

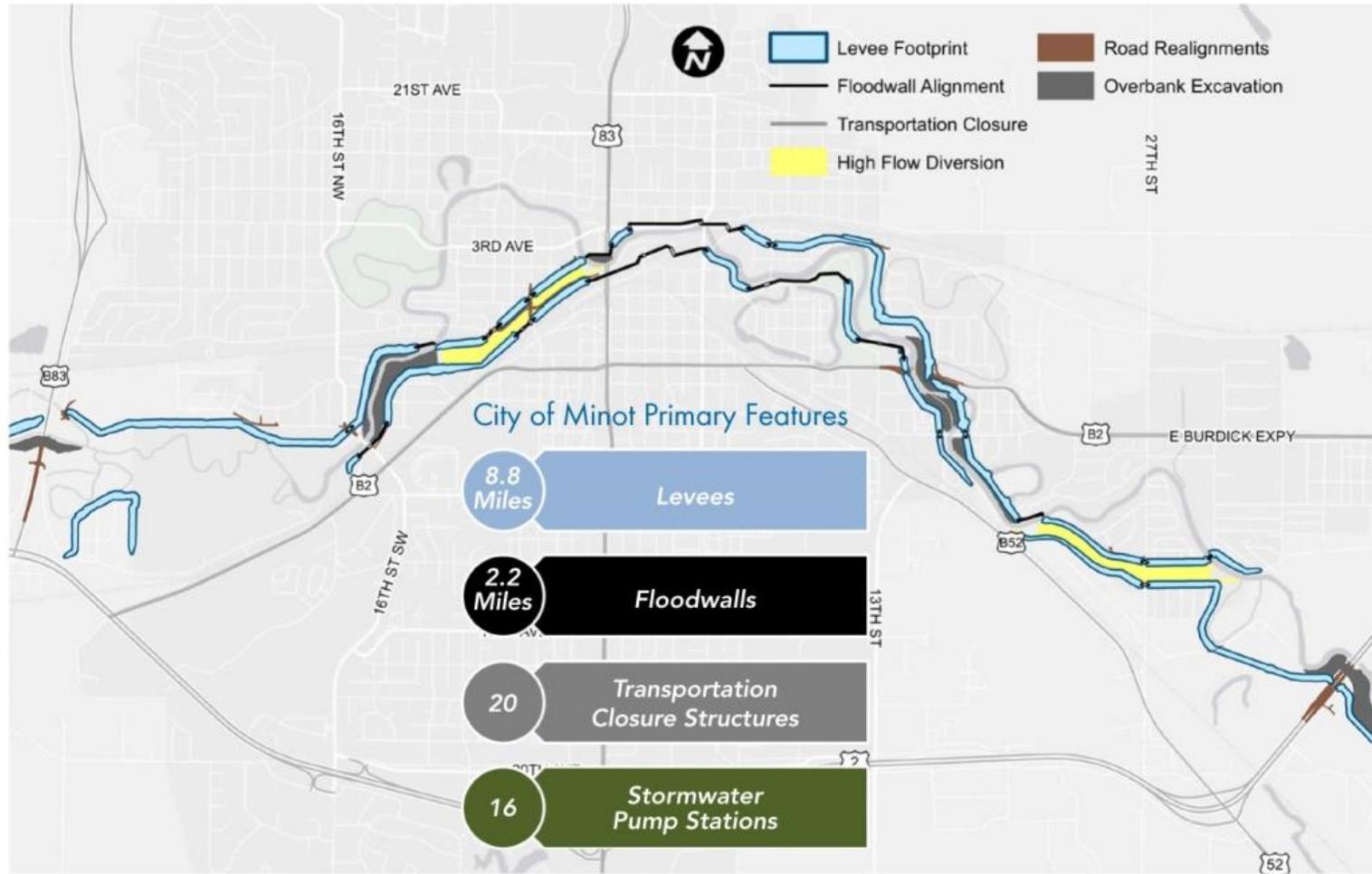
Mouse River Enhanced Flood Protection Project Phase MI-2A Perkett Ditch Improvements

PUBLIC INFORMATION MEETING

APRIL 14, 2016

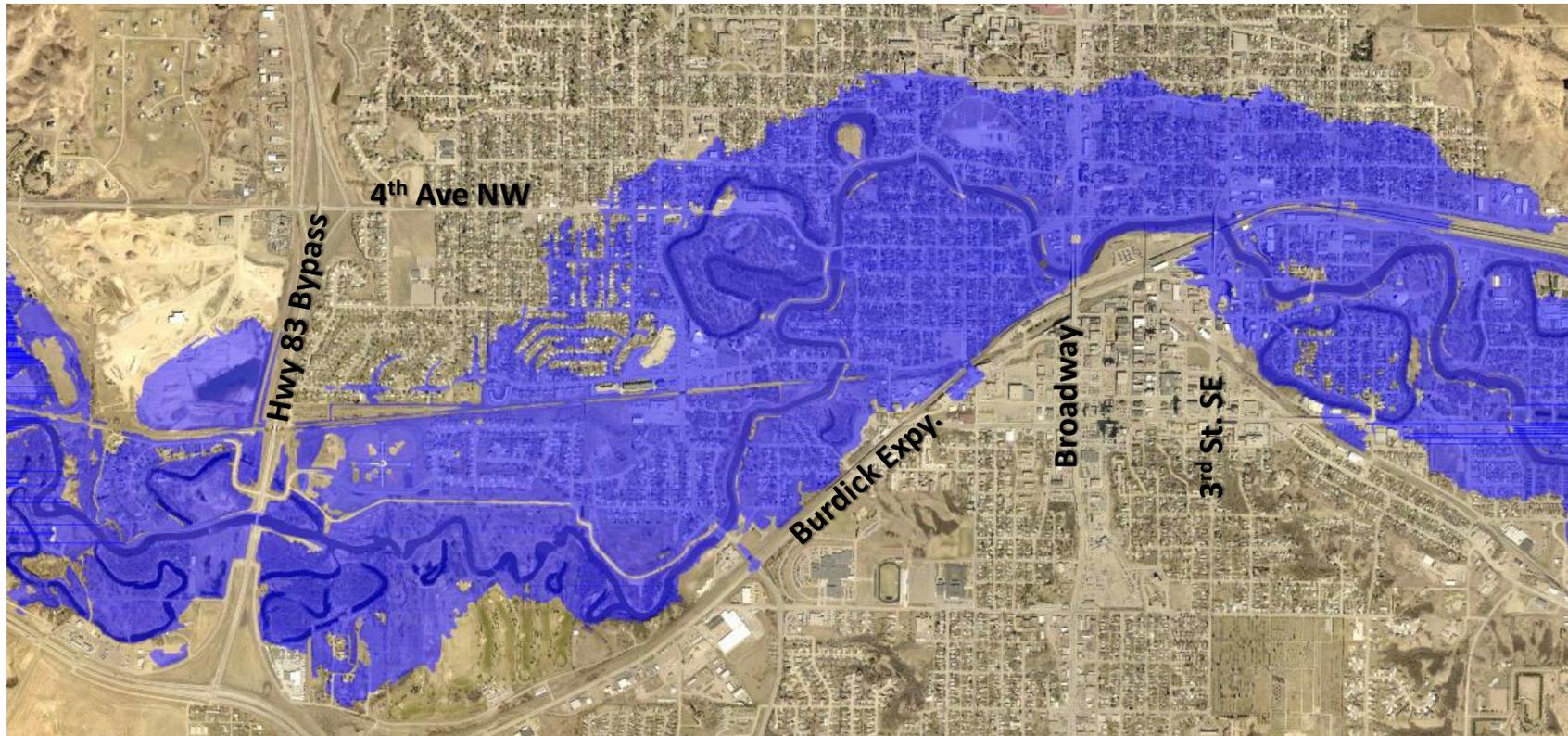


MREFPP Minot Overview



Future Regulatory (FEMA) Floodplain

Anticipated Effective Date April 2018

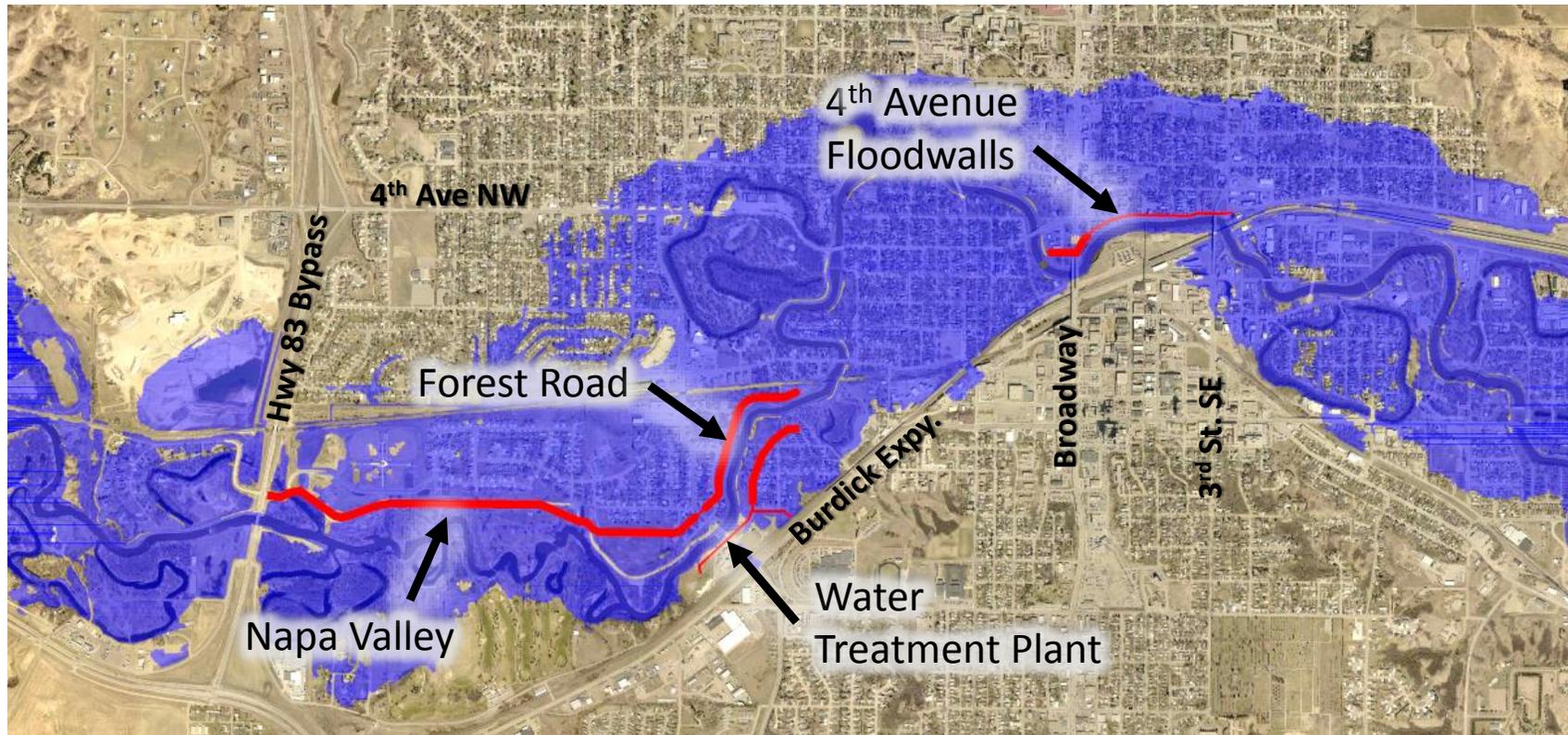


The Initial Focus in Minot

- West Minot
- ~60% of Homes Protected by Constructing ~40% of Total Project in Minot
- Remove Mandatory Flood Insurance Purchase Requirements Resulting from FEMA Remapping
- Design Features to Protect From a Similar Flood as 2011

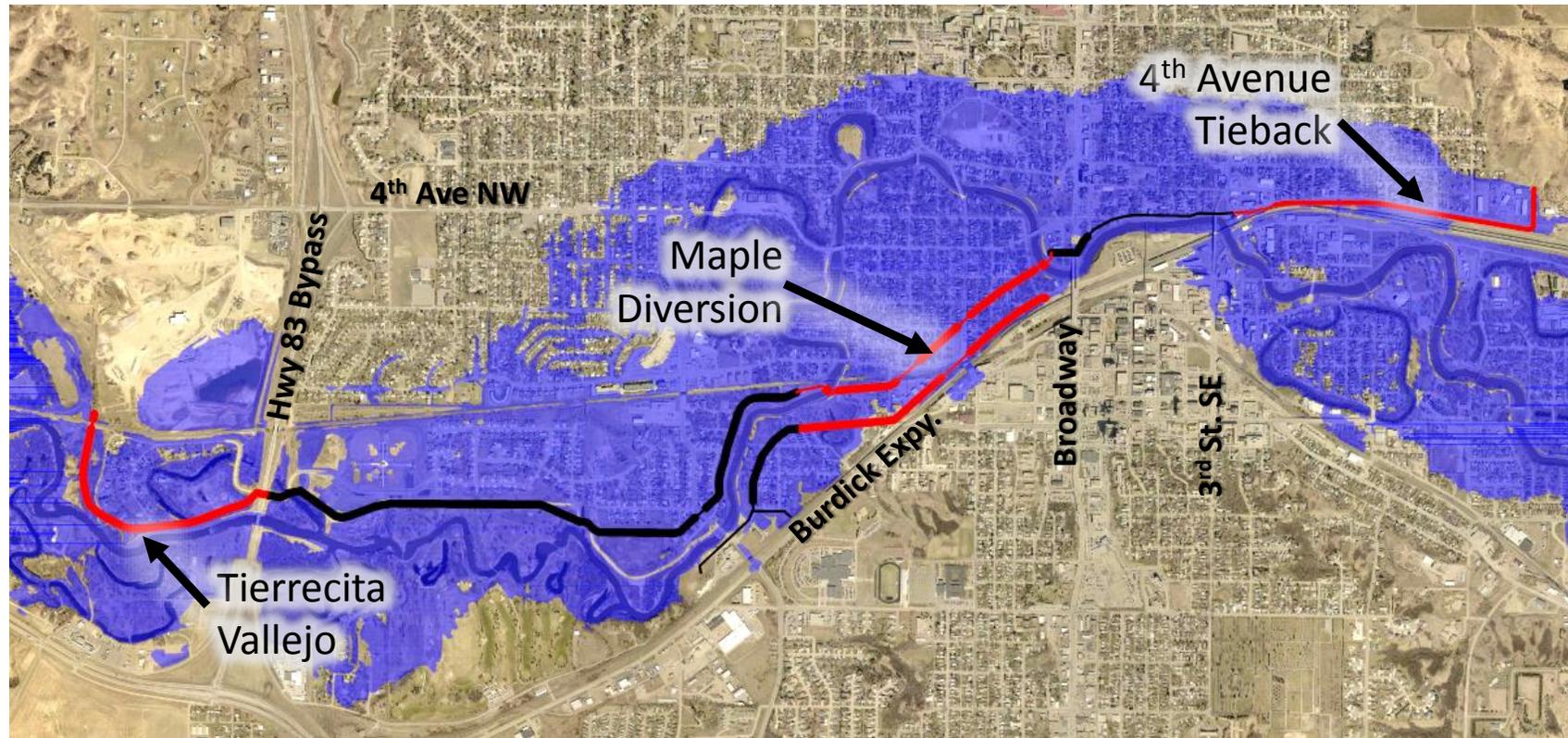
The Initial Focus in Minot

Phases Currently In Design or Under Construction



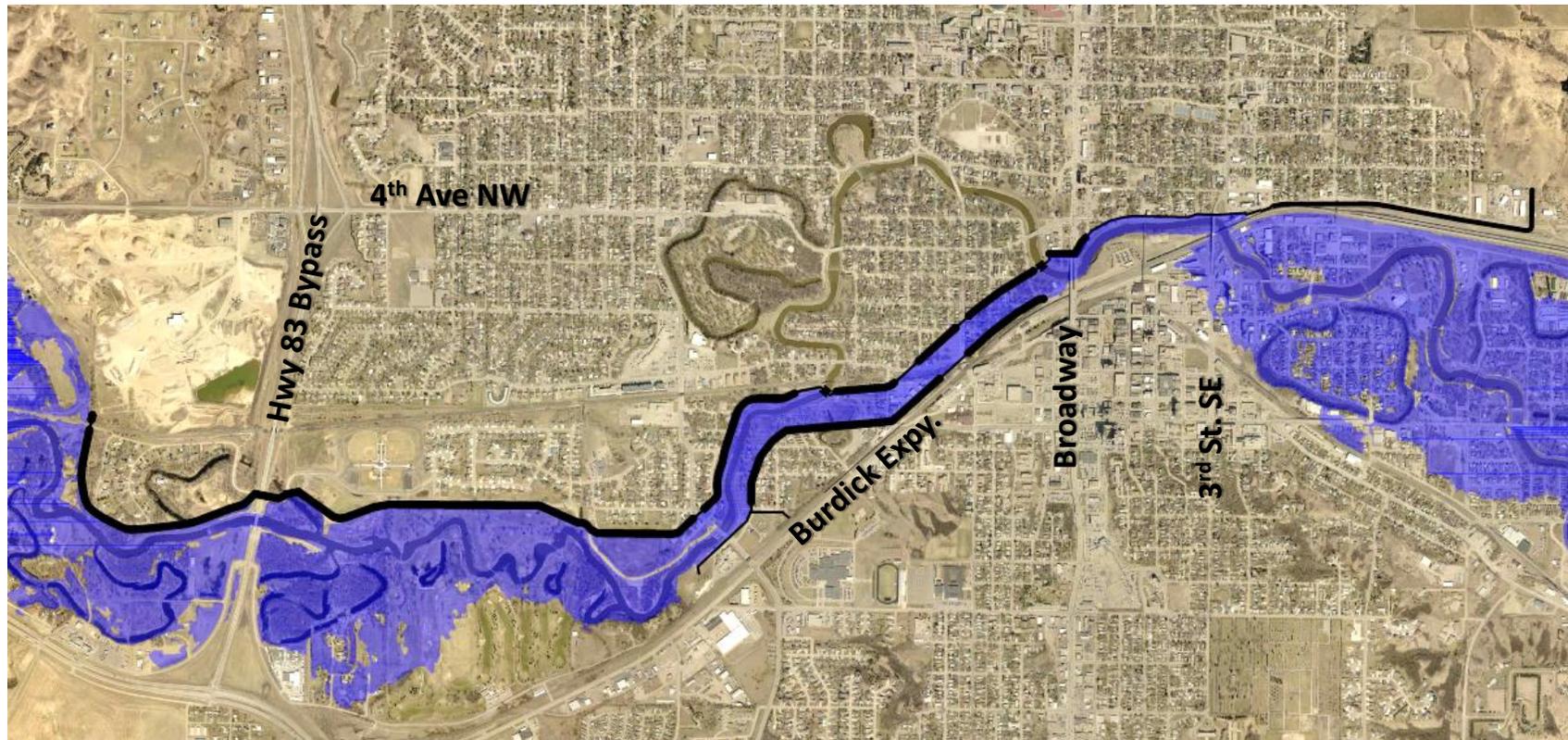
The Initial Focus in Minot

Future Phases



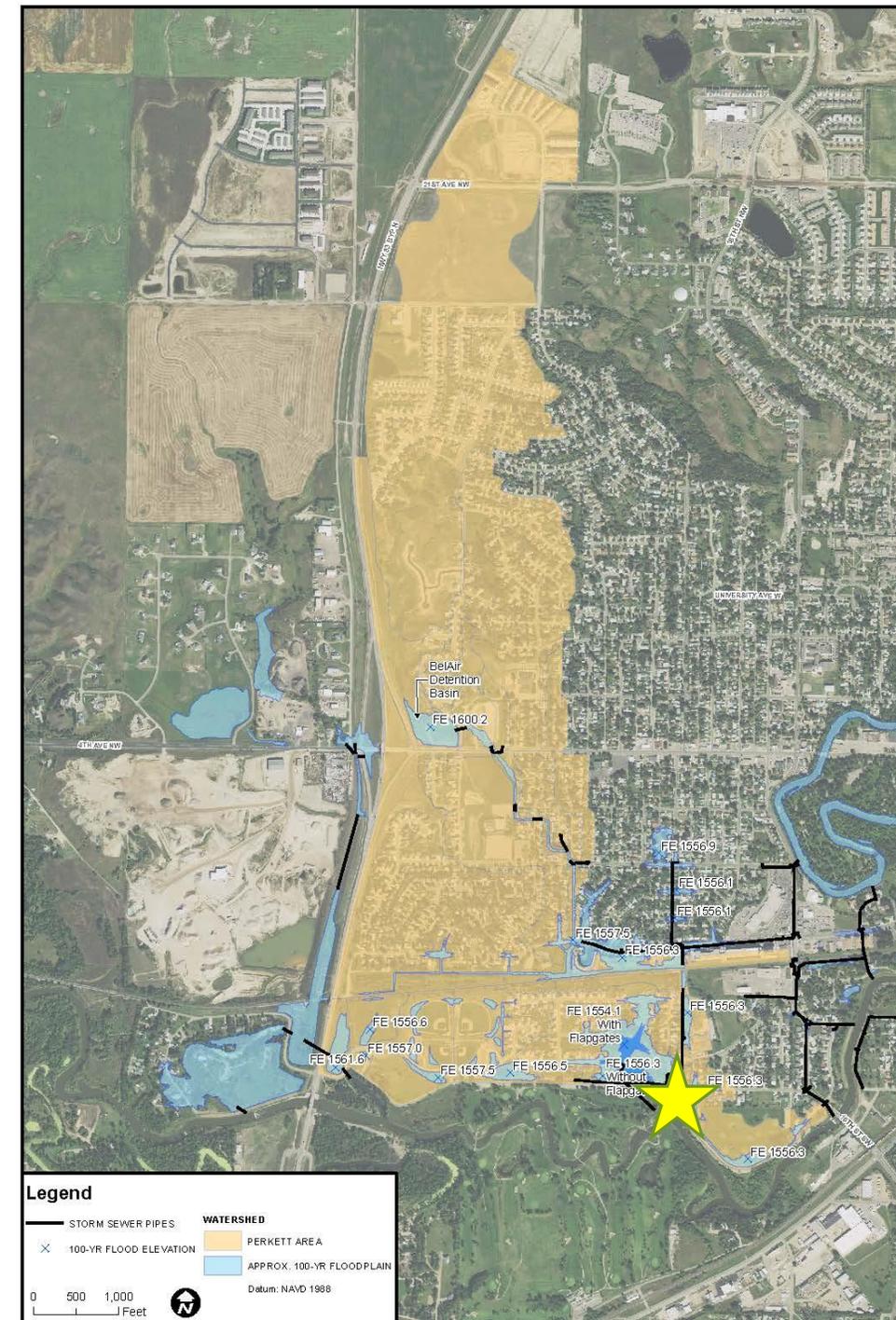
The Initial Focus in Minot

Regulatory (FEMA) Floodplain Following Construction of Initial Phases



Interior Drainage

- 600-700 Acres Drains Toward Napa Valley Levee System
- During a River Flood, Gates Along Levee System are Closed, Blocking Natural Drainage
- Pump Station ★ is Necessary



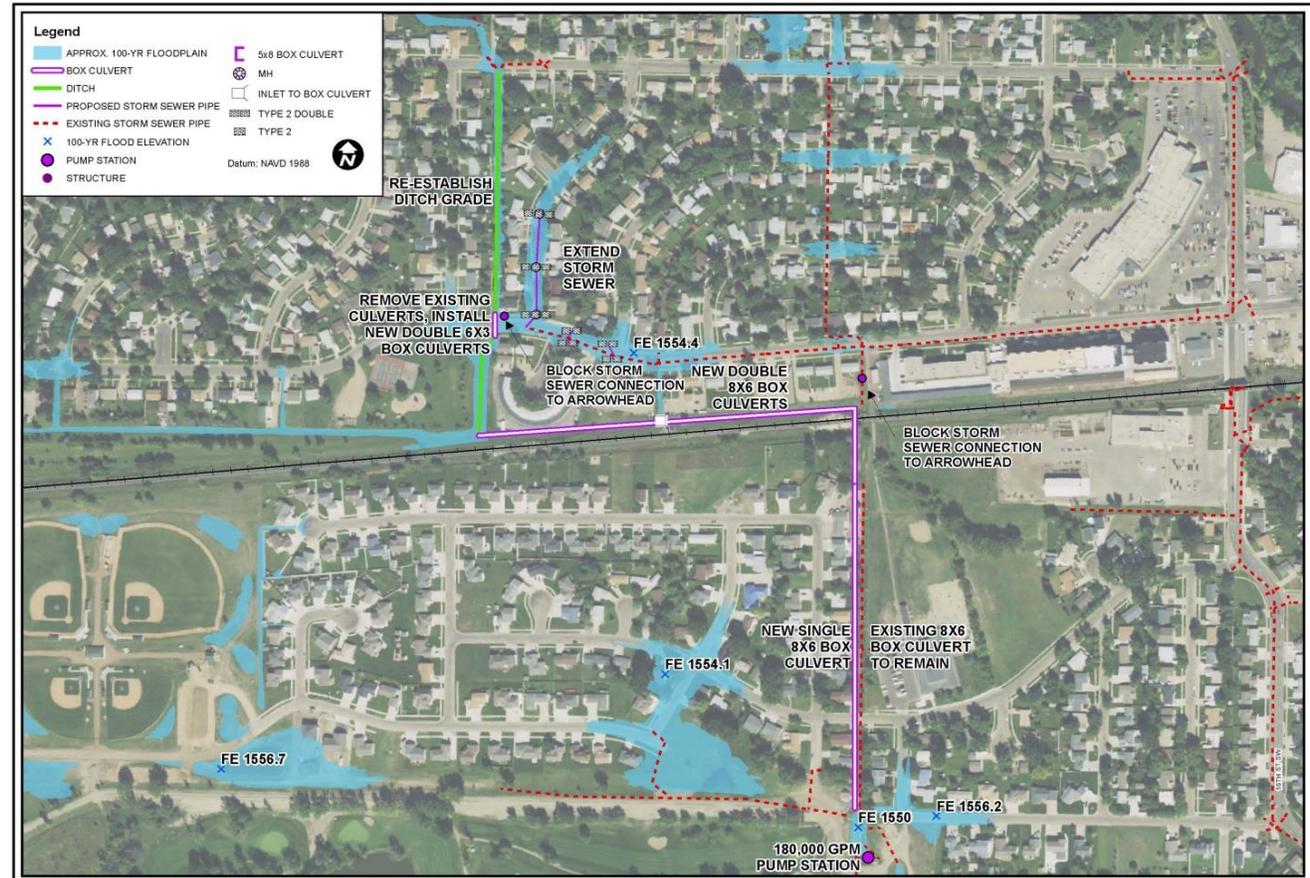
Several Alternatives Considered

1. Construct New Box Culvert Storm Sewer to New Large Perkett Pump Station
2. Divert Drainage Along 2nd Avenue NW to Oak Park; Moderate Pump Station at Perkett
3. Divert Drainage Along W Central Avenue to Oak Park; Moderate Pump Station at Perkett
4. Detention Storage on South Side of 2nd Avenue SW in Flood-Prone Properties; Small Pump Station at Perkett
5. Detention Storage at Centennial Forest; Small Pump Station at Perkett

Alternative 1

1. Construct New Box Culvert Storm Sewer to New Large Perkett Pump Station

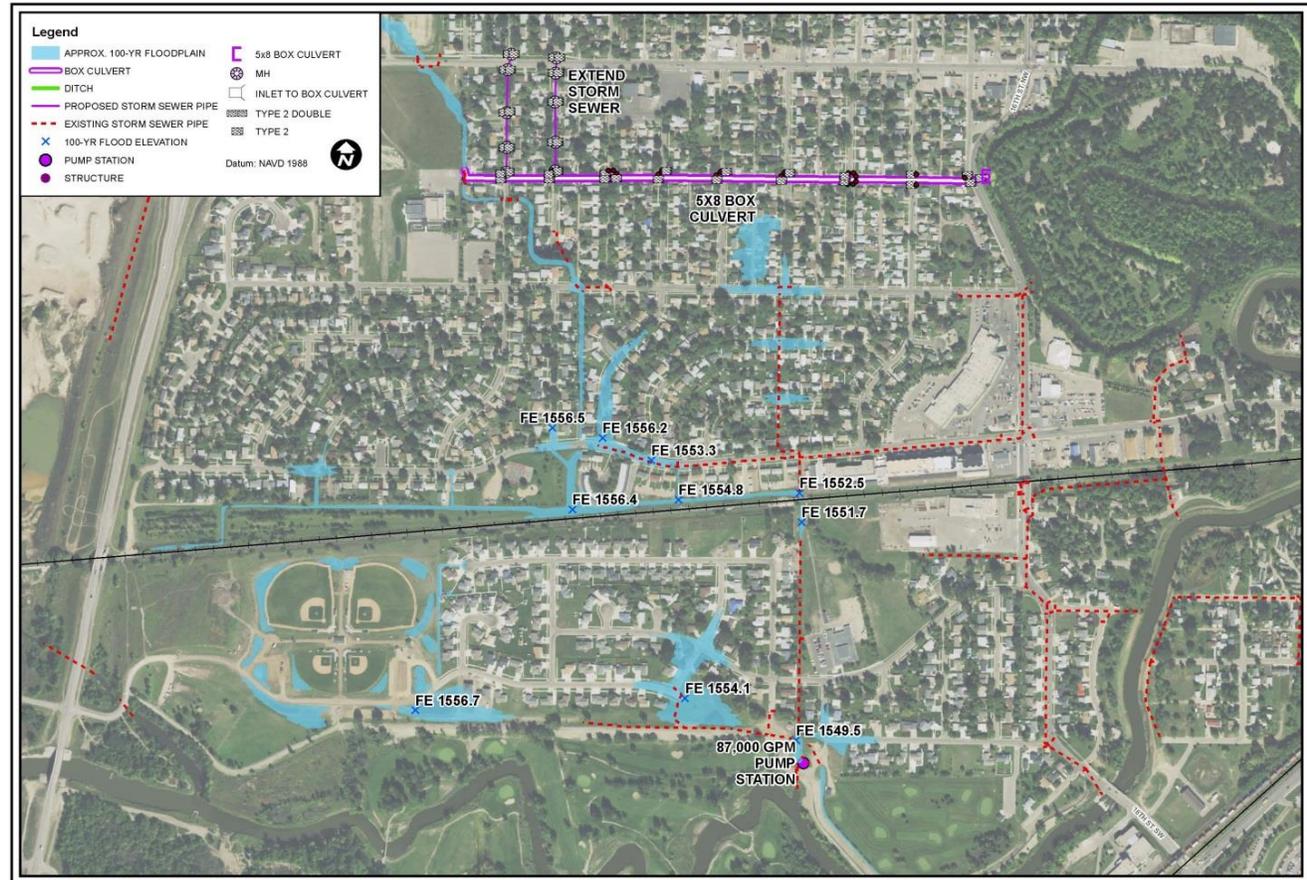
\$19 Million



Alternative 2

2. Divert Drainage Along 2nd Avenue NW to Oak Park; Moderate Pump Station at Perkett

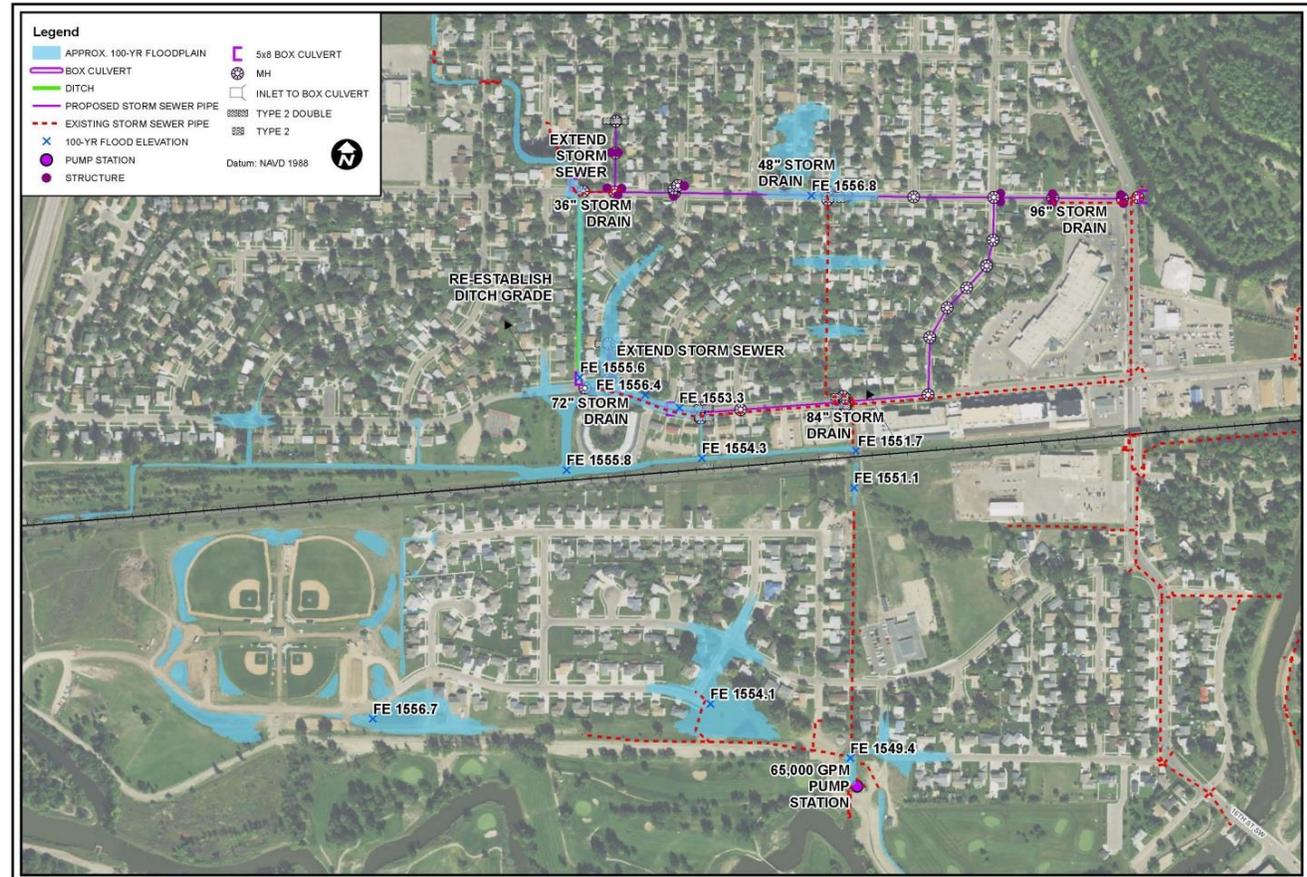
\$13 Million



Alternative 3

3. Divert Drainage Along W Central Avenue to Oak Park; Moderate Pump Station at Perkett

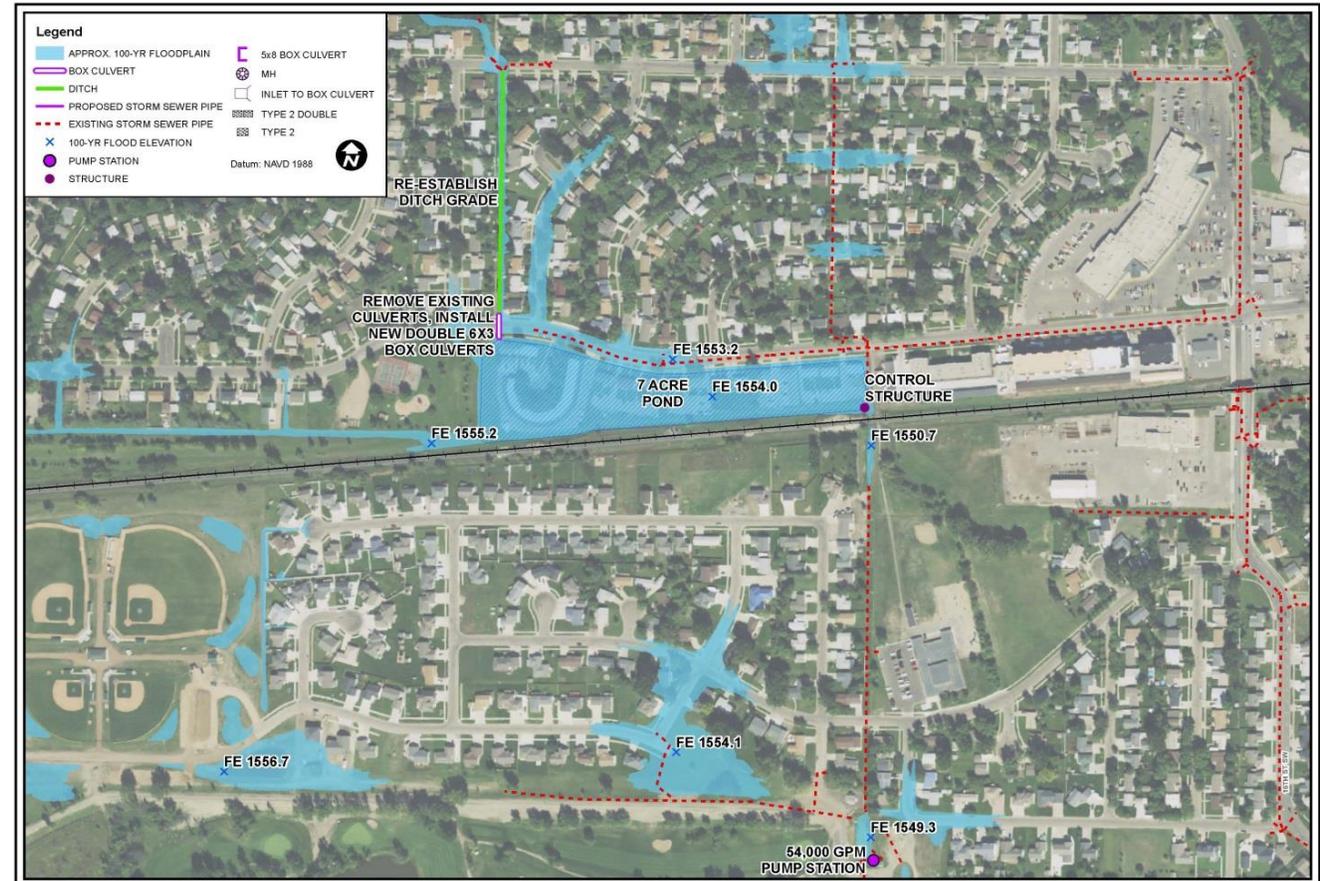
\$15 Million



Alternative 4

4. Detention Storage on South Side of 2nd Avenue SW in Flood-Prone Properties; Small Pump Station at Perkett

\$19 Million



Alternative 5

5. Detention Storage at Centennial Forest; Small Pump Station at Perkett

\$8 Million

Preferred Alternative



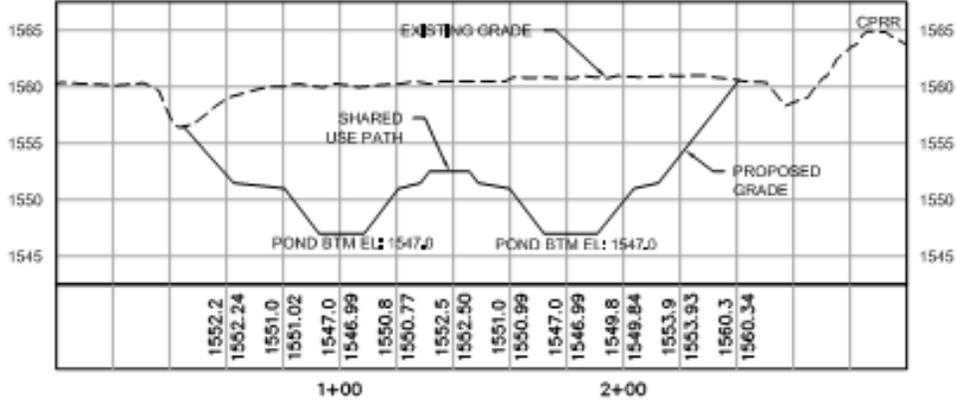
Phase MI-2A Perkett Ditch Improvements



Phase MI-2A Perkett Ditch Improvements

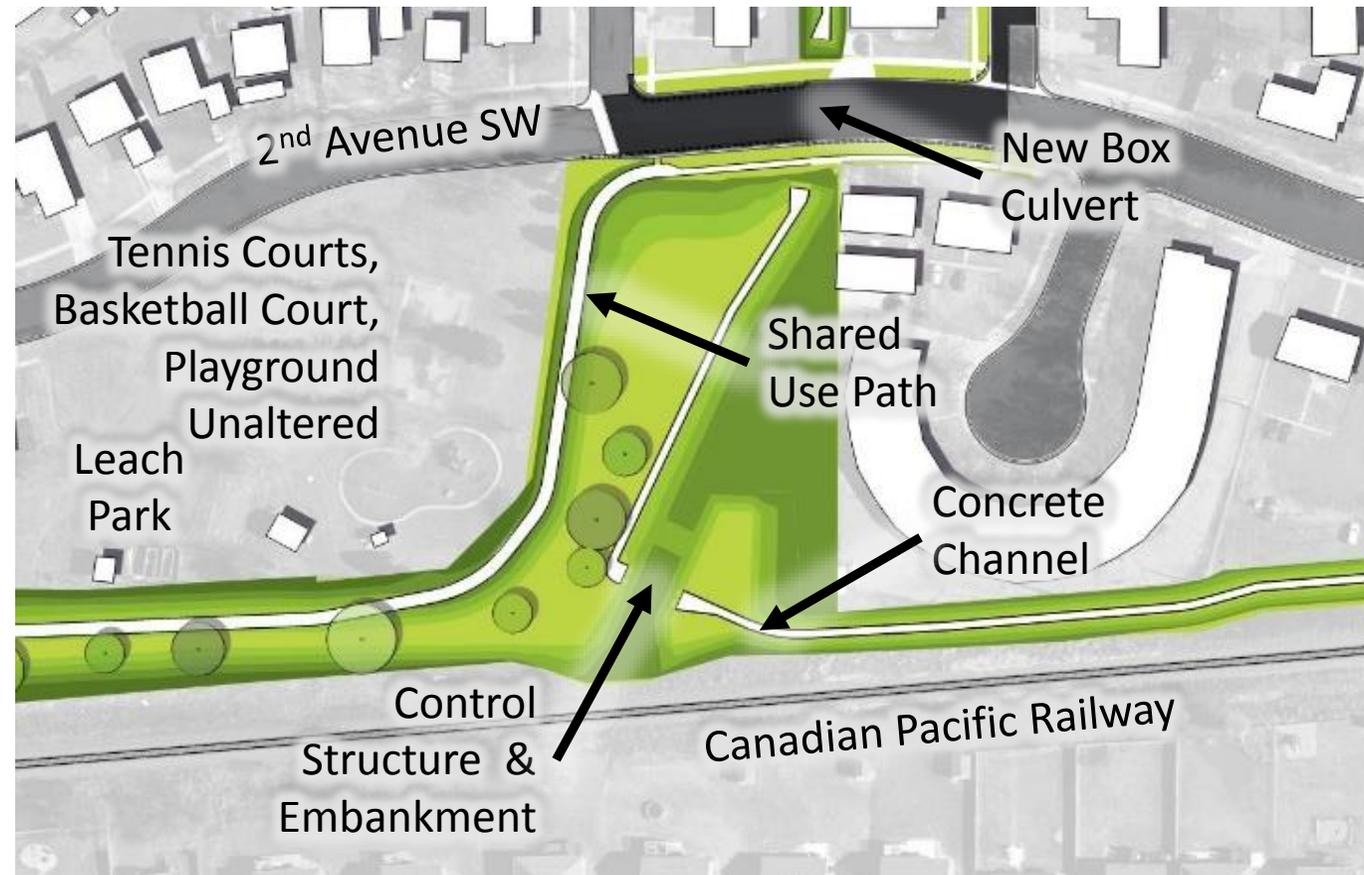


Phase MI-2A Perkett Ditch Improvements



2 SECTION

Phase MI-2A Perkett Ditch Improvements



Phase MI-2A Perkett Ditch Improvements



Phase MI-2A Perkett Ditch Improvements



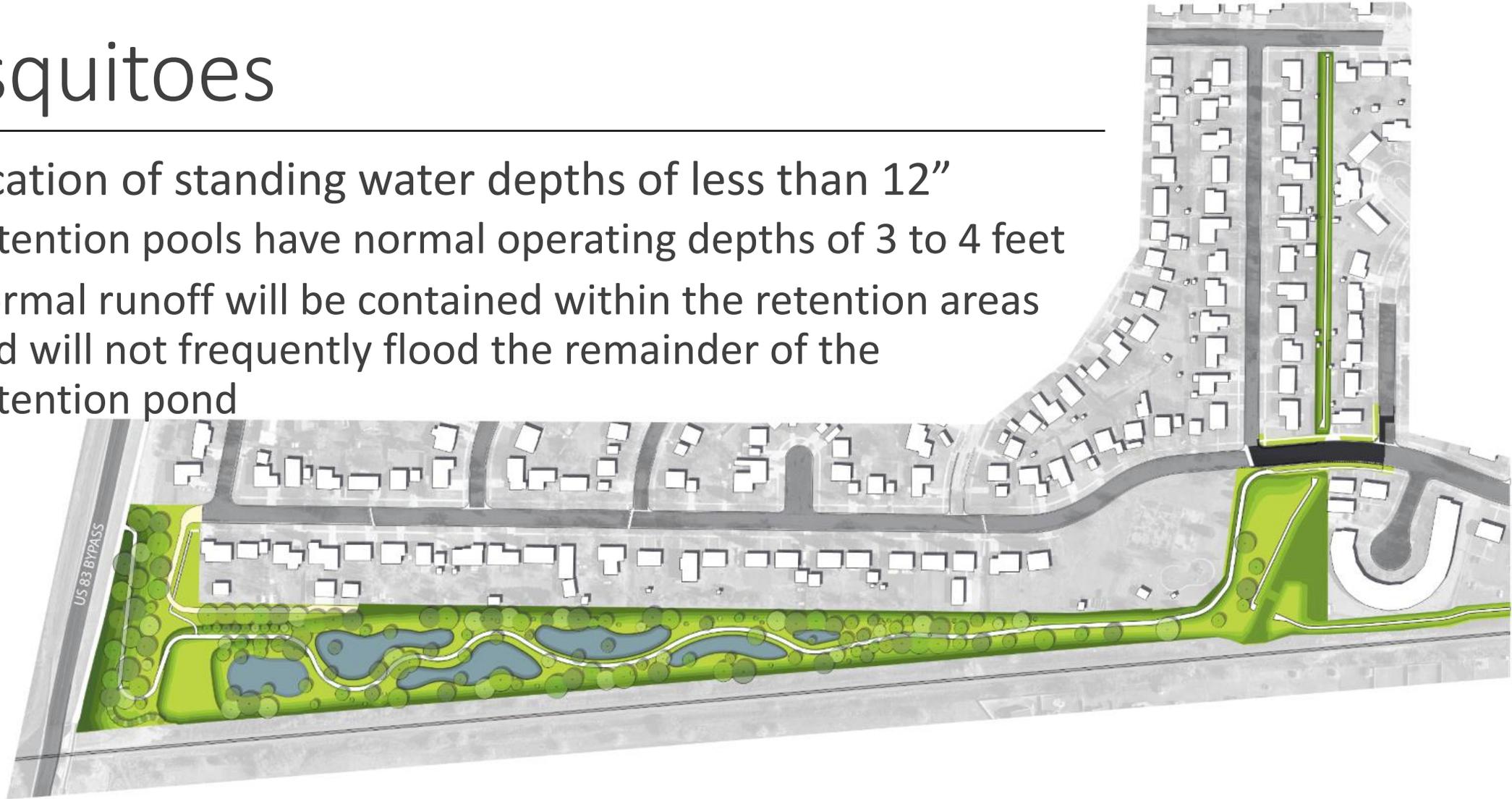
Additional Design Considerations

1. Mosquitoes
2. Water Safety
3. Construction Safety

Mosquitoes

Limit location of standing water depths of less than 12"

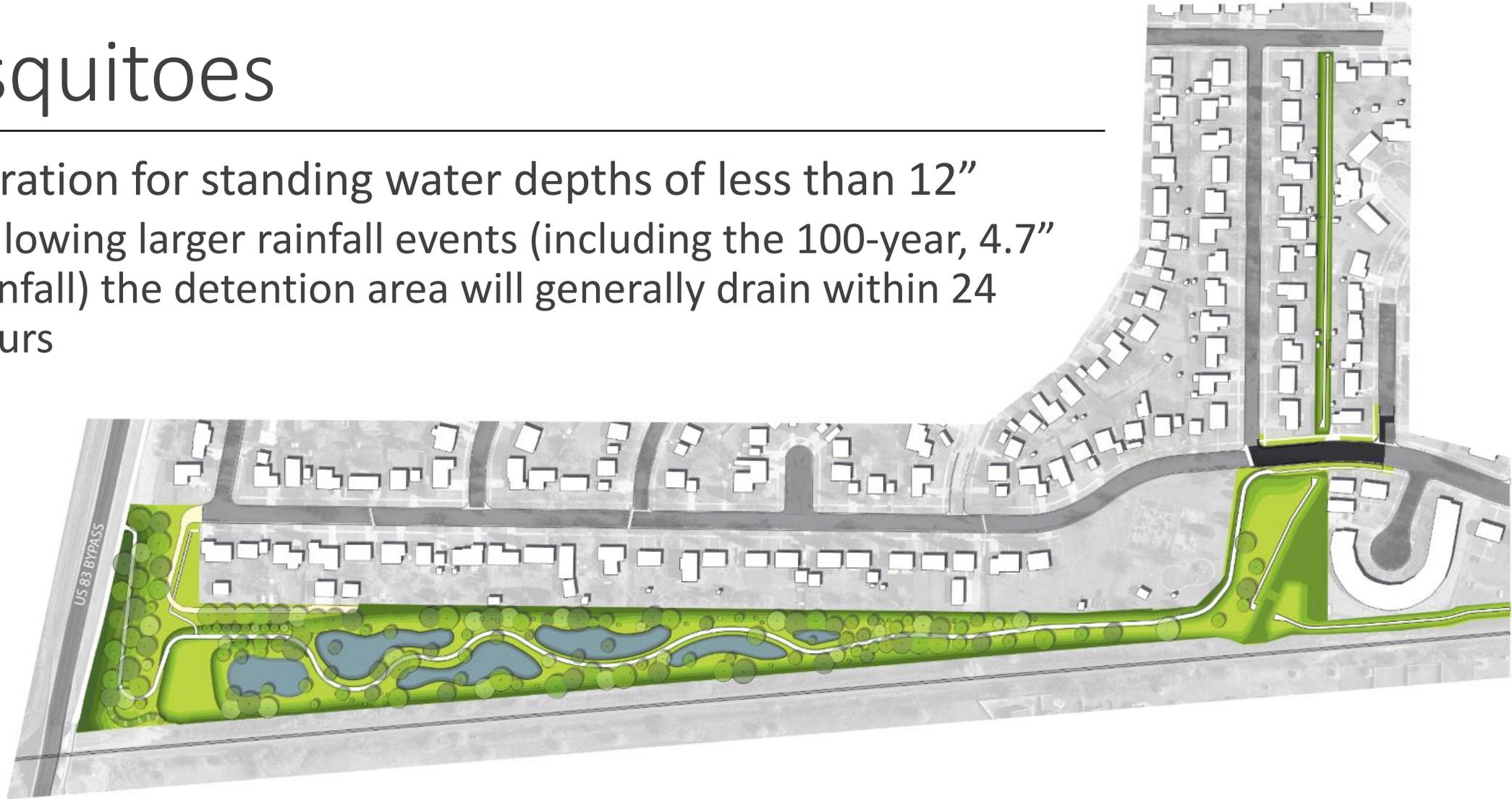
- Retention pools have normal operating depths of 3 to 4 feet
- Normal runoff will be contained within the retention areas and will not frequently flood the remainder of the detention pond



Mosquitoes

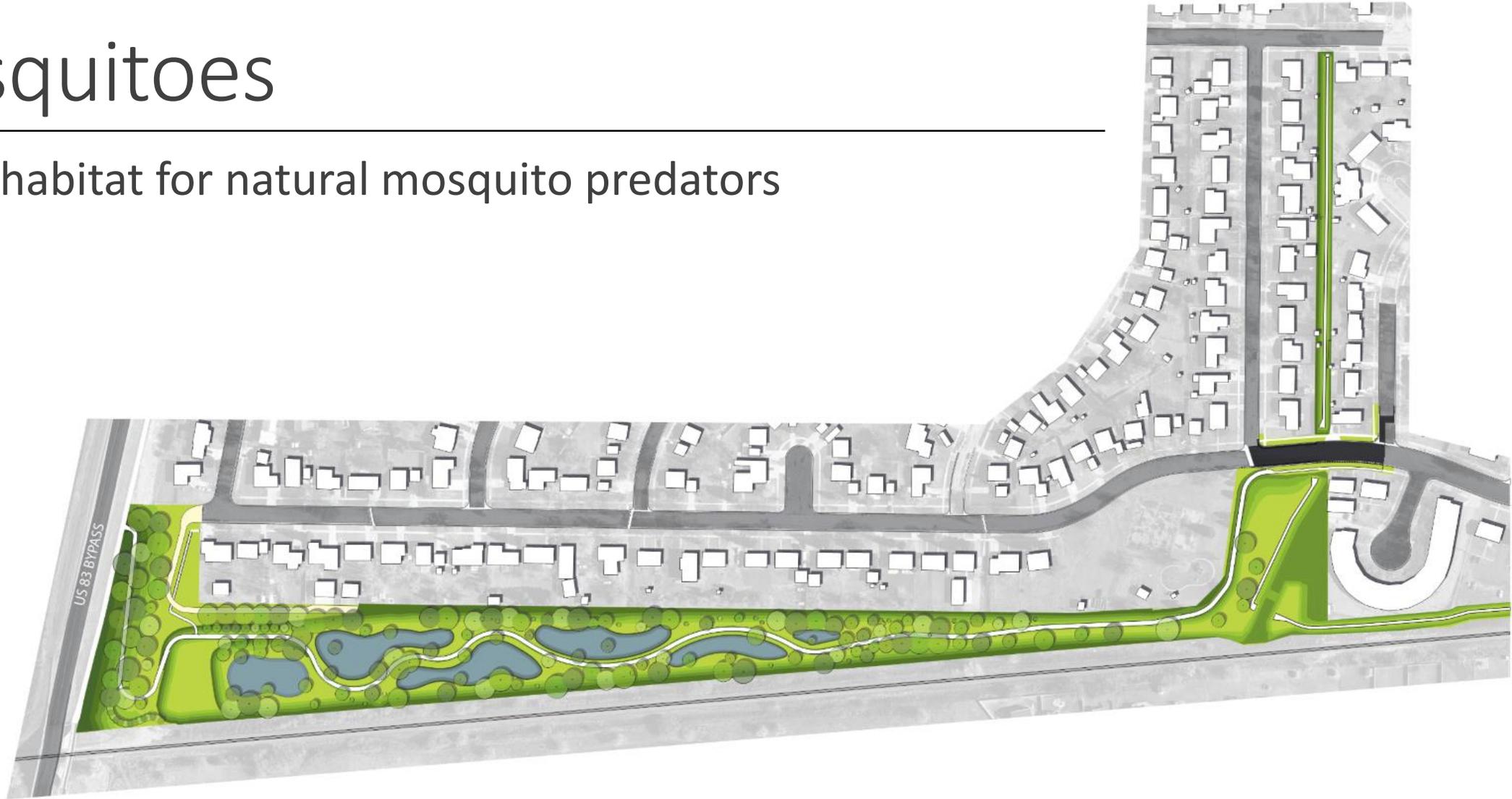
Limit duration for standing water depths of less than 12"

- Following larger rainfall events (including the 100-year, 4.7" rainfall) the detention area will generally drain within 24 hours



Mosquitoes

Provide habitat for natural mosquito predators



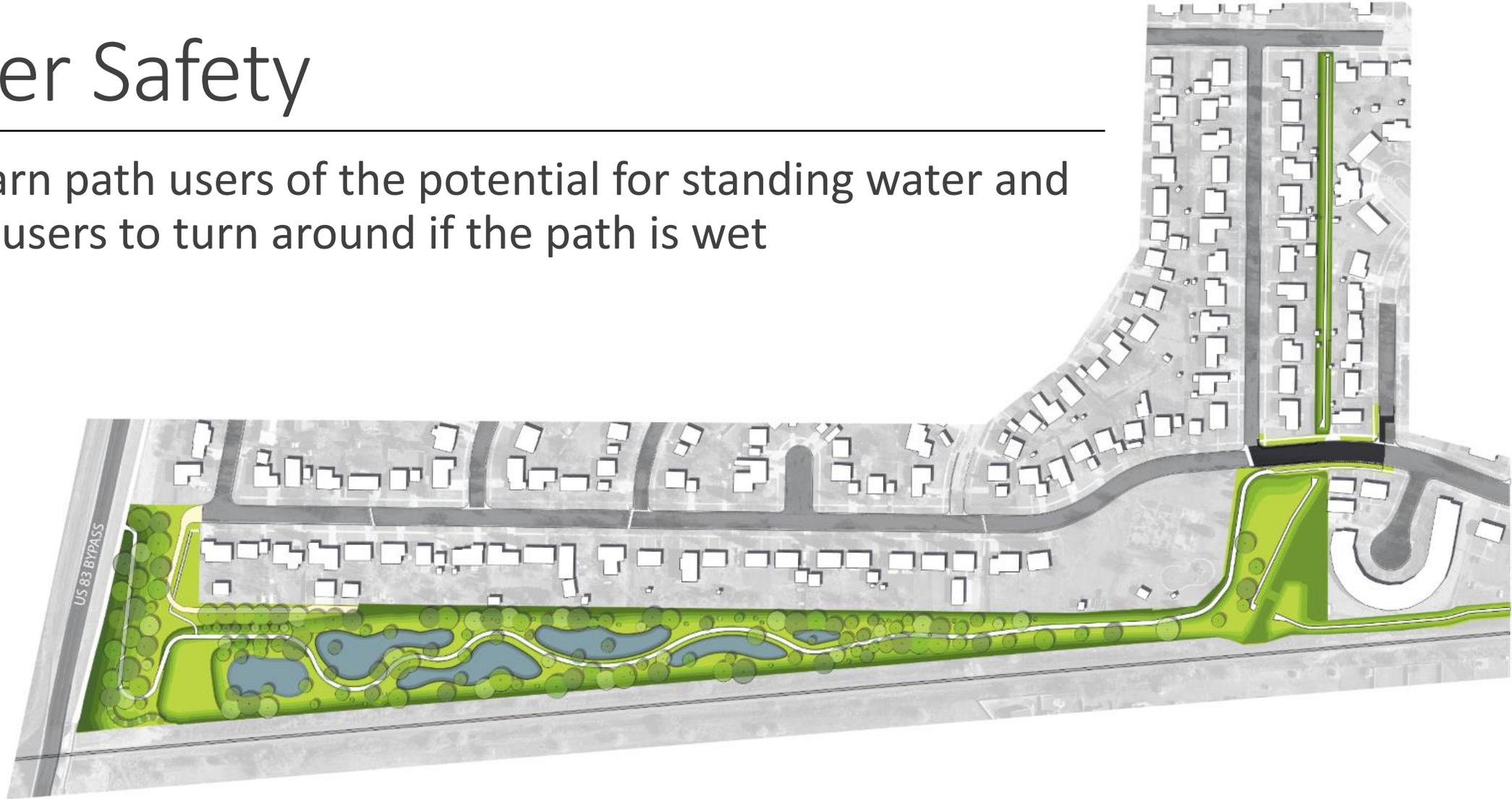
Water Safety

Pathway stays dry for rainfall events 2" and lower



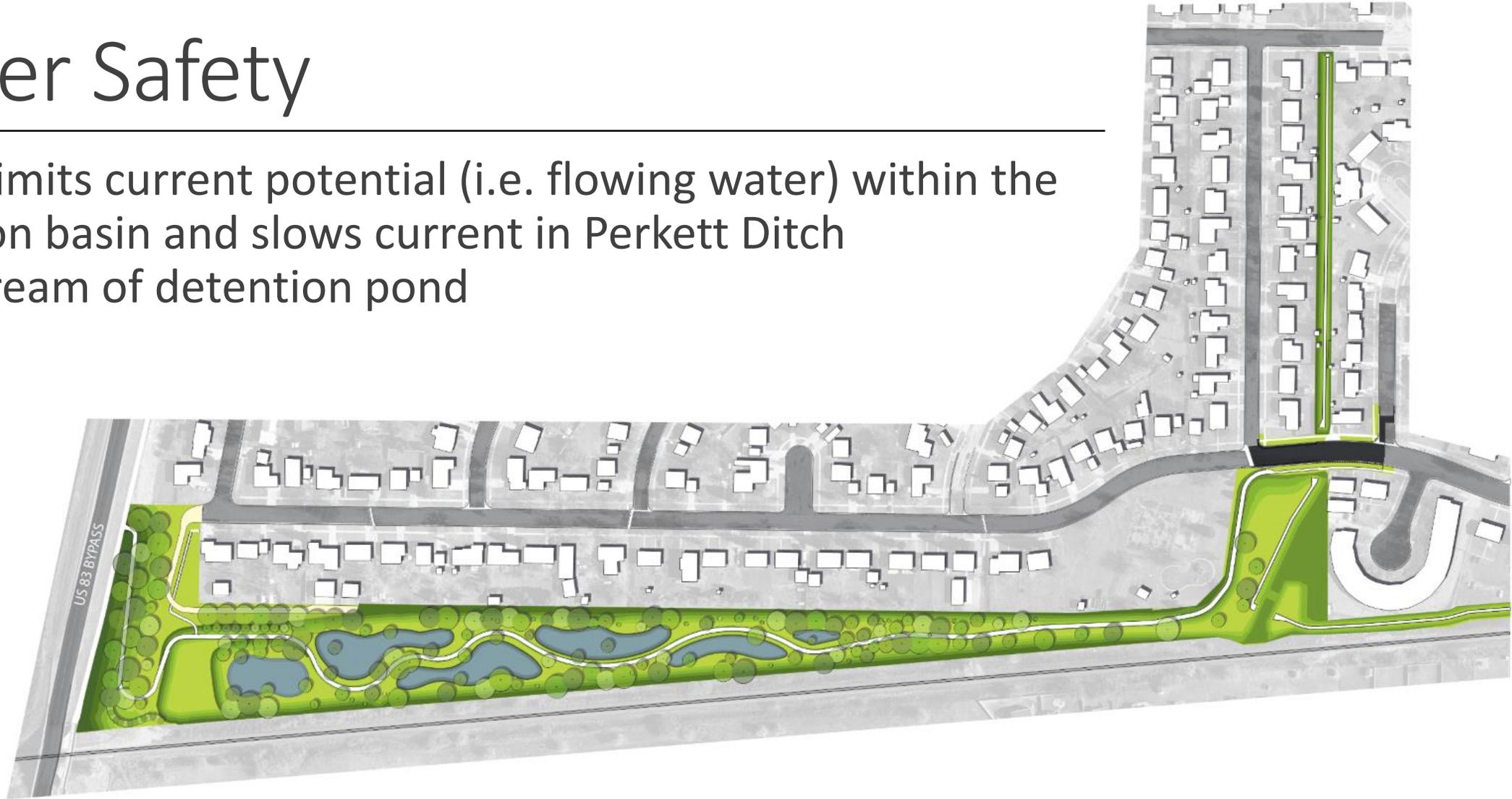
Water Safety

Signs warn path users of the potential for standing water and instruct users to turn around if the path is wet



Water Safety

Design limits current potential (i.e. flowing water) within the detention basin and slows current in Perkett Ditch downstream of detention pond



Construction Safety

Roadway detour will be established during closure of 2nd Avenue SW during construction



Construction Safety

Safety fence will be erected during construction to discourage access into the construction site

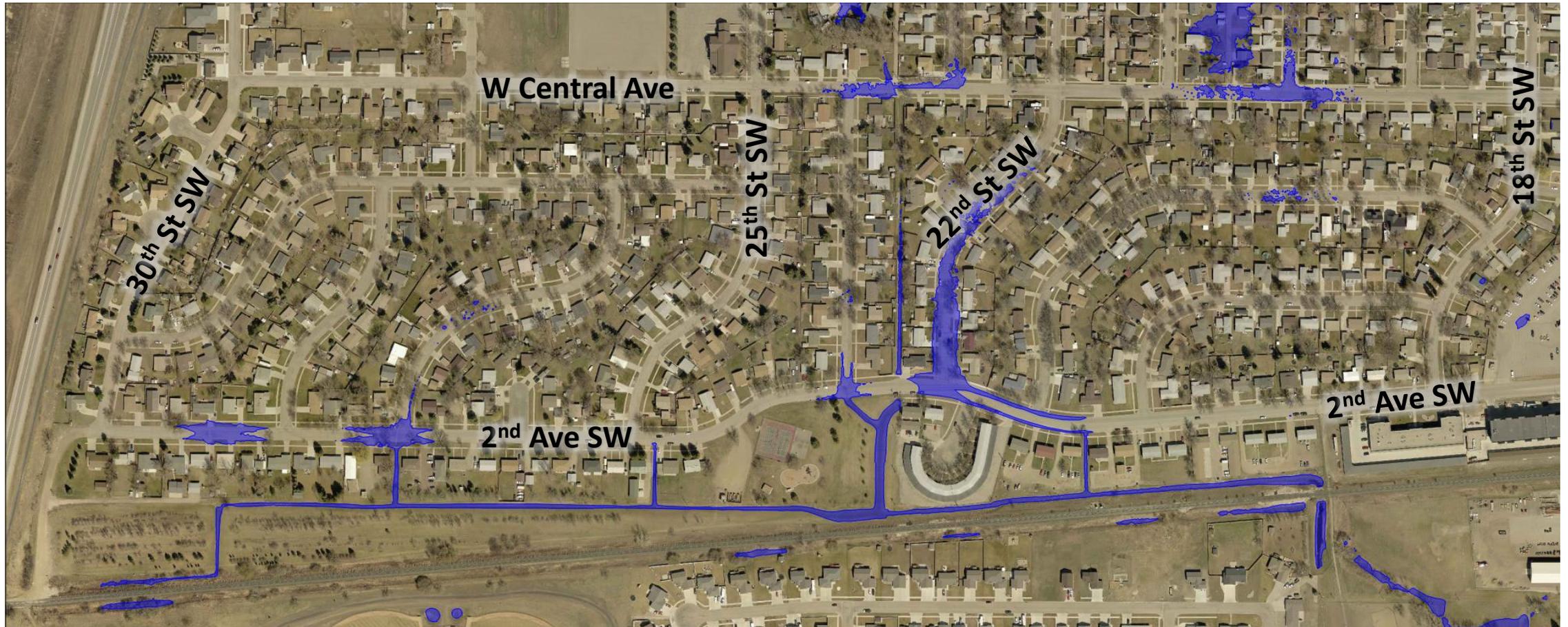


Construction Safety

Construction truck traffic (haul vehicles) will be directed across CP Railroad tracks to the south for direct access to the Bypass



~2.1" Rainfall Event (Existing)



~2.1" Rainfall Event (After Project)



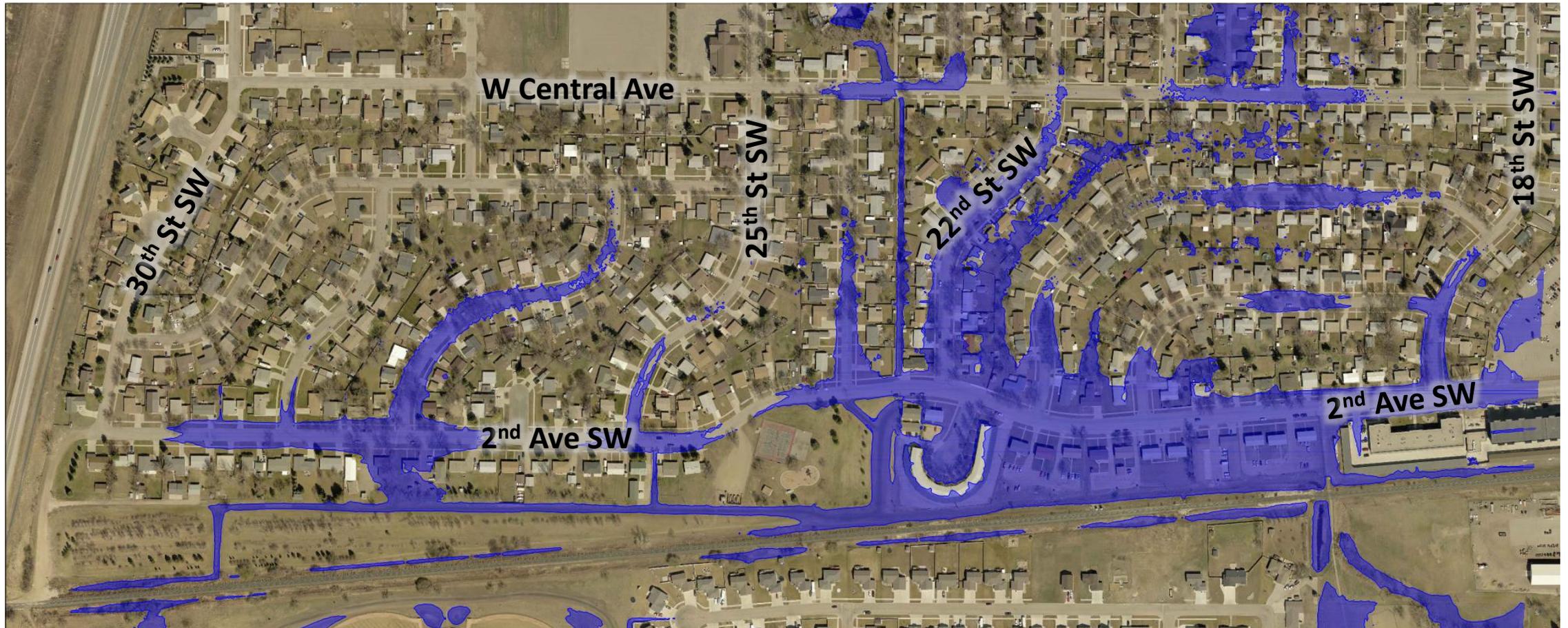
~3.1" Rainfall Event (Existing)



~3.1" Rainfall Event (After Project)



~4.7" Rainfall Event (Existing)



~4.7" Rainfall Event (After Project)



Schedule

Construction is expected to begin in summer 2016 and be substantially complete by November 2016



Thank you

