAFFIC CONTROL – CULVERT INSTALLATION	

Sheet Number TC-102
Page Number XX

SCALE: NTS



# NATALIE CREEK FINAL DESIGN- COORDINATION EFFORT



## Kenton Ave. – Culvert Installation



0 20 40  
SCALED 1" = 20'

Seal

Sheet Number  
C-123  
Page Number XX

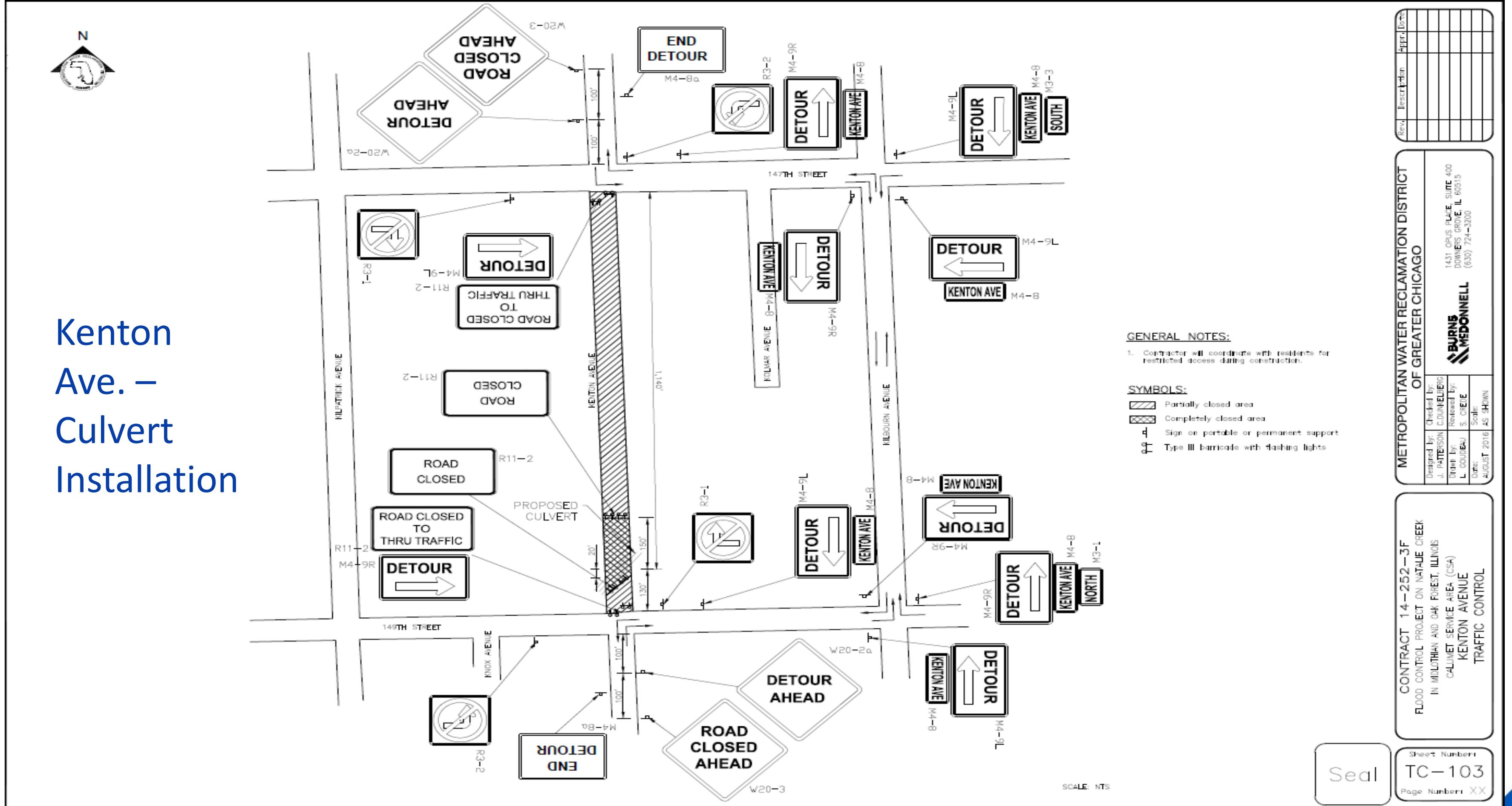
METROPOLITAN WATER RECLAMATION DISTRICT OF GREATER CHICAGO	
Designed By: J. PATERSON	Checked By: C. DUNLEEGAN
Drafter By: L. GOULEAU	Reviewed By: S. CHEE
Date: AUGUST 2016 Scale: AS SHOWN	
1431 OBUS PLACE SUITE 400 DOWNERS GROVE IL 60531-5200 (630) 724-5200	
BURNS MCDONNELL	

CONTRACT 14-252-3F FLOOD CONTROL PROJECT ON NATALIE CREEK IN MIDLOTHIAN AND OAK FOREST, ILLINOIS CAULKET SERVICE AREA (CSA) NTCR PROPOSED IMPROVEMENTS STA 108+00 TO 113+00	
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# NATALIE CREEK FINAL DESIGN- COORDINATION EFFORT



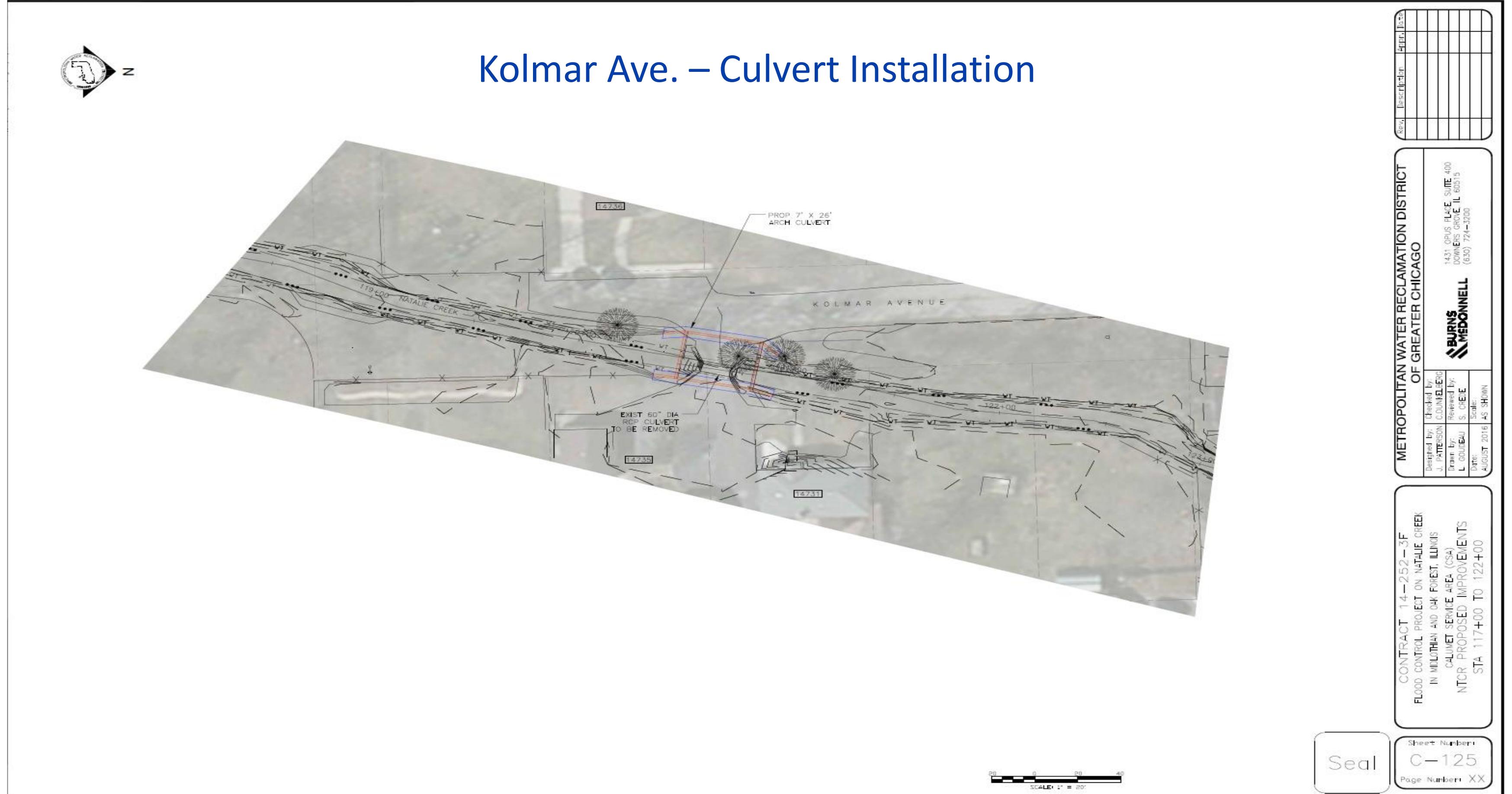
## Kenton Ave. – Culvert Installation



# NATALIE CREEK FINAL DESIGN- COORDINATION EFFORT

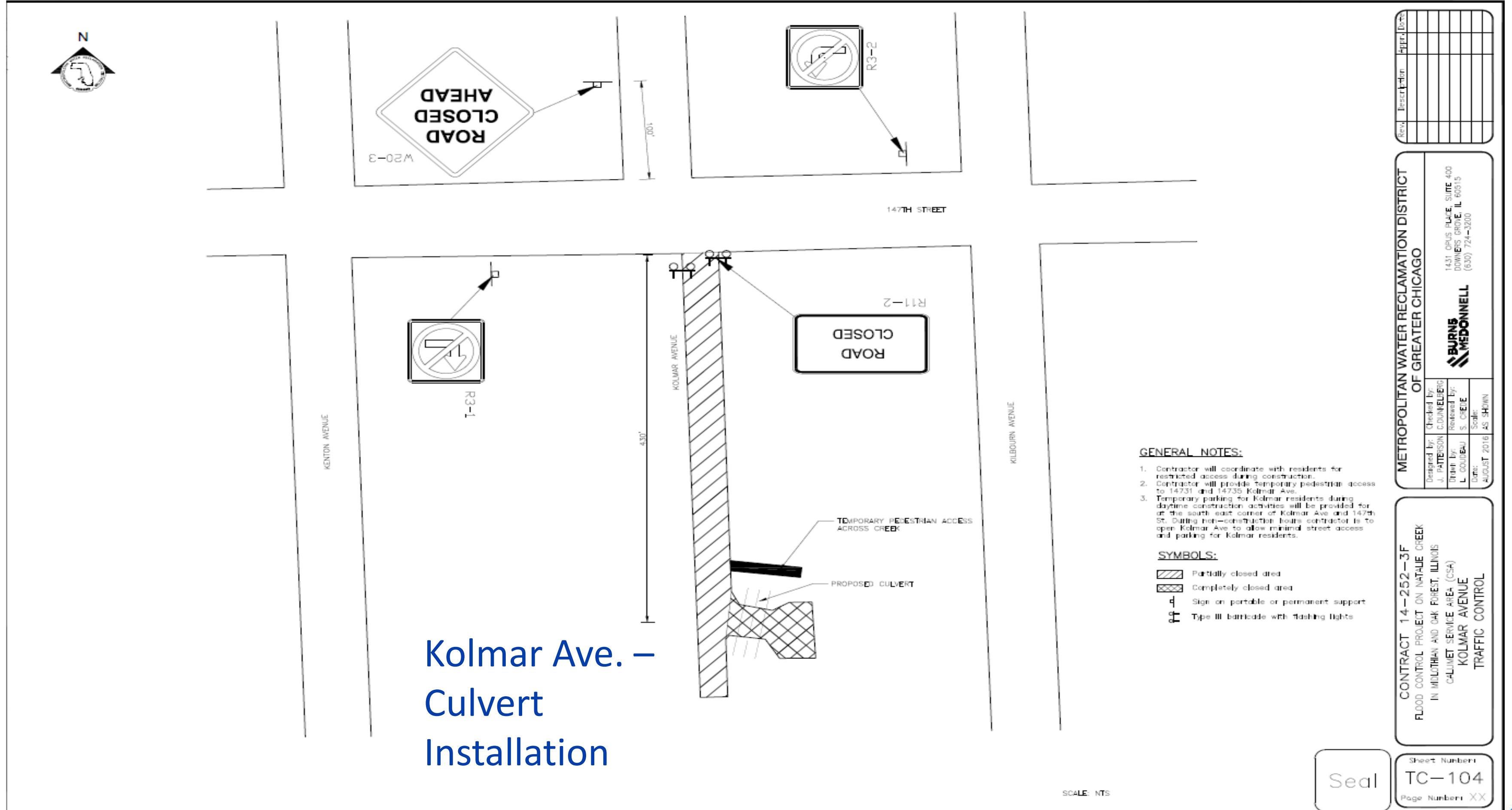


## Kolmar Ave. – Culvert Installation





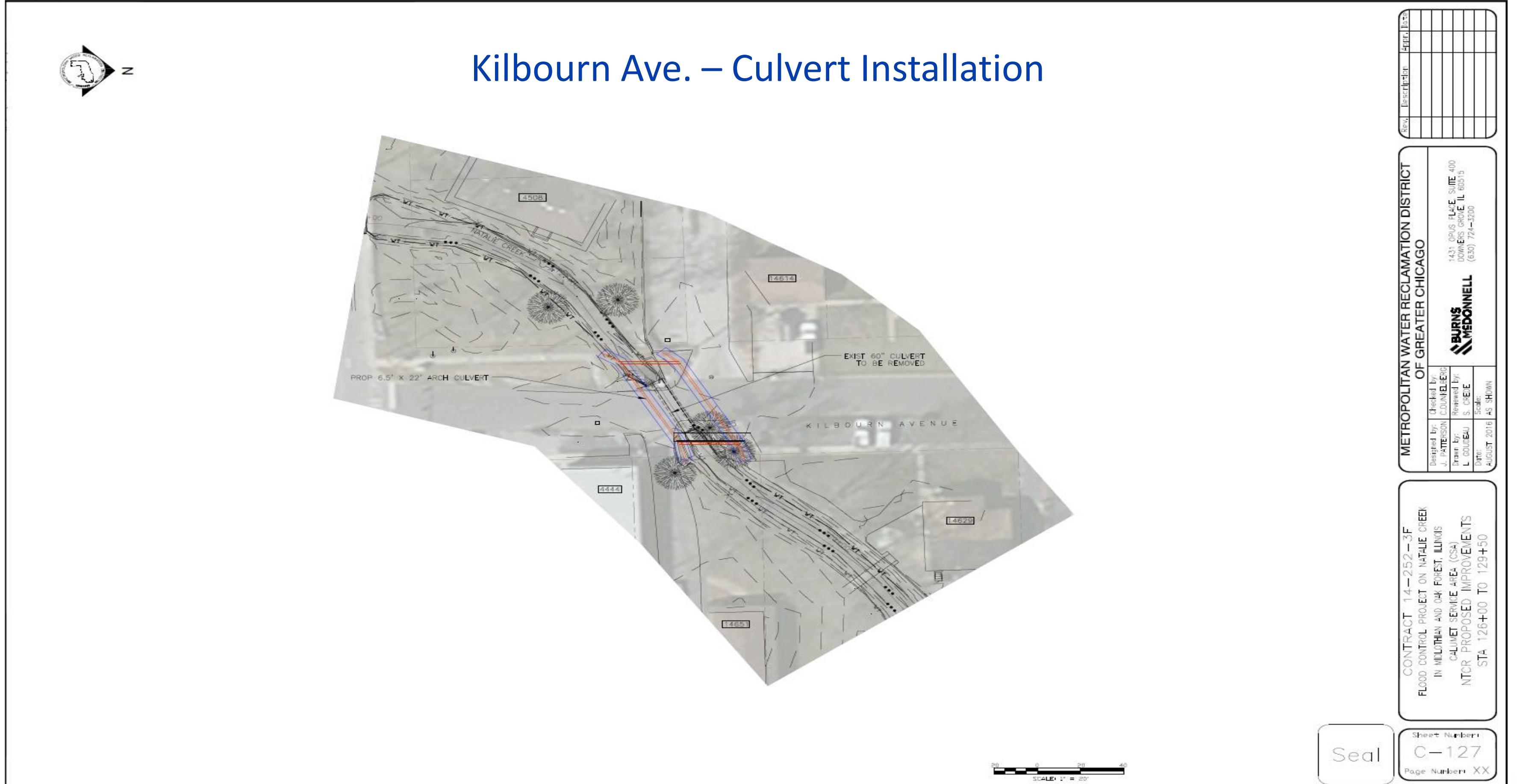
# NATALIE CREEK FINAL DESIGN-COORDINATION EFFORT



# NATALIE CREEK FINAL DESIGN- COORDINATION EFFORT



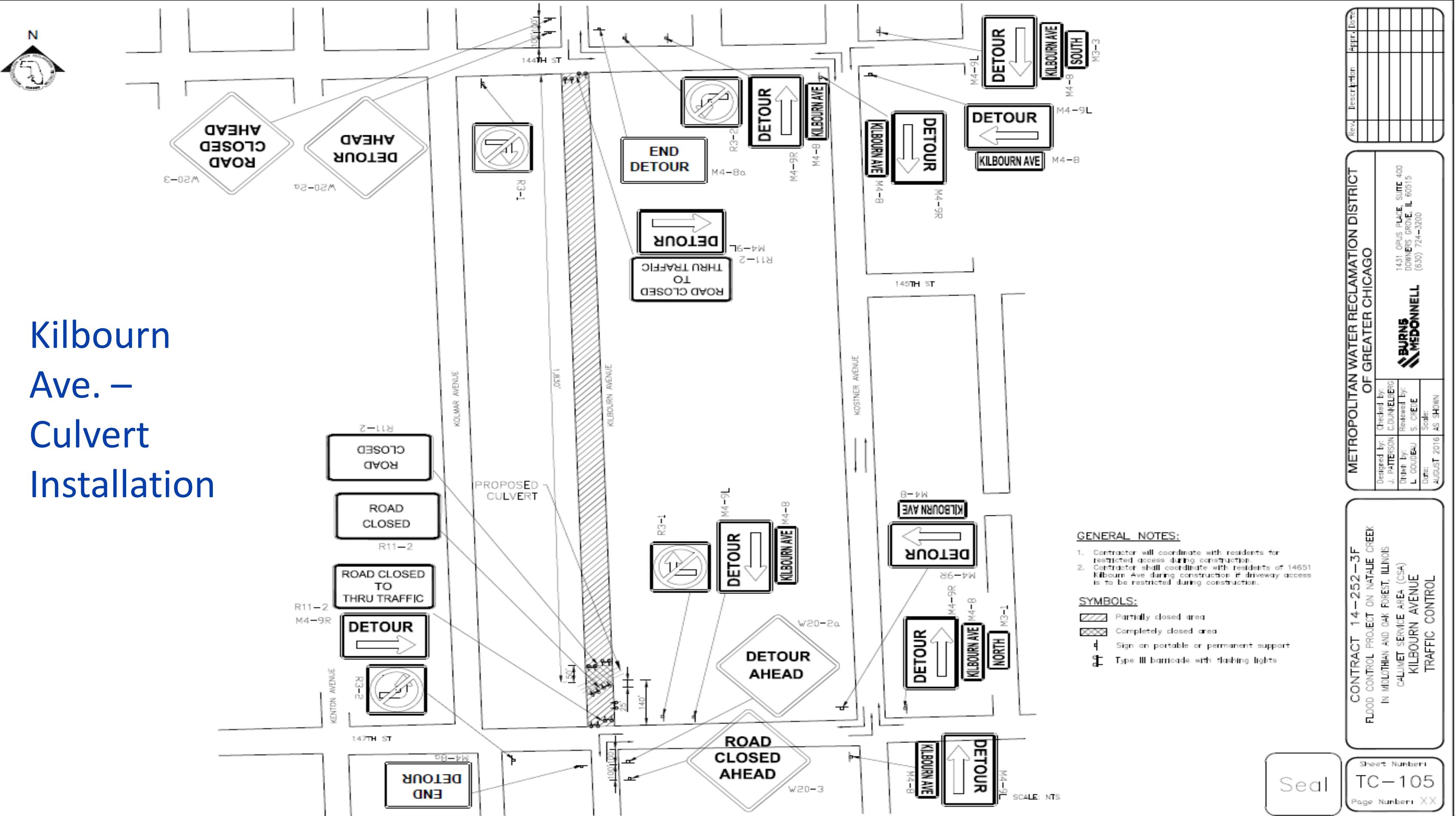
## Kilbourn Ave. – Culvert Installation





# NATALIE CREEK FINAL DESIGN- COORDINATION EFFORT

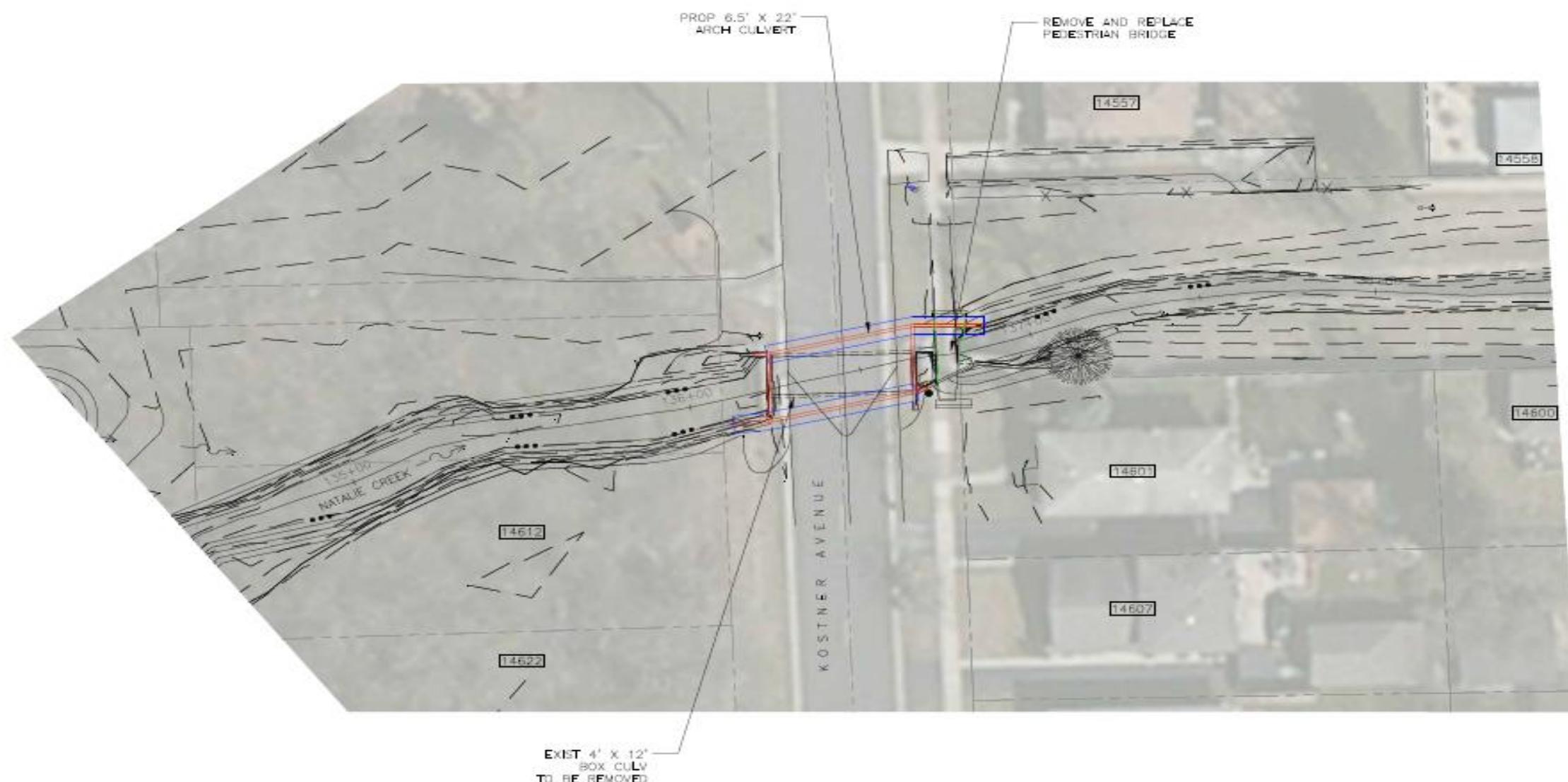
# Kilbourn Ave. – Culvert Installation



# NATALIE CREEK FINAL DESIGN- COORDINATION EFFORT



## Kostner Ave. – Culvert Installation



20 40  
SCALE 1" - 20'

Seal

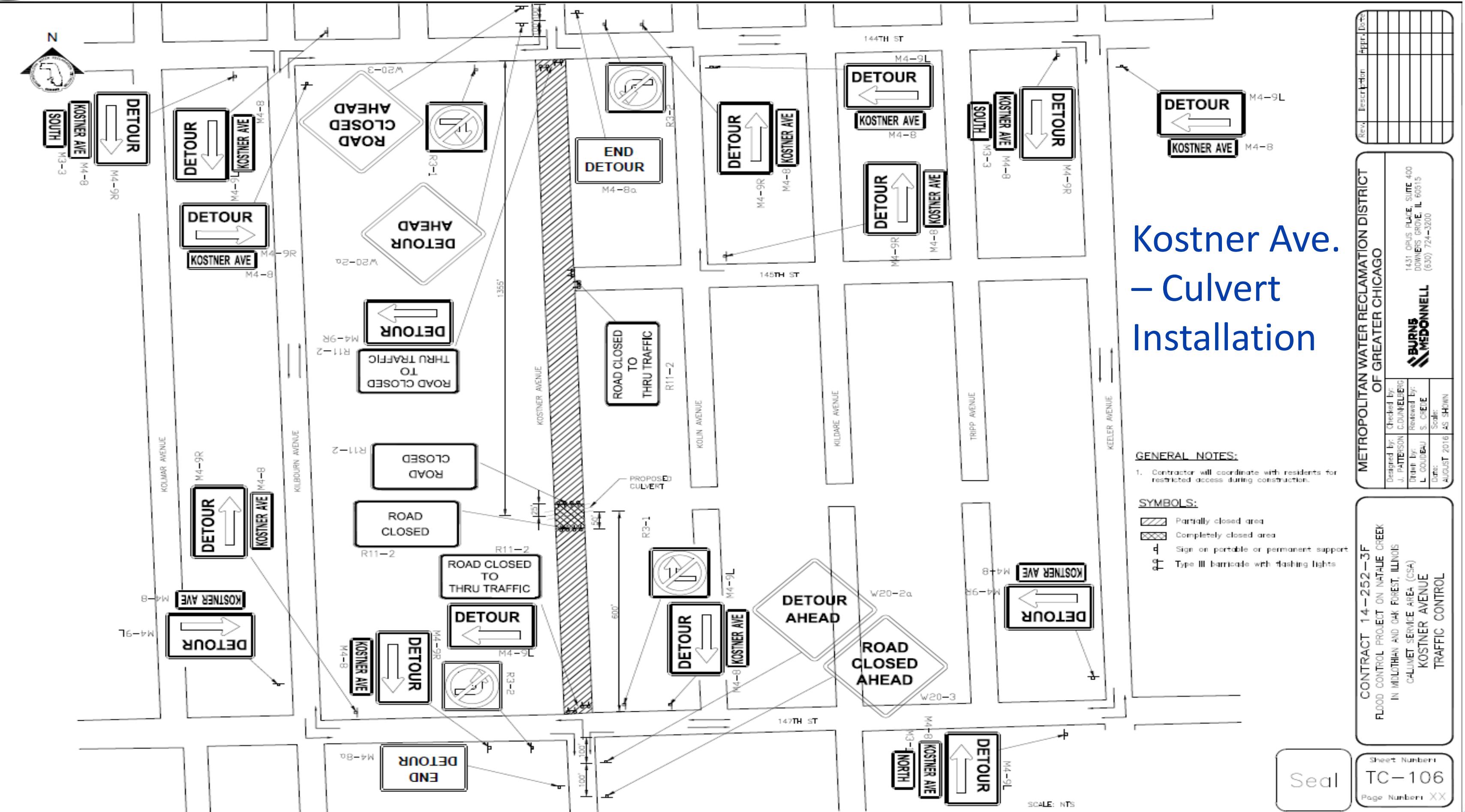
Sheet Number  
C-129  
Page Number XX

Rev.	Descriptor	File No.

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Designed by:	Checked by:
J. PATTERSON	C. DUNLEAVY
Drawn by:	Reviewed by:
L. GOULEAU	S. CIEDE
Drawn:	Scale:
AUGUST 2016	1:5000
1431 CIPUS PLACE, SUITE 400 DOWNERS GROVE, IL 60515 (630) 724-3200	
BURNS MCDONNELL	

CONTRACT 14-252-3F	
FLOOD CONTROL PROJECT ON NATALIE CREEK	
IN MIDLOTHIAN AND OH FOREST, ILLINOIS	
CALUMET SERVICE AREA (CSA)	
MTCR PROPOSED IMPROVEMENTS	
STA 134+50 TO 138+50	

# NATALIE CREEK FINAL DESIGN- COORDINATION EFFORT



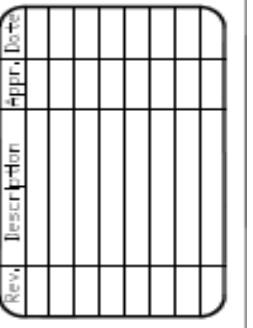
**Kostner Ave.  
– Culvert  
Installation**

#### GENERAL NOTES:

1. Contractor will coordinate with residents for restricted access during construction.

#### SYMBOLS:

- Partially closed area
- Completely closed area
- Sign on portable or permanent support
- Type III barricade with flashing lights



Dev.	Lesser than	Dev.
Det.	Lesser than	Dev.
Detour	Lesser than	Dev.

**METROPOLITAN WATER RECLAMATION DISTRICT  
OF GREATER CHICAGO**

1431 OAKS BLVE, SUITE 400  
DOWNERS GROVE, IL 60515  
(630) 724-3200

**BURNS  
MCDONNELL**

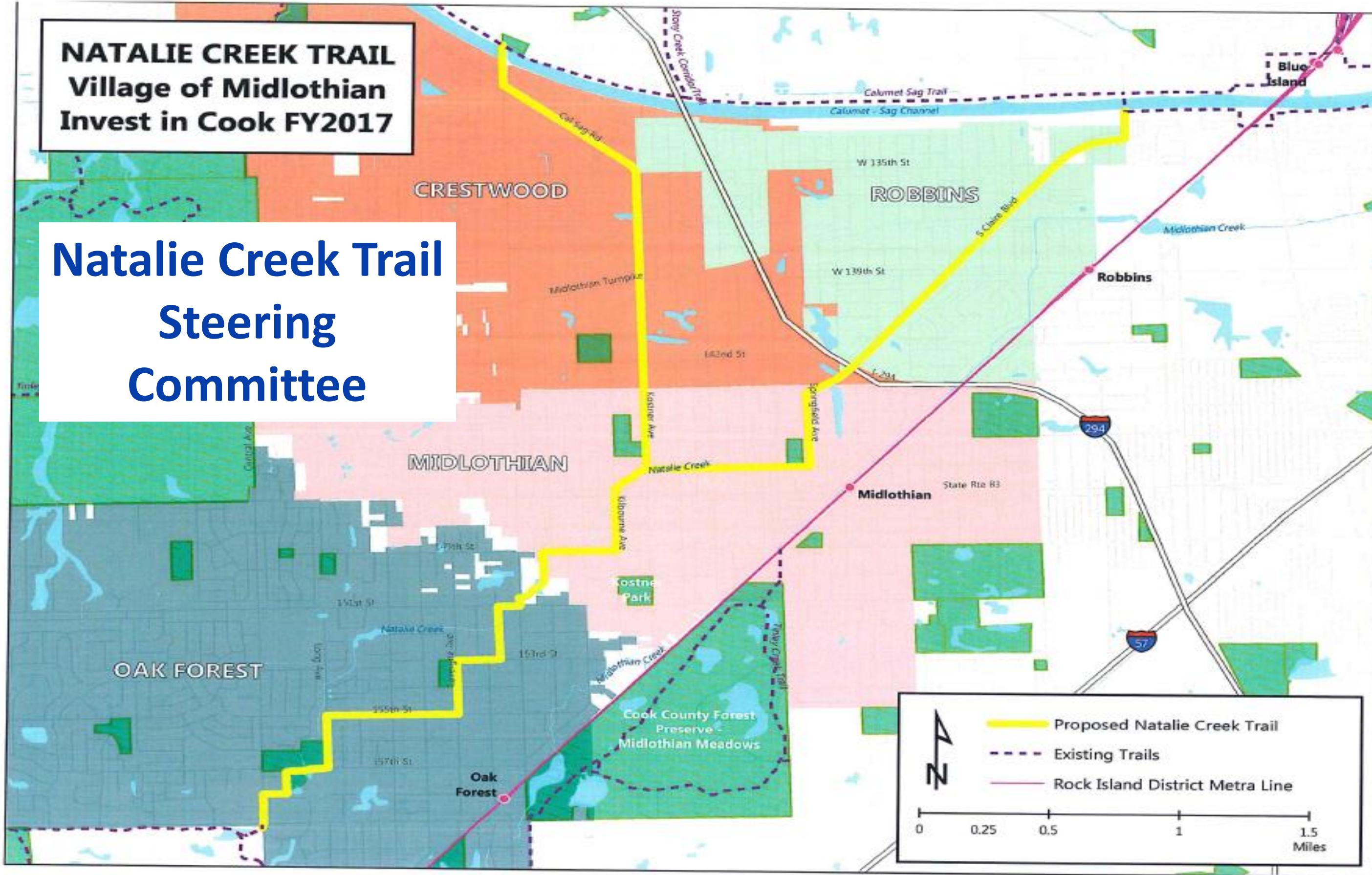
**CONTRACT 14-252-3F**  
FLOOD CONTROL PROJECT ON NATALIE CREEK  
IN MIDLOTHIAN AND OAK FOREST, ILLINOIS  
CALUMET SERVICE AREA (CSA)  
KOSTNER AVENUE  
TRAFFIC CONTROL

Sheet Number: TC-106  
Page Number: XX

Seal

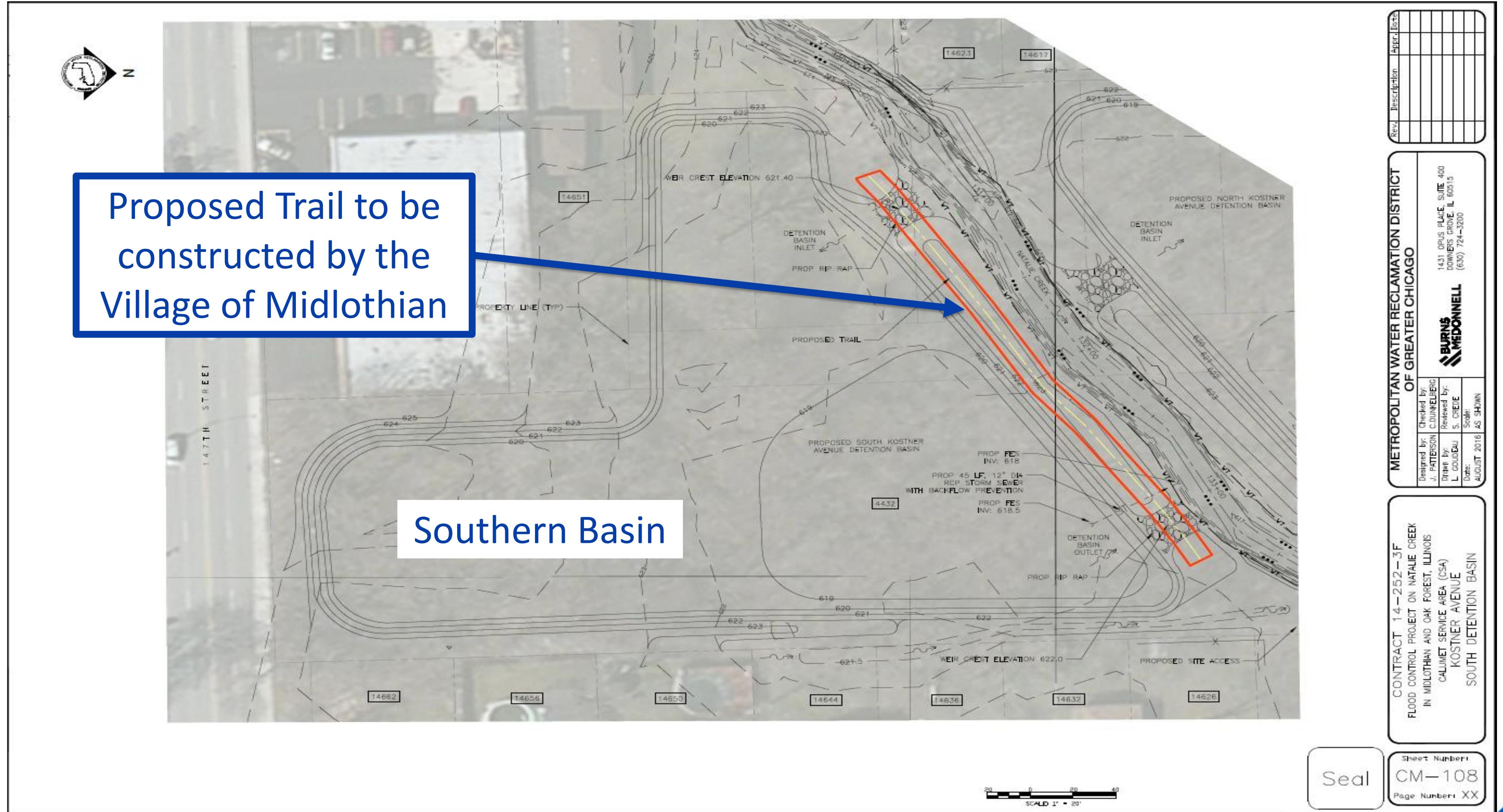


# NATALIE CREEK FINAL DESIGN- Village of Midlothian Committee





# NATALIE CREEK FINAL DESIGN- Village of Midlothian Committee



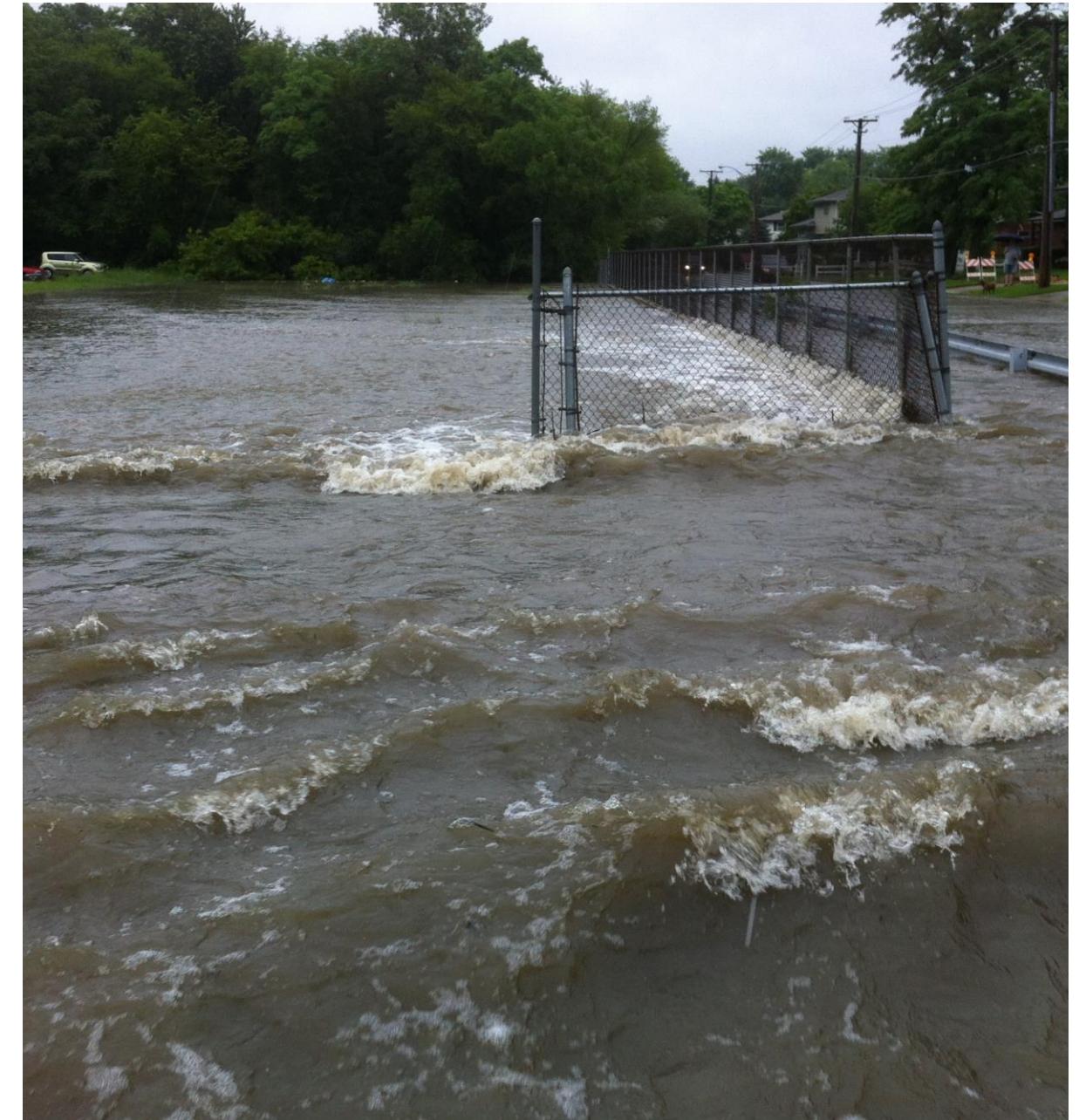


# NATALIE CREEK FINAL DESIGN ENGINEERING PROJECT



## Summary

- ▶ Past & Present Completion Timeline:
  - Preliminary Design Study – Summer 2016
  - Final Design – Summer 2017
  - Construction Start – Late 2017
  - Construction (Substantial) Completion – Fall 2018
  - Final Completion – Spring 2019





# NATALIE CREEK FINAL DESIGN ENGINEERING PROJECT



Thank You!

- ▶ Village of Midlothian & City of Oak Forest
- ▶ “Floodlothian Midlothian”
- ▶ USACE/Center for Neighborhood Technology/RainReady”
- ▶ & All others that played a role in the success of this project

Questions???

**“Coming together is a beginning; keeping together is progress; working together is success.”**

**Henry Ford**