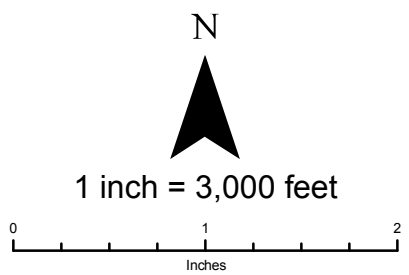


Figure 3.3.1

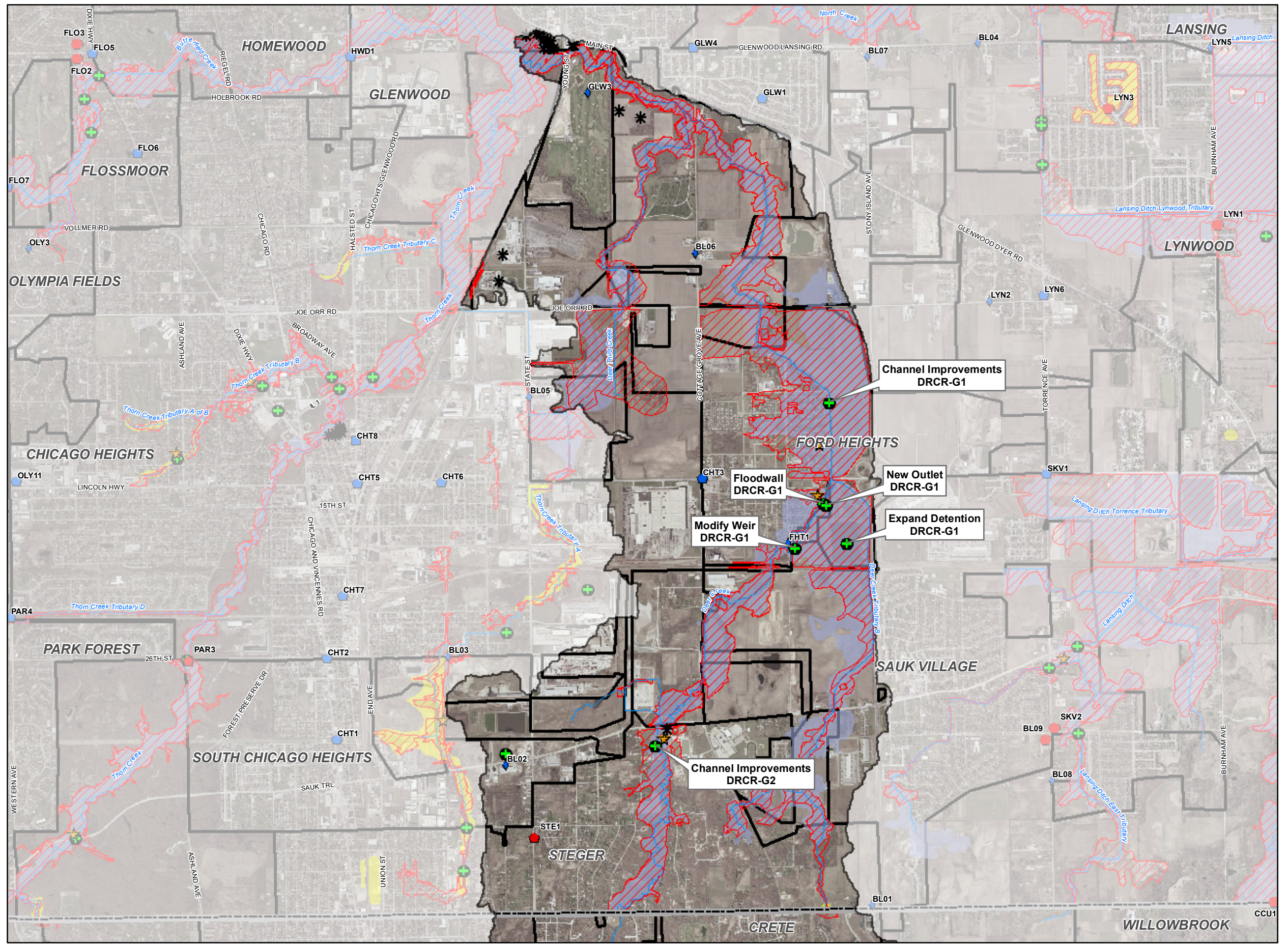
# DEER CREEK SUBWATERSHED OVERVIEW

Little Calumet River DWP

- Local Problems**
  - Bank Erosion
  - Maintenance
  - Pavement Flooding
  - Storm Sewer Flow Restriction
- Regional Problems**
  - Bank Erosion
  - Maintenance
  - Overbank Flooding
  - Pavement Flooding
  - Problem Area Identified Through Modeling
  - Candidate Structures for Floodproofing/Acquisition
  - Project Alternative Location
- River/Stream**
- Municipal Boundary**
- County Boundary**
- DWP 100-year Inundation Area**
- FEMA Floodplain**
  - Zone A; Zone AH; Zone AO
  - Zone AE



December, 2009





**Figure 3.3.6**

**DEER CREEK  
ALTERNATIVE  
DRCR-G1**

Little Calumet River DWP

**Alternative Description:**  
Increase channel capacity north of US 30 HWY and excavate existing reservoir to provide additional 24 ac-ft storage

**Conceptual Level Cost:**

\$8,331,000

**Benefit:** \$3,801,000      **B/C Ratio:** 0.49

\* Candidate Structures for Floodproofing/Acquisition

**Regional Problems**

- Bank Erosion
- ▲ Maintenance
- Overbank Flooding
- ◆ Pavement Flooding

**Local Problems**

- Bank Erosion
- ▲ Maintenance
- ◆ Pavement Flooding
- ◆ Storm Sewer Flow Restriction

— River/Stream

▭ Municipalities

▭ County Boundary

▭ Project Alternative Location

■ 100-year Inundation Area With Project

■ 100-year Inundation Area Without Project

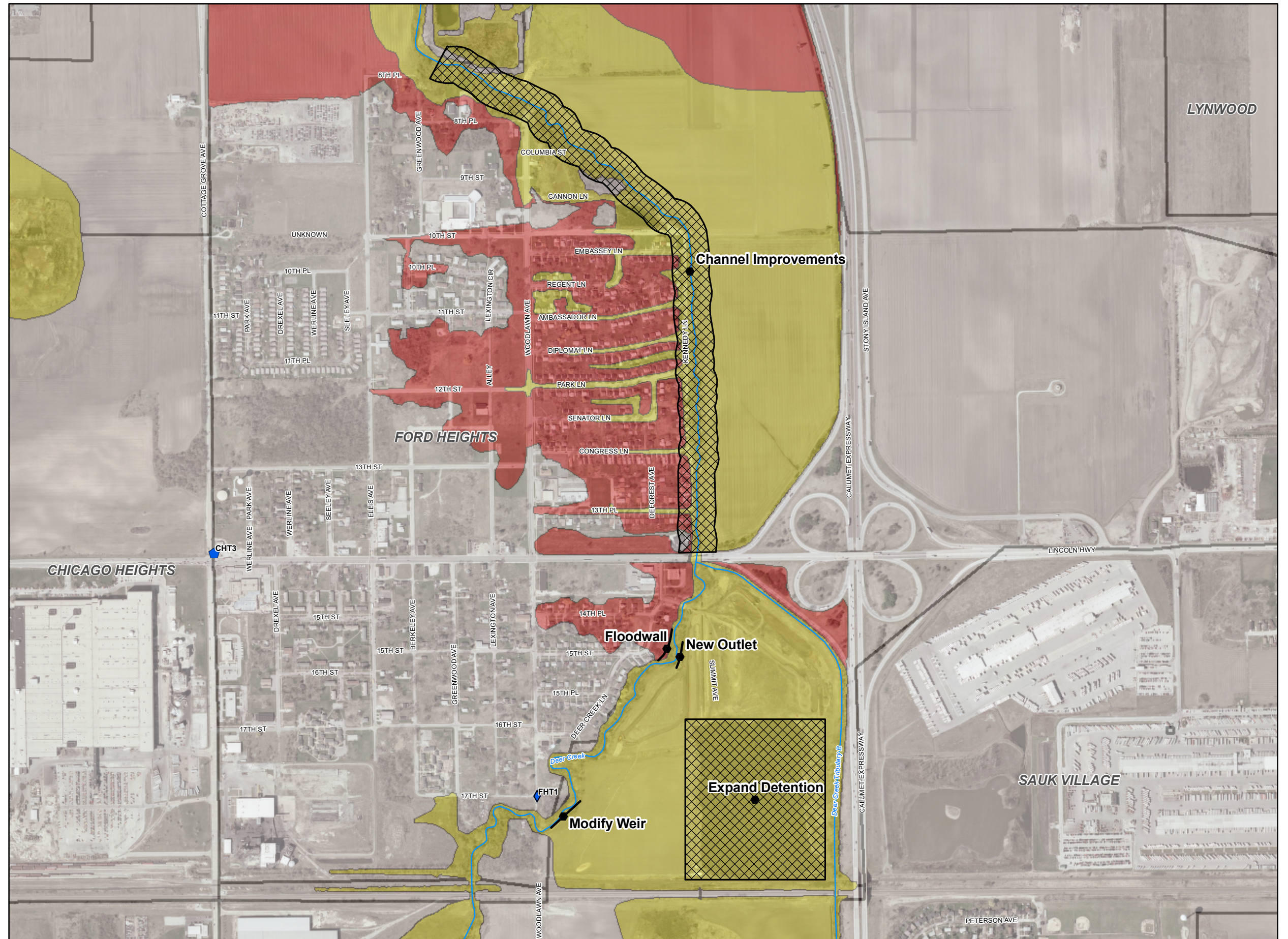
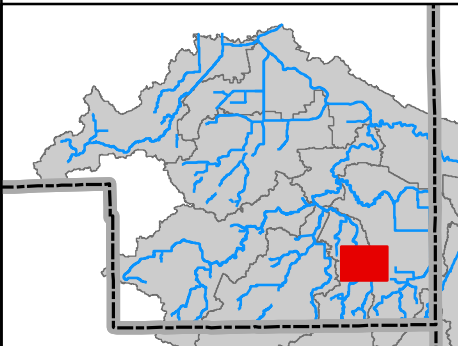
0 1 2 Inches

1 inch = 800 feet



**CDM**

December, 2009





**Figure 3.3.7**

**DEER CREEK  
ALTERNATIVE  
DRCR-G2**

Little Calumet River DWP

**Alternative Description:**  
Channel improvements for 1,800 LF upstream  
of Sauk Trail Road

**Conceptual Level Cost:**

\$14,312,000

**Benefit:** \$55,000      **B/C Ratio:** <0.01

\* Candidate Structures for  
Floodproofing/Acquisition

**Regional Problems**

- Bank Erosion
- ▲ Maintenance
- Overbank Flooding
- ◆ Pavement Flooding

**Local Problems**

- Bank Erosion
- ▲ Maintenance
- ◆ Pavement Flooding
- ◆ Storm Sewer Flow Restriction

— River/Stream

▭ Municipalities

▭ County Boundary

▨ Project Alternative Location

■ 100-year Inundation Area With Project

■ 100-year Inundation Area Without Project

0 1 2 Inches

1 inch = 250 feet



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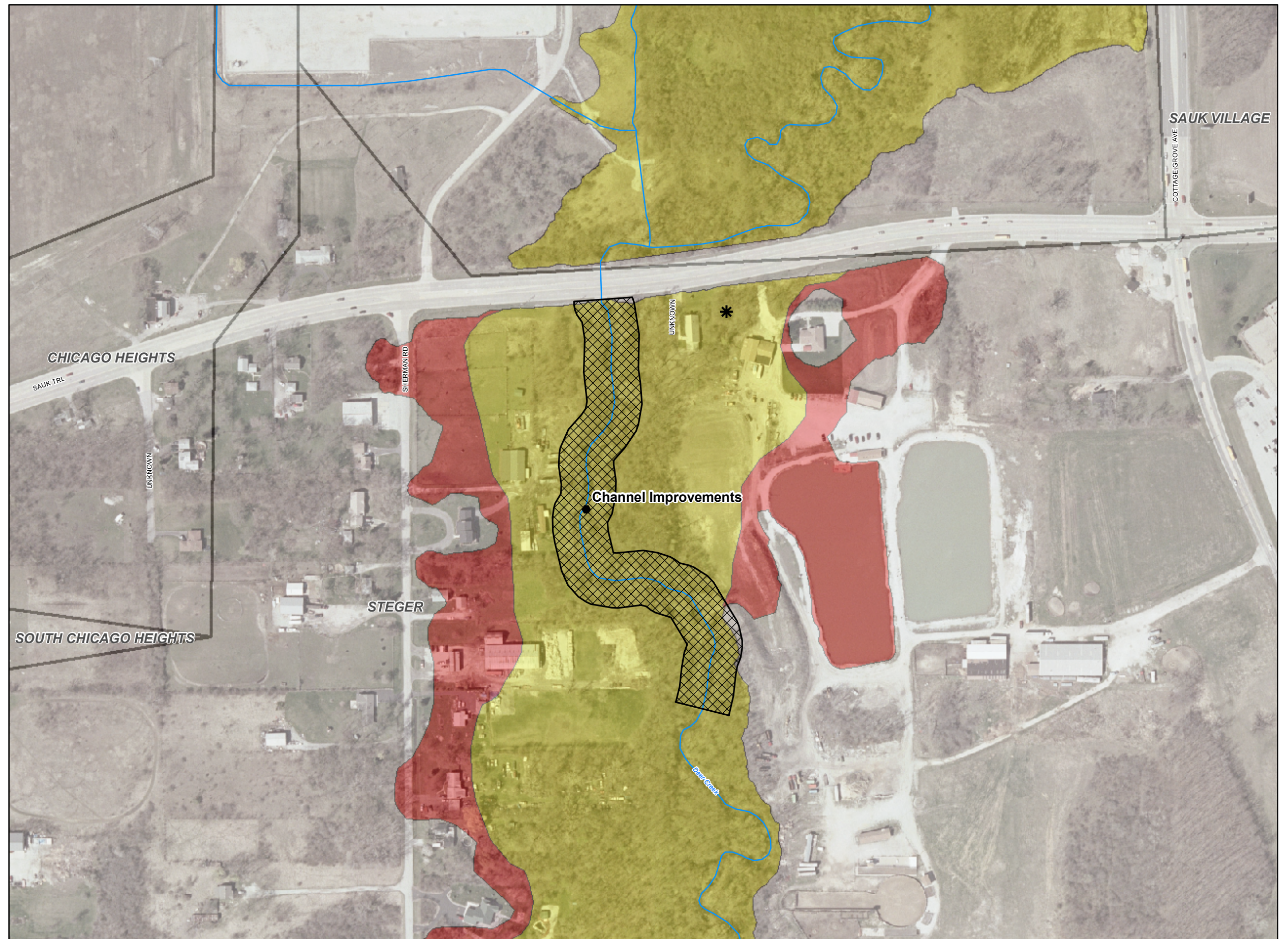
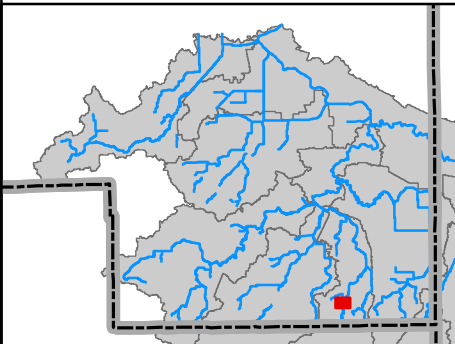




Figure 3.4.1

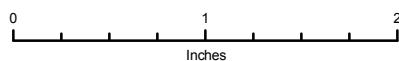
# MIDLOTHIAN CREEK SUBWATERSHED OVERVIEW

Little Calumet River DWP

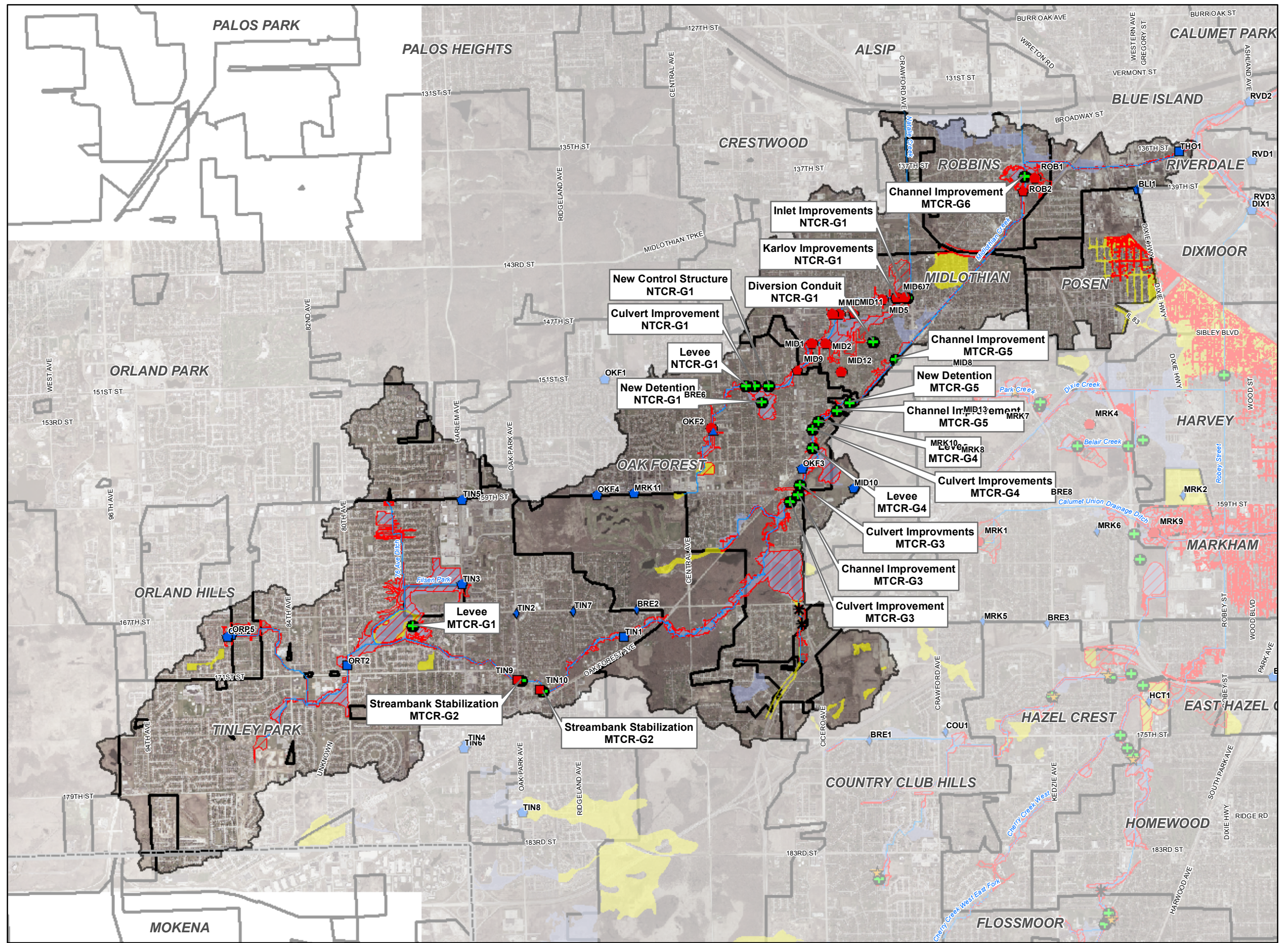
- Local Problems**
  - Bank Erosion
  - Maintenance
  - Pavement Flooding
  - Storm Sewer Flow Restriction
- Regional Problems**
  - Bank Erosion
  - Maintenance
  - Overbank Flooding
  - Pavement Flooding
  - Problem Area Identified Through Modeling
  - Candidate Structures for Floodproofing/Acquisition
  - Project Alternative Location
- River/Stream
- Municipal Boundary
- County Boundary
- DWP 100-year Inundation Area
- FEMA Floodplain**
  - Zone A; Zone AH; Zone AO
  - Zone AE



1 inch = 4,500 feet



December, 2009





**Figure 3.4.5**

**MIDLOTHIAN CREEK  
ALTERNATIVE  
MTCR-G1**  
Little Calumet River DWP

**Alternative Description:**  
Construct a 700 LF levee along Overhill Avenue and Oleander Avenue

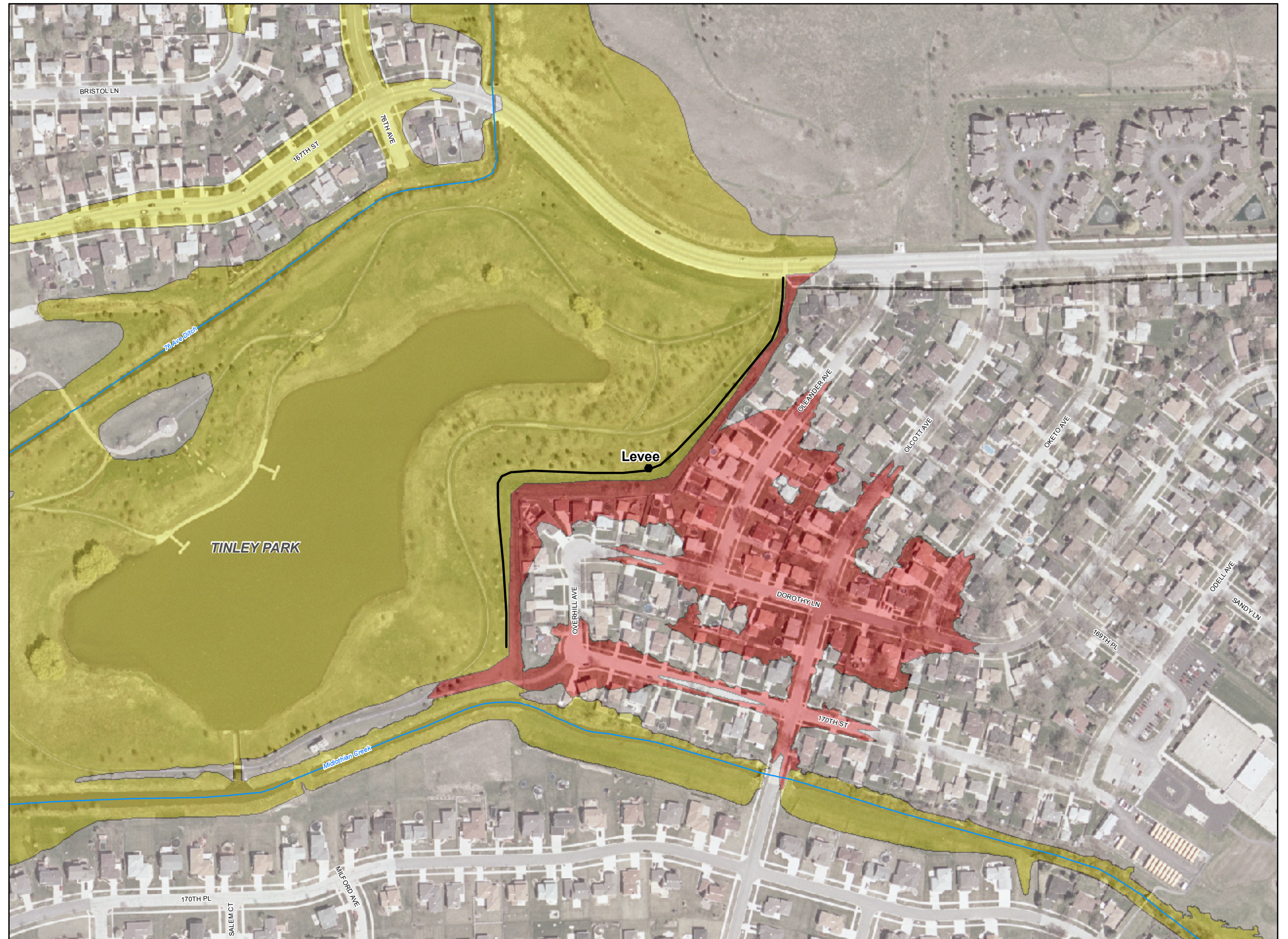
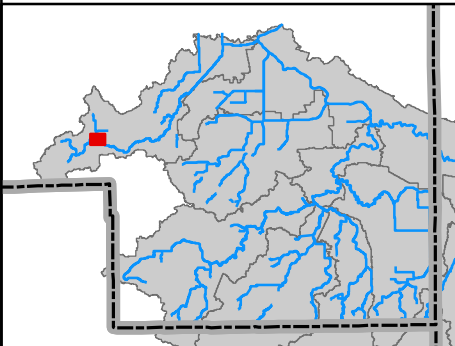
**Conceptual Level Cost:**  
\$1,710,000  
**Benefit:** \$134,000  
**B/C Ratio:** 0.08

- \* Candidate Structures for Floodproofing/Acquisition
- Regional Problems**
  - Bank Erosion
  - ▲ Maintenance
  - Overbank Flooding
  - ◆ Pavement Flooding
- Local Problems**
  - Bank Erosion
  - ▲ Maintenance
  - ◆ Pavement Flooding
  - ◆ Storm Sewer Flow Restriction
- River/Stream
- ▭ Municipalities
- ▭ County Boundary
- ▭ Project Alternative Location
- 100-year Inundation Area With Project
- 100-year Inundation Area Without Project

0 1 2 Inches  
1 inch = 250 feet



December, 2009





**Figure 3.4.6**

**MIDLOTHIAN CREEK  
ALTERNATIVE  
MTCR-G2**  
Little Calumet River DWP

**Alternative Description:**  
Streambank stabilization near Oak Park Avenue and 172nd Street and near Hickory Street and 66th Court

**Conceptual Level Cost:**  
\$1,569,000  
**Benefit:** \$1,110,000  
**B/C Ratio:** 0.71

- \* Candidate Structures for Floodproofing/Acquisition
- Regional Problems**
  - Bank Erosion
  - ▲ Maintenance
  - Overbank Flooding
  - ◆ Pavement Flooding
- Local Problems**
  - Bank Erosion
  - ▲ Maintenance
  - ◆ Pavement Flooding
  - ◆ Storm Sewer Flow Restriction
- River/Stream
- ▭ Municipalities
- ▭ County Boundary
- ▭ Project Alternative Location
- 100-year Inundation Area With Project
- 100-year Inundation Area Without Project

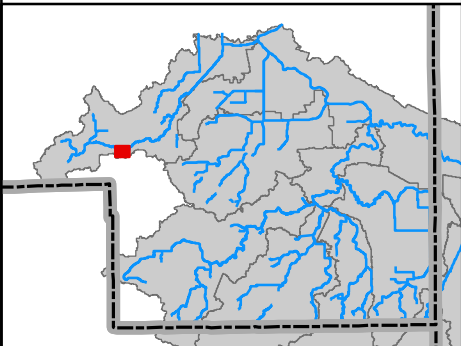
0 1 2 Inches

1 inch = 250 feet



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**Figure 3.4.7**

**MIDLOTHIAN CREEK  
ALTERNATIVE  
MTCR-G3  
Little Calumet River DWP**

**Alternative Description:**  
Replace 160th and 159th Street culverts and  
channel improvements between 160th and Oak  
Avenue

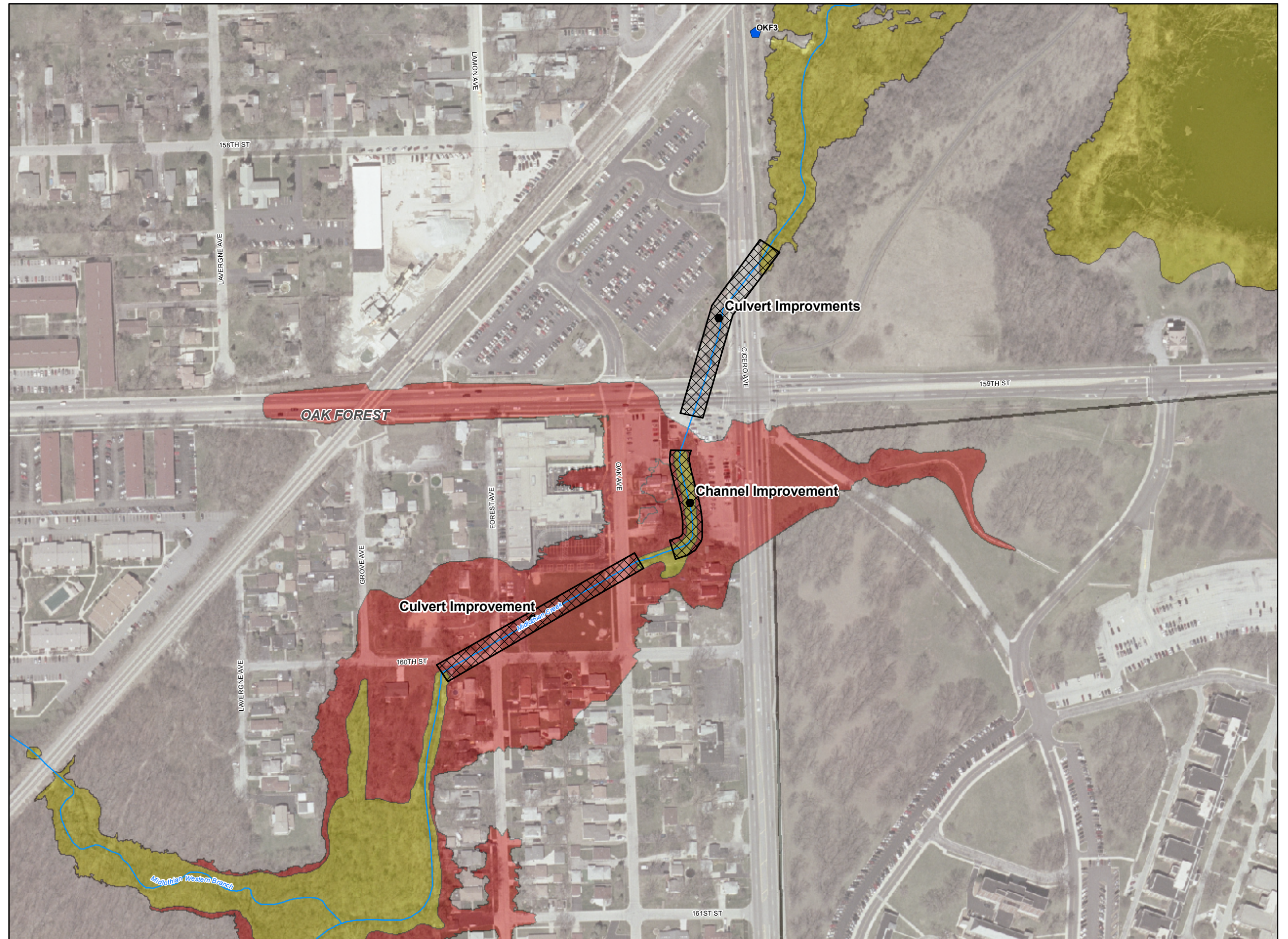
**Conceptual Level Cost:**  
\$3,455,000  
**Benefit:** \$37,000      **B/C Ratio:** 0.01

- \* Candidate Structures for Floodproofing/Acquisition
- Regional Problems**
- Bank Erosion
- ▲ Maintenance
- Overbank Flooding
- ◆ Pavement Flooding
- Local Problems**
- Bank Erosion
- ▲ Maintenance
- Pavement Flooding
- ◆ Storm Sewer Flow Restriction
- River/Stream
- ▭ Municipalities
- ▭ County Boundary
- ▭ Project Alternative Location
- 100-year Inundation Area With Project
- 100-year Inundation Area Without Project

0 1 2 Inches  
1 inch = 250 feet



December, 2009





**Figure 3.4.8**

**MIDLOTHIAN CREEK  
ALTERNATIVE  
MTCR-G4**  
Little Calumet River DWP

**Alternative Description:**  
Replace 155th and Kilpatrick Avenue culverts and construct a 700LF floodwall downstream of Kilpatrick Avenue and construct a 350LF floodwall upstream of Waverly Avenue

**Conceptual Level Cost:**  
\$27,700,000  
**Benefit:** \$1,143,000  
**B/C Ratio:** 0.04

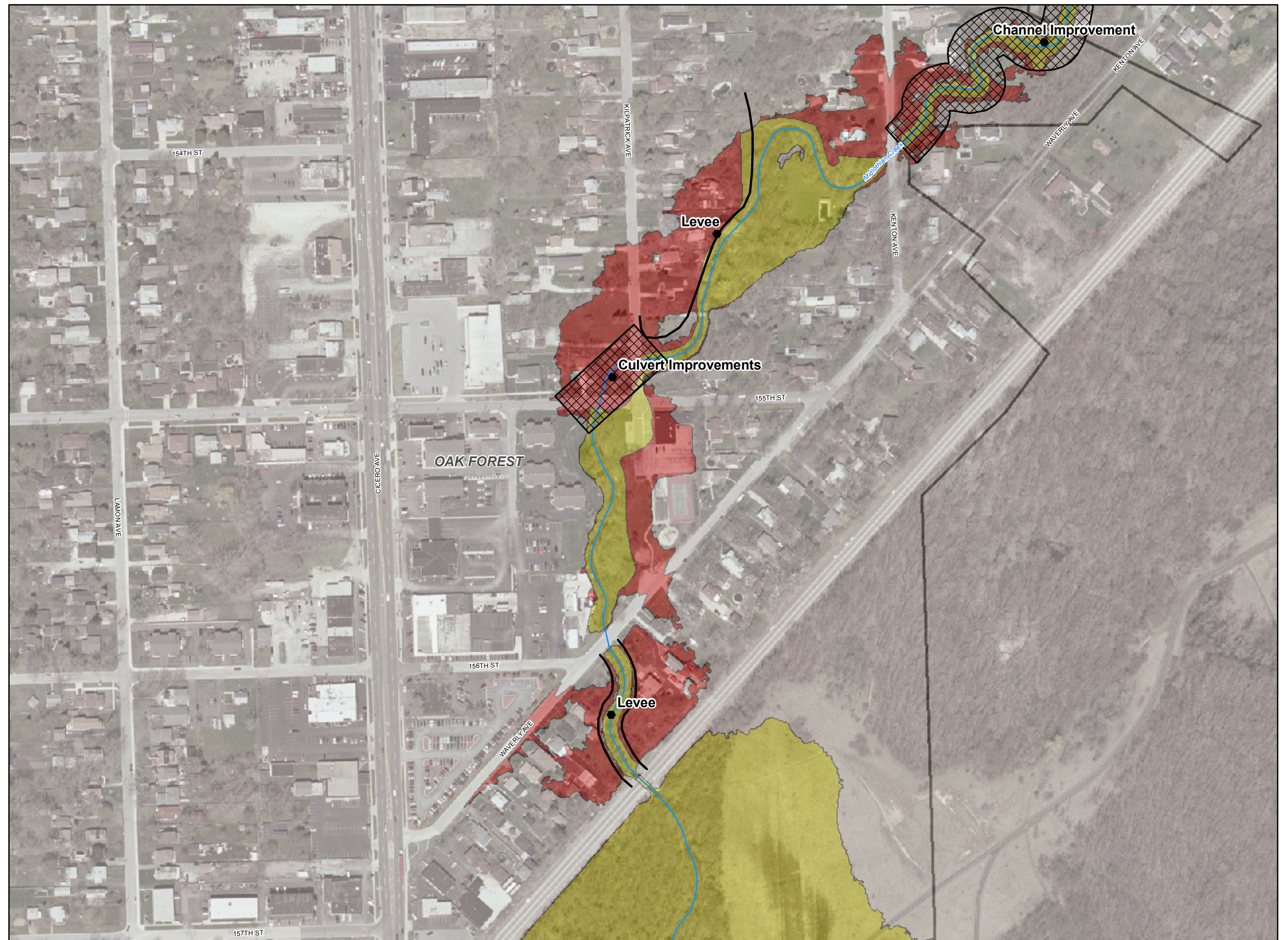
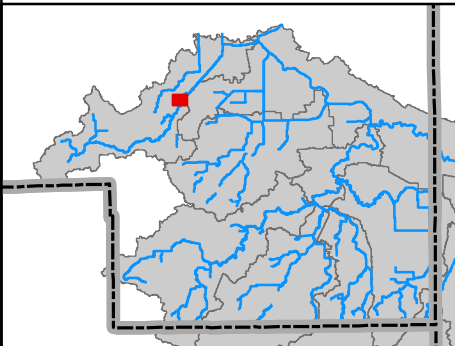
- \* Candidate Structures for Floodproofing/Acquisition
- Regional Problems**
  - Bank Erosion
  - ▲ Maintenance
  - Overbank Flooding
  - ◆ Pavement Flooding
- Local Problems**
  - Bank Erosion
  - ▲ Maintenance
  - ◆ Pavement Flooding
  - ◆ Storm Sewer Flow Restriction
- River/Stream
- ▭ Municipalities
- ▭ County Boundary
- ▭ Project Alternative Location
- 100-year Inundation Area With Project
- 100-year Inundation Area Without Project

0 1 2 Inches

1 inch = 250 feet



December, 2009





**Figure 3.4.9**

**MIDLOTHIAN CREEK  
ALTERNATIVE  
MTCR-G5**  
Little Calumet River DWP

**Alternative Description:**  
Construct a 25 ac-ft detention at Kilbourn and Waverly, channel improvements from 151st Street to Pulaski Road and between Kenton and Kilbourn Avenue

**Conceptual Level Cost:**  
\$21,000,000  
**Benefit:** \$58,000  
**B/C Ratio:** < 0.01

\* Candidate Structures for Floodproofing/Acquisition

**Regional Problems**

- Bank Erosion
- ▲ Maintenance
- Overbank Flooding
- ◆ Pavement Flooding

**Local Problems**

- Bank Erosion
- ▲ Maintenance
- ◆ Pavement Flooding
- ◆ Storm Sewer Flow Restriction

- River/Stream
- ▭ Municipalities
- ▭ County Boundary
- ▭ Project Alternative Location
- 100-year Inundation Area With Project
- 100-year Inundation Area Without Project

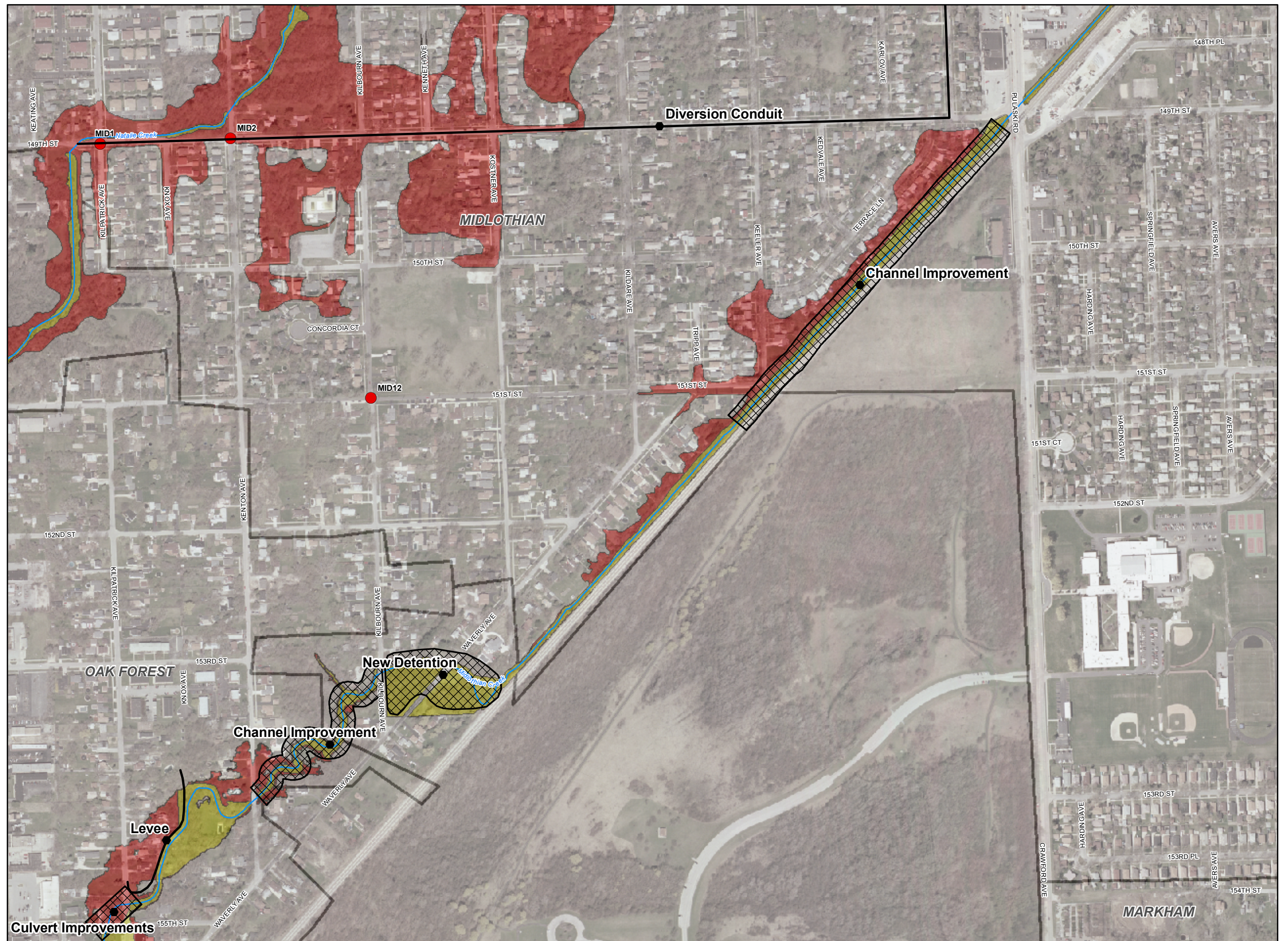
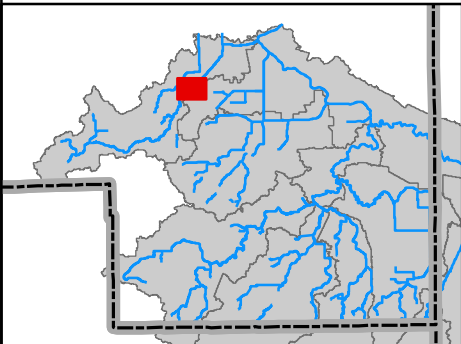
0 1 2 Inches

1 inch = 500 feet



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**Figure 3.4.10**

**MIDLOTHIAN CREEK  
ALTERNATIVE  
MTCR-G6**  
Little Calumet River DWP

**Alternative Description:**  
Channel improvements between 137th and 139th Street

**Conceptual Level Cost:**  
\$479,000  
**Benefit:** \$110,000  
**B/C Ratio:** 0.23

\* Candidate Structures for Floodproofing/Acquisition

**Regional Problems**

- Bank Erosion
- ▲ Maintenance
- Overbank Flooding
- ◆ Pavement Flooding

**Local Problems**

- Bank Erosion
- ▲ Maintenance
- ◆ Pavement Flooding
- ◆ Storm Sewer Flow Restriction

— River/Stream

▭ Municipalities

▭ County Boundary

▨ Project Alternative Location

■ 100-year Inundation Area With Project

■ 100-year Inundation Area Without Project

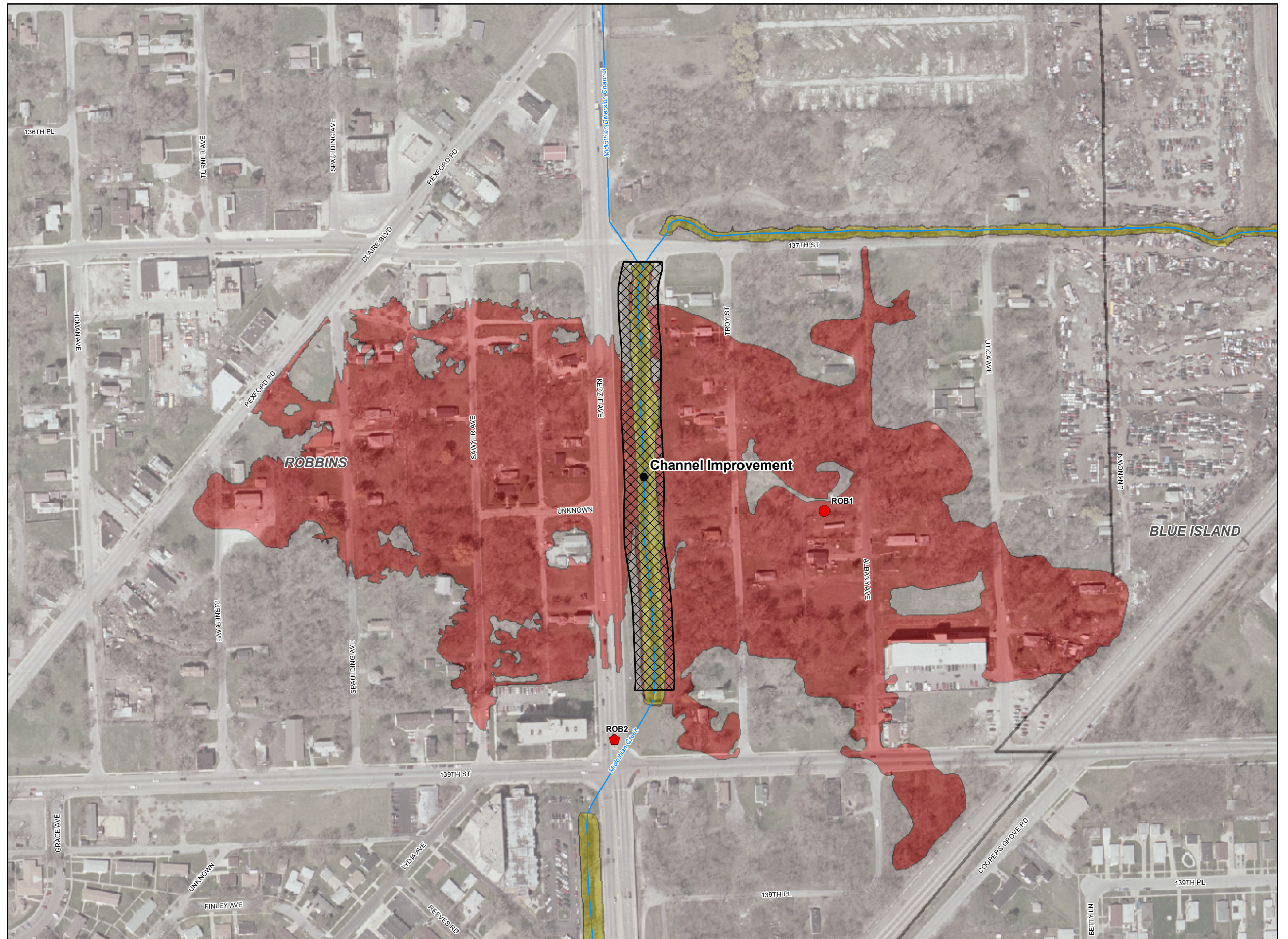
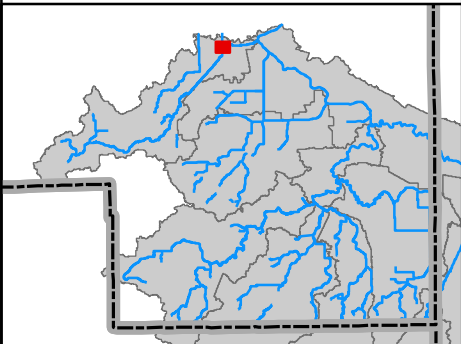
0 1 2 Inches

1 inch = 250 feet



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December, 2009





**Figure 3.4.11**

**MIDLOTHIAN CREEK  
ALTERNATIVE  
NCR-G1**  
Little Calumet River DWP

**Alternative Description:**  
Construct a 190 ac-ft detention facility at Leclaire Avenue and 153rd street and a 6600 LF diversion conduit from Kilpatrick to Keystone Avenue

**Conceptual Level Cost:**  
\$61,940,000  
**Benefit:** \$14,700,000  
**B/C Ratio:** 0.24

- \* Candidate Structures for Floodproofing/Acquisition
- Regional Problems**
  - Bank Erosion
  - ▲ Maintenance
  - Overbank Flooding
  - ◆ Pavement Flooding
- Local Problems**
  - Bank Erosion
  - ▲ Maintenance
  - ◆ Pavement Flooding
  - ◆ Storm Sewer Flow Restriction
- River/Stream
- ▭ Municipalities
- ▭ County Boundary
- ▭ Project Alternative Location
- 100-year Inundation Area With Project
- 100-year Inundation Area Without Project

0 1 2 Inches

1 inch = 750 feet



December, 2009

