

# CHIPPEWA CREEK FLOOD REDUCTION PROJECT NEAR ECHO LANE

## PROJECT AREA



□ Parcel Boundary    / Stream    / Culverted Stream

0 100 200 FEET

## PROJECT COMPONENTS: REGIONAL STORMWATER SYSTEM (RSS)

### Basin CC00231



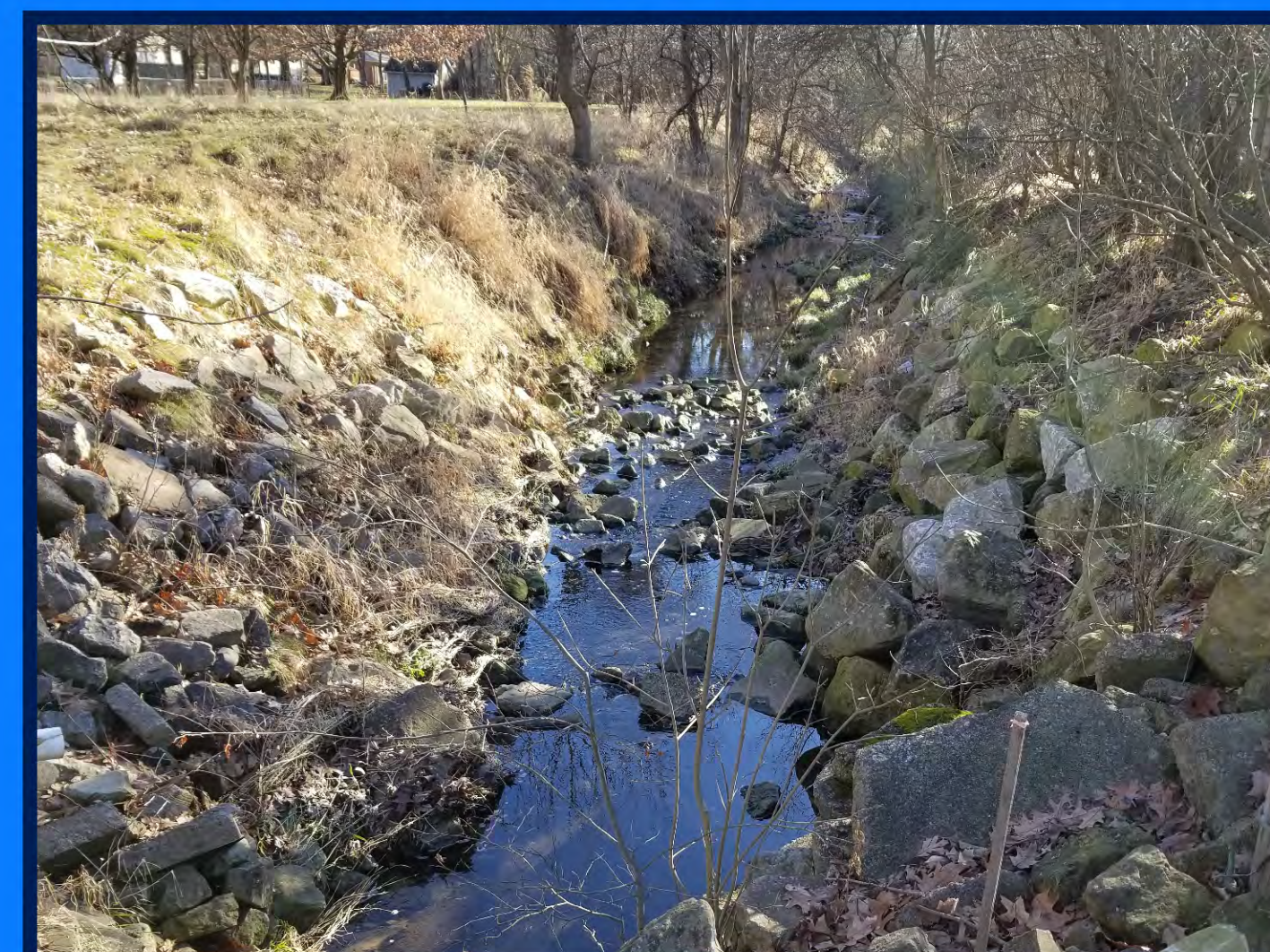
Existing basin that detains stormwater runoff from local storm sewers and conveys flow to Culverted Stream CC00230.

### Culverted Stream CC00230



Existing storm sewers that convey flow from Basin CC00231 and local storm sewers, under Echo Lane, to Stream CC00184.

### Stream CC00184



Existing, natural section of Chippewa Creek that conveys flow from Culverted Stream CC00230 and local storm sewers to Culverted Stream CC00183.

### Culverted Stream CC00183

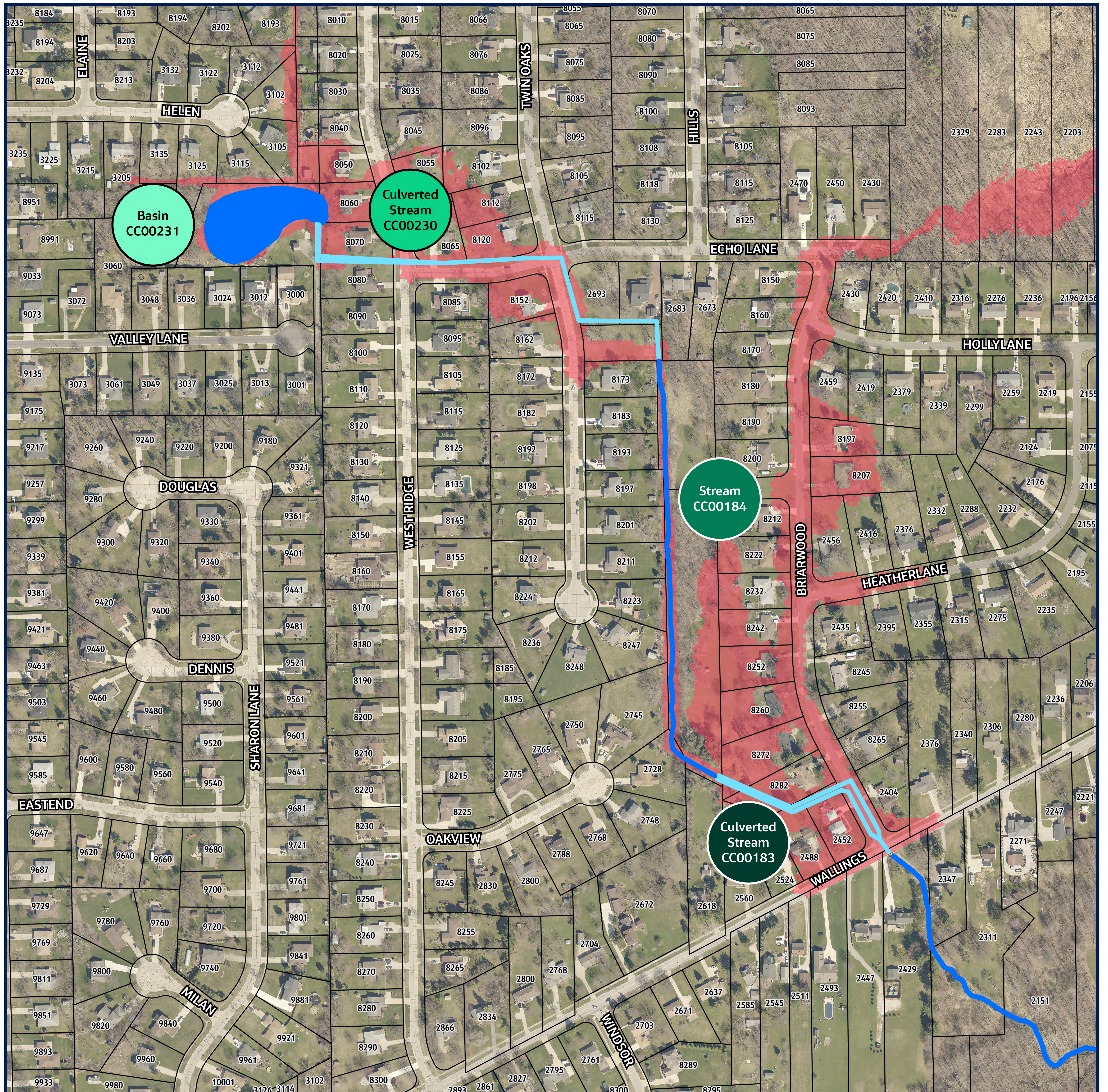


Existing storm sewers that convey flow from Stream CC00184 and local storm sewers, under Wallings Road, to the downstream sections of Chippewa Creek.

### RSS FLOW DIAGRAM



## EXISTING CONDITION ESTIMATED FLOODING EXTENTS\* (100-year, 24-hour design storm)



■ Flooding Extents   
  Parcel Boundary   
 — Stream   
 — Culverted Stream

↑ 0 100 200 FEET

\* Flooding extents are based on results of hydrologic and hydraulic modeling; actual flooding extents may vary

## PHOTOS SHOWING FLOODING AFTER RECENT RAIN EVENTS

The Chippewa Creek Flood Reduction Project Near Echo Lane aims to reduce flooding impacts to houses and roads in the neighborhood. Estimated reductions in flooding from proposed stormwater infrastructure improvements will continue to be refined throughout the design process.



Flooding on Twin Oaks (June 2019)



Flooding near Echo Lane and Briarwood (June 2019)

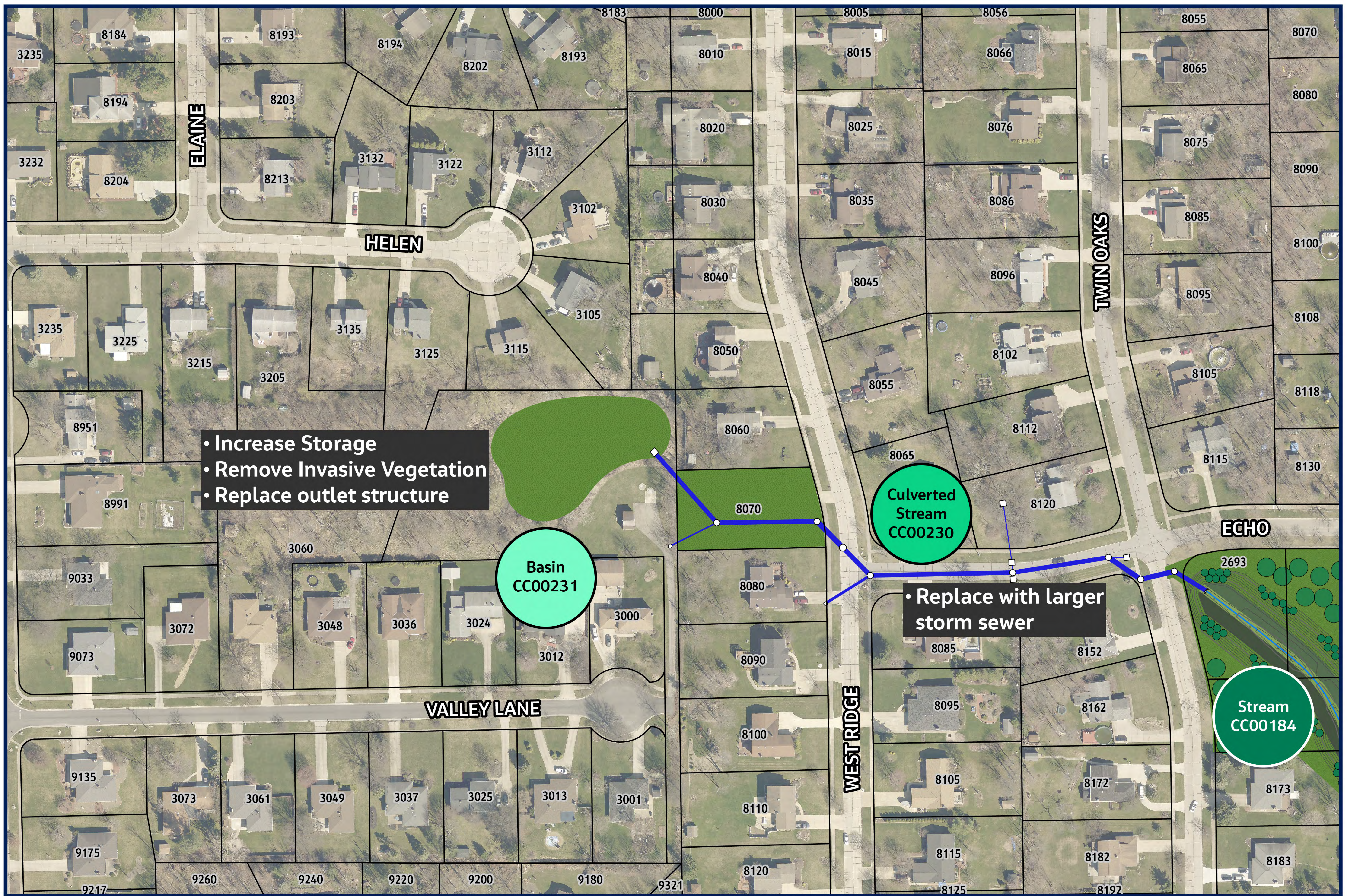


Flooding downstream of Wallings Road (July 2019)



Flooding on West Ridge (July 2019)

## PRELIMINARY CONCEPT (Basin CC00231 and Culverted Stream CC00230)



Preliminary Concept for Proposed Stormwater Infrastructure Improvements

\*Note that the concept will continue to be refined based on coordination with property owners and stakeholders.

### Basin CC00231



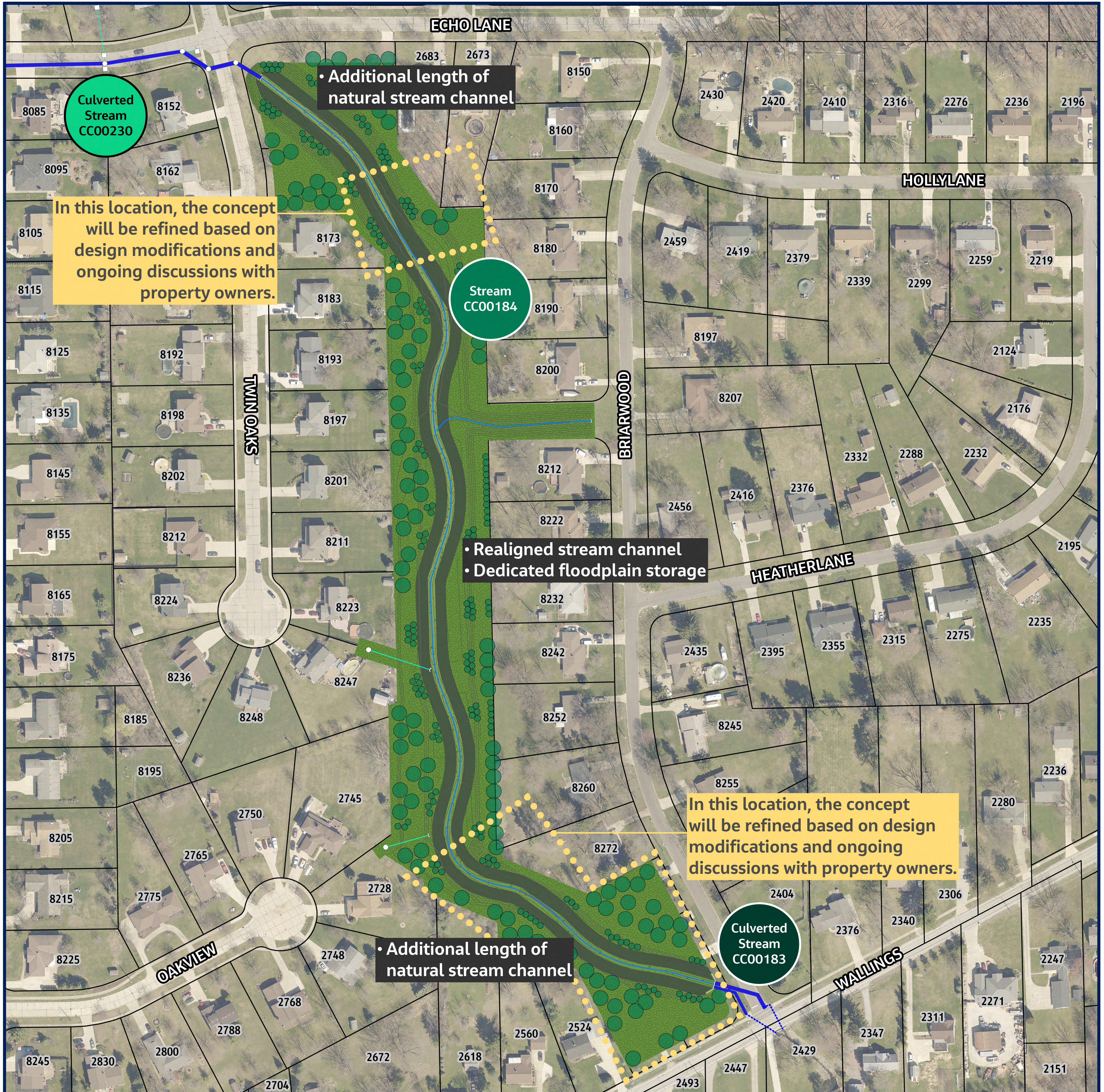
EXISTING	PROPOSED
<ul style="list-style-type: none"> <li>Accumulated sediment has reduced storage capacity</li> <li>Invasive vegetation limits native vegetation and complicates maintenance</li> <li>Outlet structure is deteriorating</li> </ul>	<ul style="list-style-type: none"> <li>Remove sediment to increase storage capacity</li> <li>Remove invasive species</li> <li>Replace the basin outlet with a new structure that optimizes storage and improves operations and maintenance</li> </ul>

### Culverted Stream CC00230

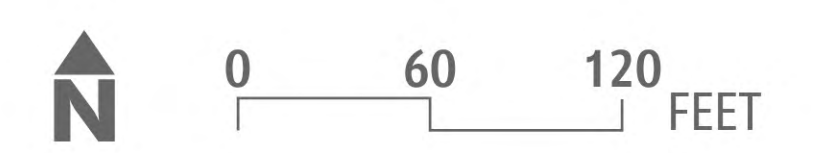


EXISTING	PROPOSED
<ul style="list-style-type: none"> <li>Existing culverted stream has multiple pipe sizes, materials, and slopes which reduce capacity and contribute to flooding</li> <li>Existing alignment presents operations and maintenance challenges</li> </ul>	<ul style="list-style-type: none"> <li>Replace with a new, larger storm sewer with increased capacity</li> <li>Proposed alignment is primarily within existing right-of-way</li> </ul>

## PRELIMINARY CONCEPT (Stream CC00184 and Culverted Stream CC00183)

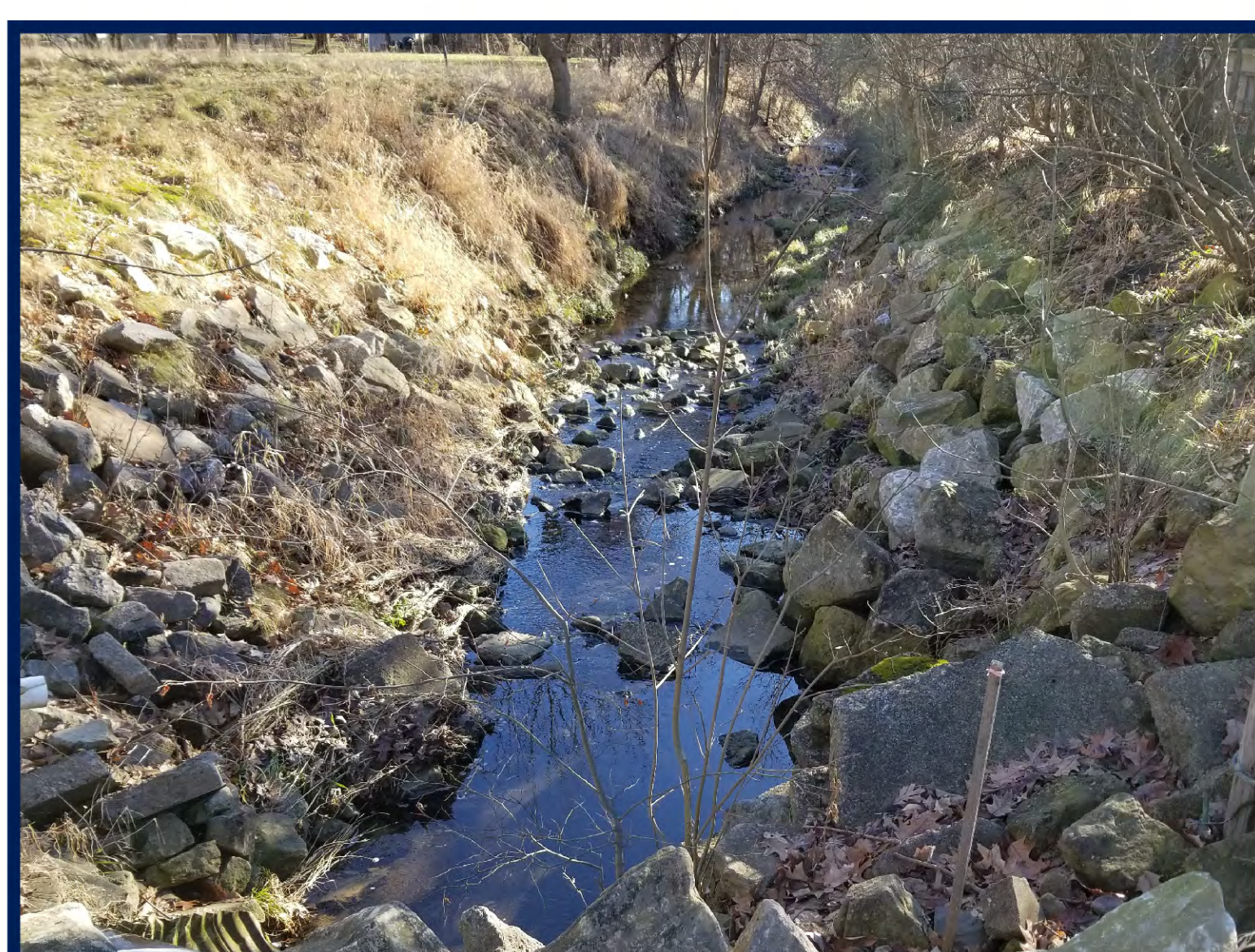


### Preliminary Concept for Proposed Stormwater Infrastructure Improvements



\*Note that the concept will continue to be refined based on coordination with property owners and stakeholders.

### Stream CC00184 and Culverted Stream CC00183



EXISTING	PROPOSED
<ul style="list-style-type: none"> <li>Stream channel has been modified over time to accommodate development</li> <li>Linear drainage channel has insufficient floodplain storage</li> </ul>	<ul style="list-style-type: none"> <li>Realign the stream channel to restore a more natural, winding stream with dedicated floodplain storage</li> <li>"Daylight" upstream portions of the culverted stream</li> </ul>