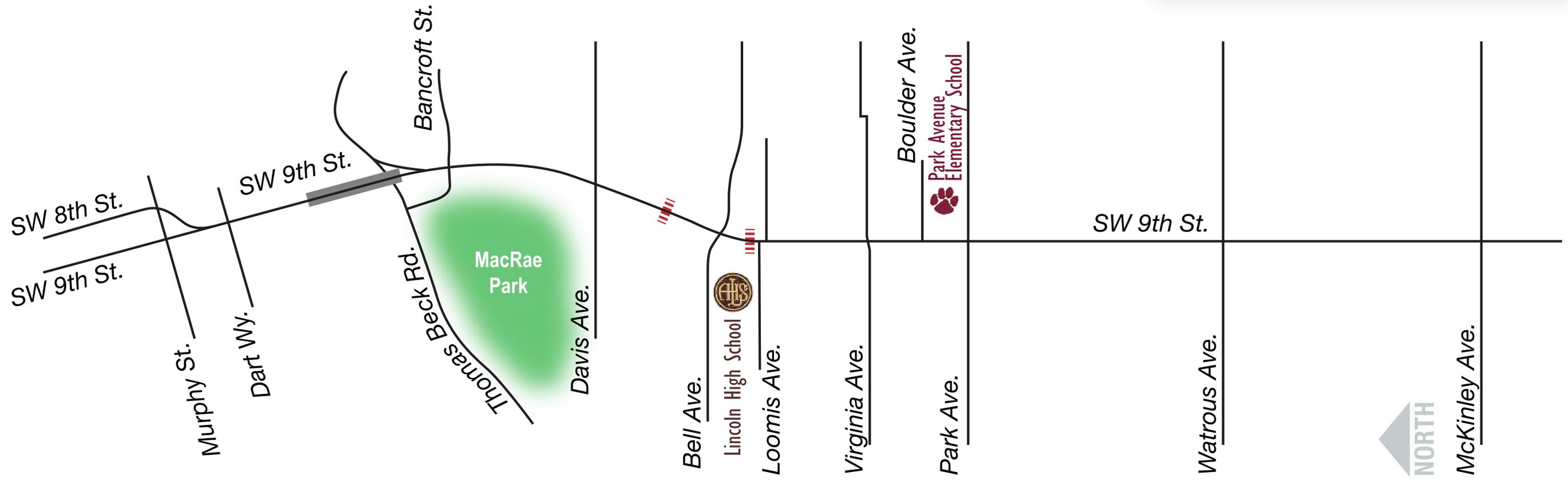
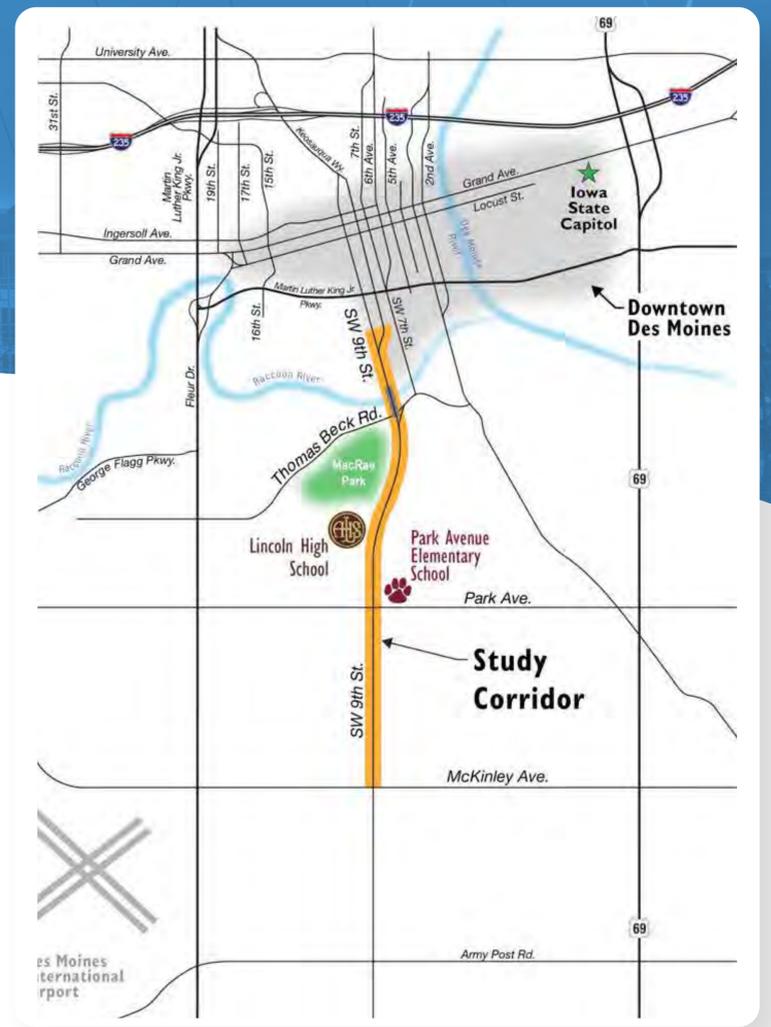


SW 9th Street Traffic Study

DART WAY TO MCKINLEY AVENUE

WELCOME

June 23, 2025



SW 9th Street Corridor Study

A Critical Step Toward Vision Zero in Des Moines

The City is committed to eliminating all traffic deaths and serious injuries

(City Wide) 2017 to 2021

resulting in

~28,000 crashes recorded in Des Moines

76 fatalities 453 serious injuries

(Corridor) From 2019 to 2023

resulting in

Over 500 crashes

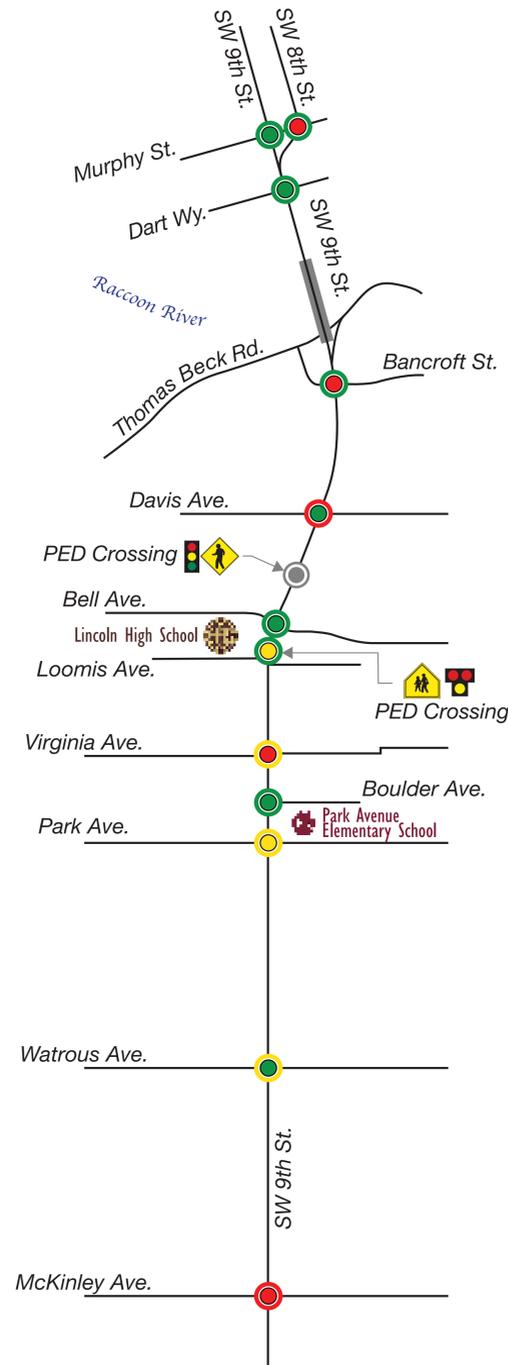


were recorded on SW 9th

3 fatalities 12 serious injuries

86% of all drivers exceed the speed limit in the corridor south of Raccoon River

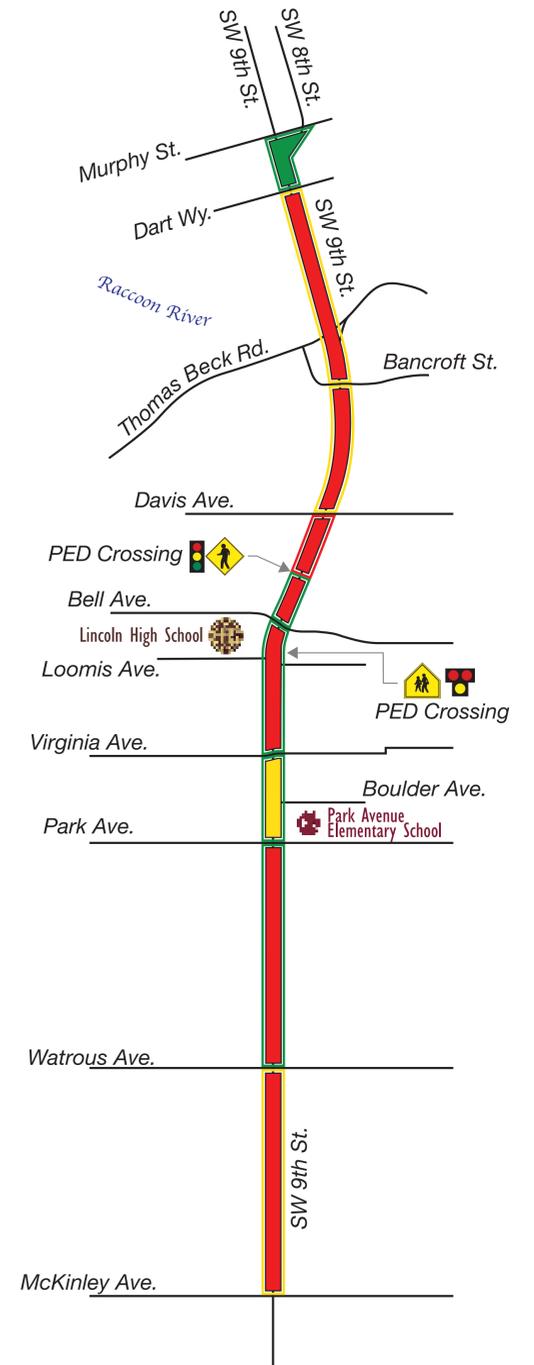
Intersection Crashes



LEGEND

- /●/● = Intersection PCR (All Crashes) <0/0-1/>1
- /○/○ = Intersection PCR (Severe Crashes) <0.05/0.05-0.25/>0.25

Segment Crashes



LEGEND

- /■ = Segment (All Crashes Rate/MVMT) <1.03/1.03-2.07/>2.07
- /□ = Segment (Severe Crash Rate/MVMT) <0.31/0.31-0.63/>0.63

Background

TIMELINE

Study Goal - Review existing conditions and develop a plan for SW 9th Street that improves safety and provides mobility options for all users.

Stakeholder Outreach

- Dec 2023 – Met w/ DART, DMPS, Friends of SW 9th, Neighborhood Assoc.
- Jan 2024 – Coalition of Southside Neighborhoods Meeting
- Jun 2024 – Letter to adjacent properties requesting feedback



Professional Services Agreement approved October 26, 2023



Data Collection

- Traffic Volumes
- Crash Data
- Speed / Violation Study
- School Observations
- Past Study Review



Summer 2024 to Today: analysis and develop recommendations

CORRIDOR CONTEXT



High pedestrian activity along entire corridor. Increased parkway width to make sidewalk more comfortable desired



Access to MacRae Park is important to neighborhoods and all stakeholder groups



SW 9th Street is on the core bike network



Transit – SW 9th is a high ridership corridor. Corridor is a high frequency route in Reimagine DART



Bridge over Raccoon River is a design challenge

Public & Stakeholder Feedback

What we heard:



Speeding



Better access to MacRae Park



Improve lighting on corridor



Sidewalks too narrow and close to the street



Lanes are too narrow and light poles too close to street



Improve mobility of residents into and out of corridor/businesses



Improve bus stops with shelters

What we recommend:



Roundabouts, medians



Trail connections to MacRae Park and Downtown, roundabout at Bancroft



Identify and address lighting improvements with design projects



10' Shared Use Path and 5' Sidewalk Recommended. Minimum 5' parkway width (per MoveDSM)



Existing 40' wide street. Recommended 11' Travel Lanes (per MoveDSM)



Balancing safety with mobility (traffic ops)



Collaborate with DART on future improvements



WHAT DID WE DO? Cross-Section - Design Considerations

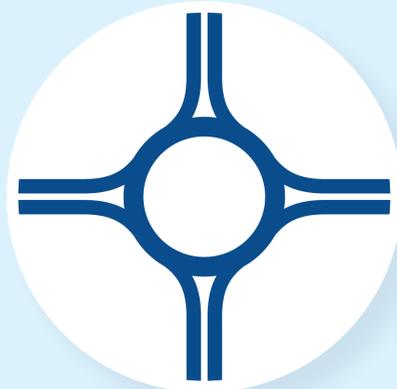
WHY ARE WE CONSIDERING CERTAIN DESIGN ELEMENTS?

Roundabouts

- **Federal Highway Administration (FHWA) Proven Safety Countermeasure**
- Safety (less conflict points)
- Slower speeds (all vehicles must slow down)
- Can reduce delay and queuing (can serve more vehicles than traditional intersections)
- Shorter pedestrian crossings
- Opportunity for landscaping & placemaking

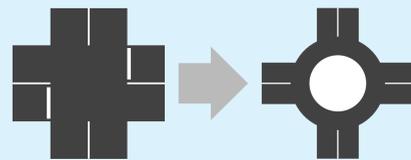
★ Past Successes Near High Schools

- Johnston High School
- Liberty High School (Iowa City)
- Waukee Northwest High School
- Prairie Schools Campus (Cedar Rapids)



SAFETY BENEFITS

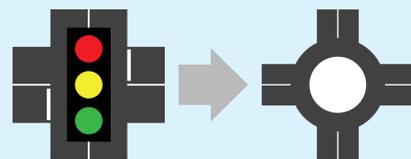
Two-way Stop-Controlled Intersection to a Roundabout



82%

Reduction in fatal and injury crashes

Signalized Intersection to a Roundabout



78%

Reduction in fatal and injury crashes

Corridor Access Management

(medians/driveway elimination/consolidation)

- **Federal Highway Administration (FHWA) Proven Safety Countermeasure**
- “Thoughtful access management along a corridor can simultaneously enhance safety for all modes, facilitate walking and biking, and reduce trip delay and congestion” - FHWA

★ Past Successes

- **Hubbell Avenue** – eliminated 8 redundant driveways, median, etc. 50% reduction in crashes. 80% reduction in fatal/severe injuries
- **Keo/Crocker** – eliminated full access. Reduced crashes from 7 crashes/yr including 5 injuries to 2/crashes/yr (no injuries)



SAFETY BENEFITS

Reducing Driveway Density

25%-31%

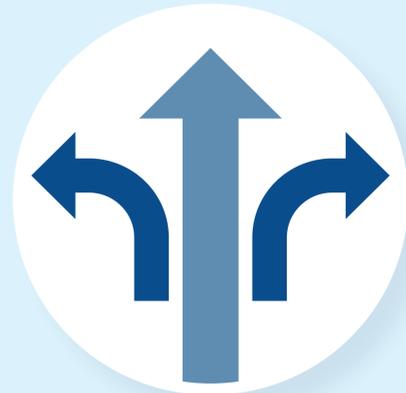
Reduction in fatal and injury crashes along urban/suburban arterials

WHAT DID WE DO? Intersection - Design Considerations

WHY ARE WE CONSIDERING CERTAIN DESIGN ELEMENTS?

Positive Offset Left-turn Lanes

- **Federal Highway Administration (FHWA) Proven Safety Countermeasure**
- Improves Sight Distance for Left-Turning Vehicles
- Reduces Delay and Improves Traffic Flow
- Enhances Safety and Driver Confidence



SAFETY BENEFITS

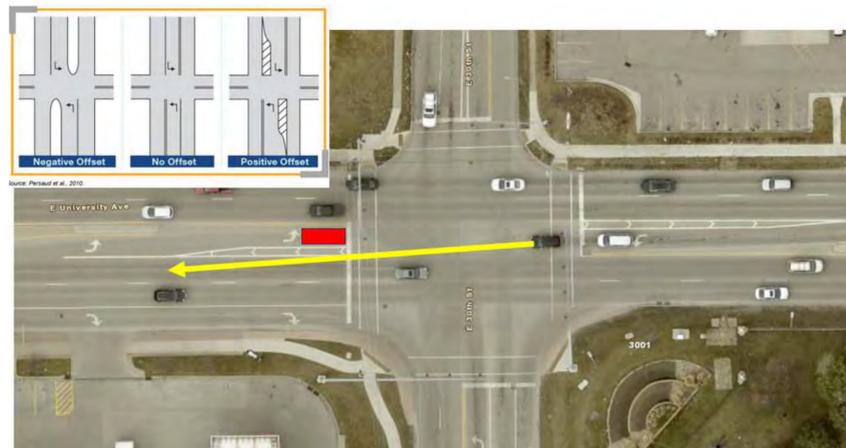
Left-Turn Lane
28-48%
Reduction in total crashes

Positive Offset Left-Turn Lanes
36% Reduction in fatal and injury crashes

Right-Turn Lanes
14-26%
Reduction in total crashes¹

★ Past Successes

- E 30th Street & E University Avenue (completed 2022)



Positive Offset Left-turn lanes at a signalized intersection

Source:
City of Des Moines, IA

Signal Improvements

- **Federal Highway Administration (FHWA) Proven Safety Countermeasure**

Reflective Backplates



SAFETY BENEFITS

15% Reduction in total crashes

Increased Traffic Signal Visibility in All Conditions

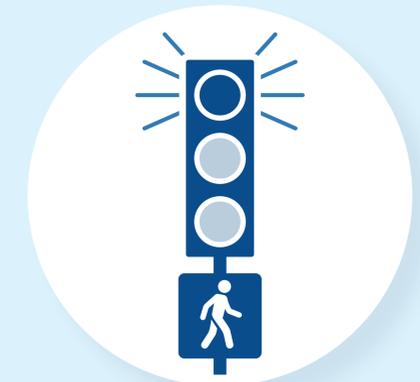
Enhanced Driver Reaction Time and Reduced Crashes



Signal backplate framed with a retroreflective border

Source: FHWA

Leading Pedestrian Interval (LPI)



SAFETY BENEFITS

13%

Reduction in pedestrian-vehicle crashes at intersections

Gives Pedestrians a Head Start at Crosswalks



Leading Pedestrian Intervals (LPI) reduce potential conflicts between pedestrian and turning vehicles

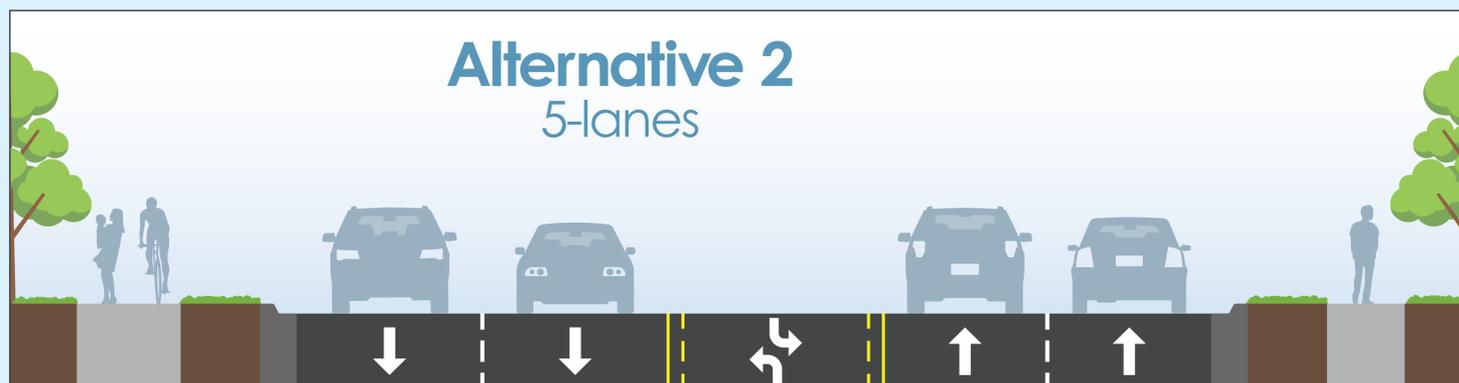
Source: FHWA

Street layout options

We evaluated different street layout options to see what best meets the needs of drivers, bikers, walkers, and everyone who uses the road



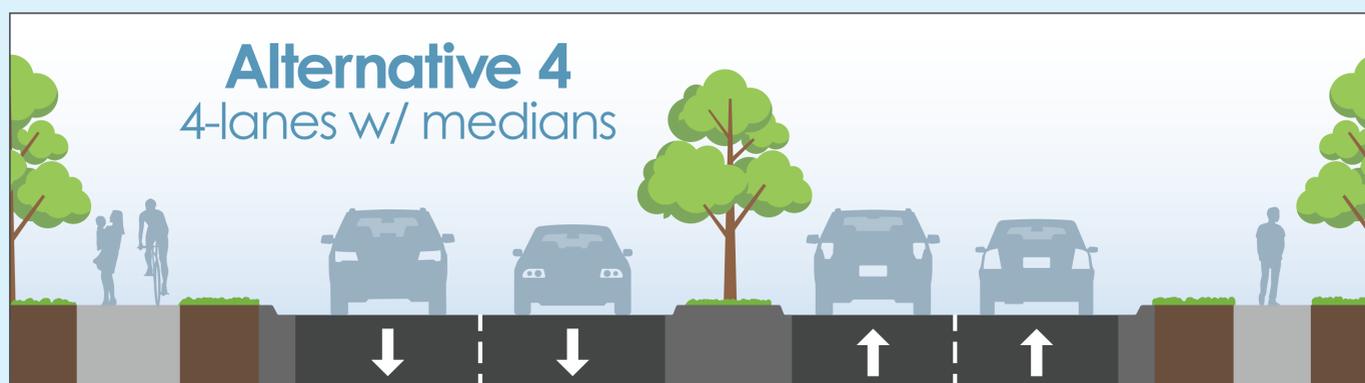
- + Reduces crashes and speeds
- + Shortens ped crossings. Most comfortable for peds/bikes
- + Minimal impacts to access
- + Lower cost and minimal property impacts
- Increased queuing and congestion during peak hours
- Increased transit times during peak hours



- + Best alternative for traffic operations
- + Minimal impacts to access
- + Reduced transit times
- No Speed Reduction
- Highest costs and extensive property impacts



- + Reduces speeds
- + Marginal reduction in crashes
- + Minimal impacts to access
- + Minimal property impacts
- Increased queuing and congestion during peak hours
- Increased transit times during peak hours
- Unique street configuration

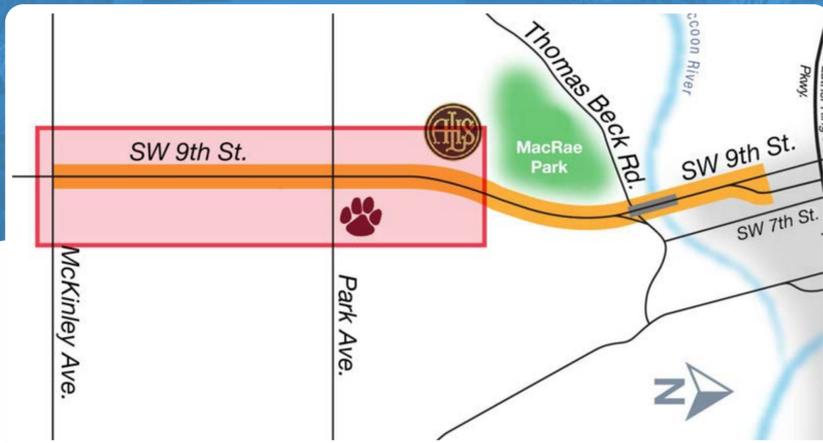


- + Reduces crashes
- + Maintains traffic operations
- + Marginal speed reductions
- + Maintains transit times
- + Provides opportunity for aesthetic improvements
- Major impacts to property access
- Higher cost

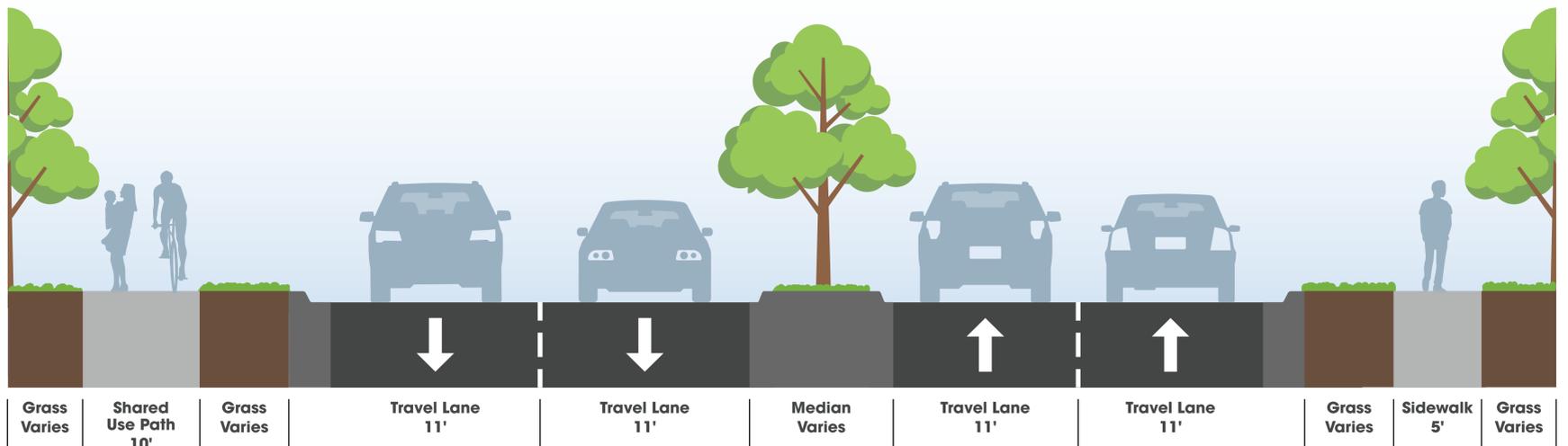
NOTE: Trees only in median north of Davis Ave.

RECOMMENDATIONS

Bell Avenue to McKinley Avenue



- ✓ **4-lane with median and left turn lanes at intersections**
- ✓ **Strategic median breaks at intersections to allow full-access**
- ✓ **Traffic Signals at Virginia, Park, Watrous, McKinley to remain**
- ✓ **Shared use path on west side of SW 9th from Davis to the south**

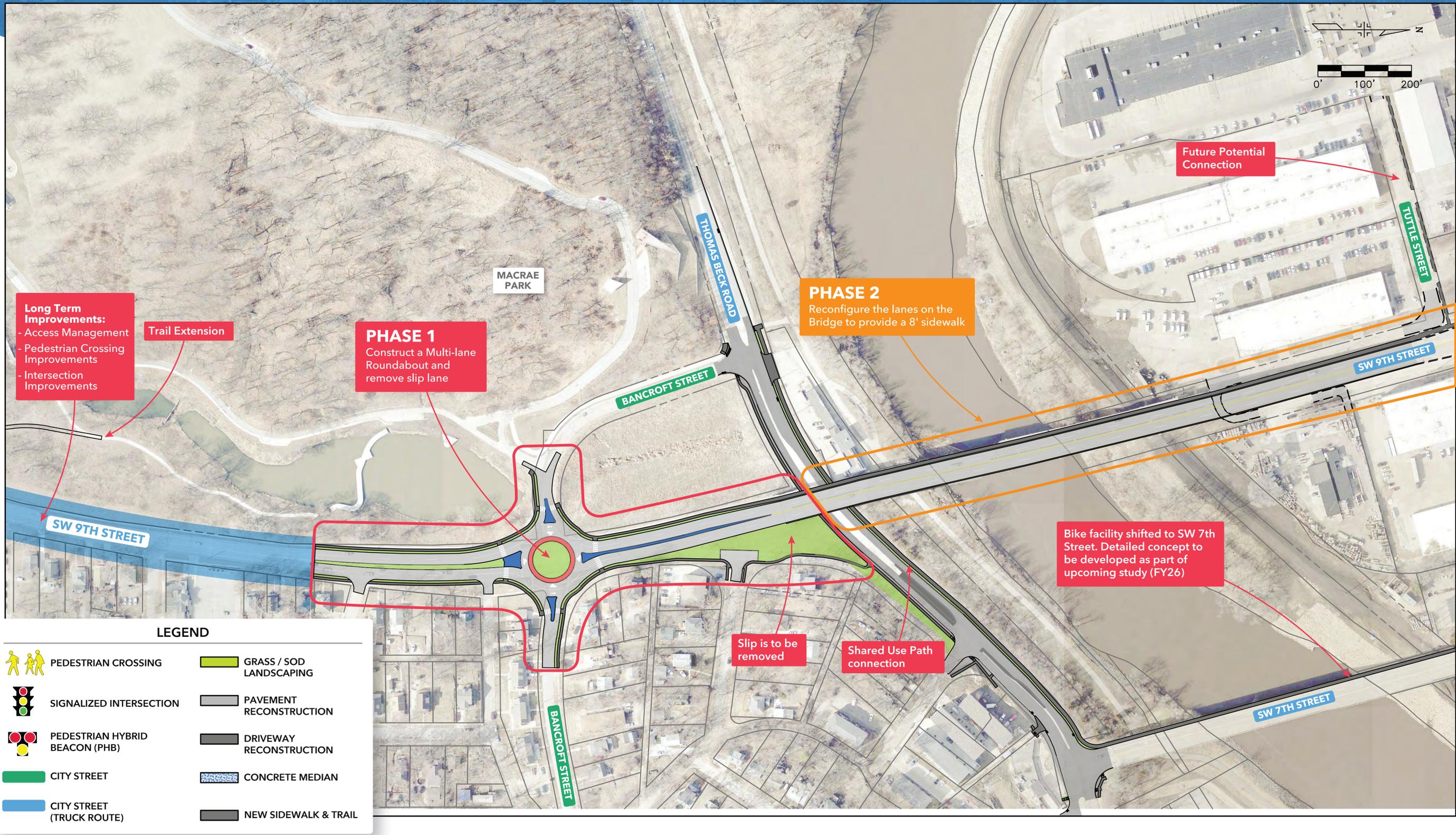


Alternative 4

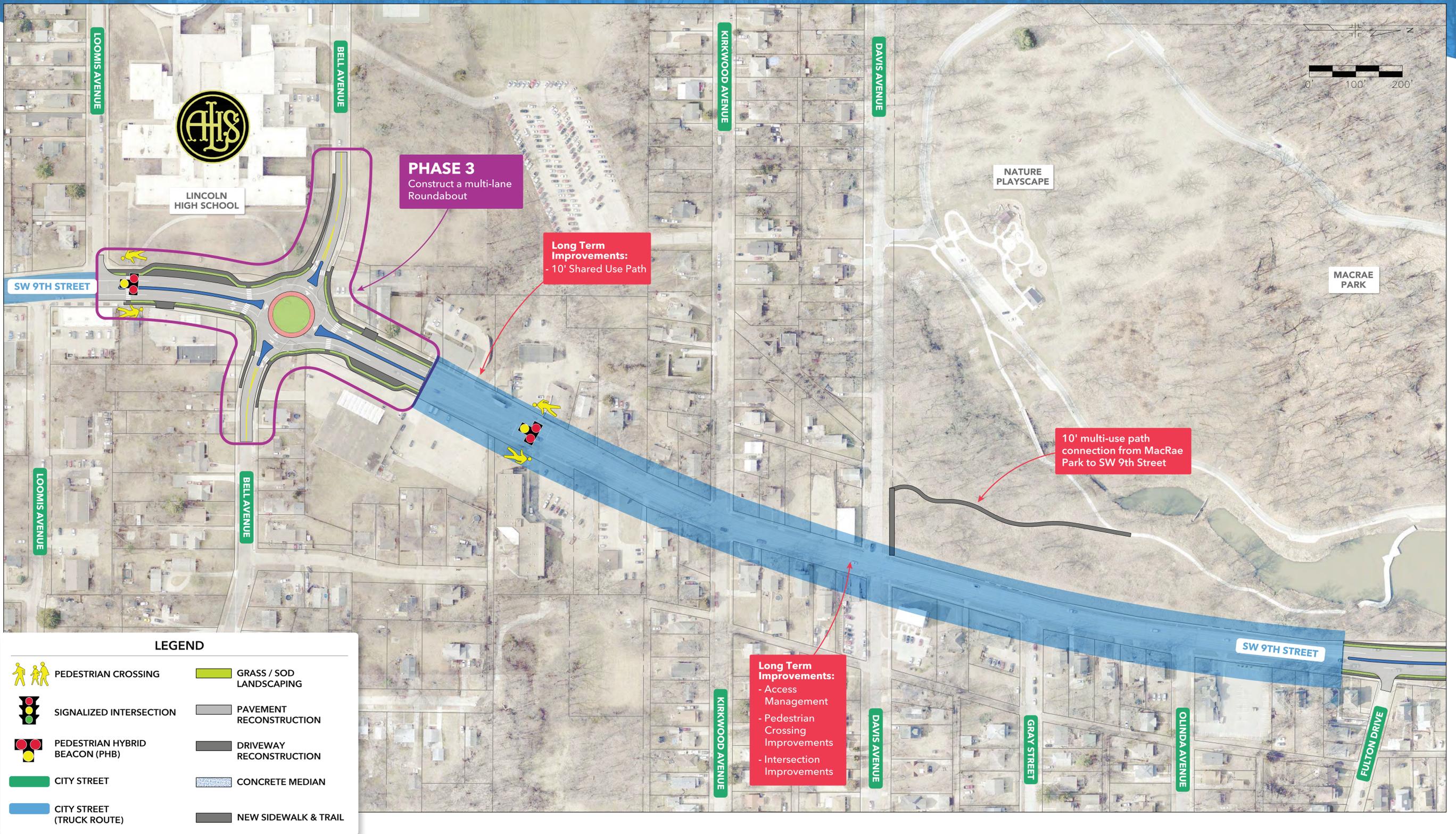
4-lane with median & turn lanes at intersections

**Note: trees are only anticipated in wider median near MacRae Park*

Raccoon River Bridge & Bancroft Intersection



MacRae Park Connection & Bell Intersection





EXISTING CONDITIONS



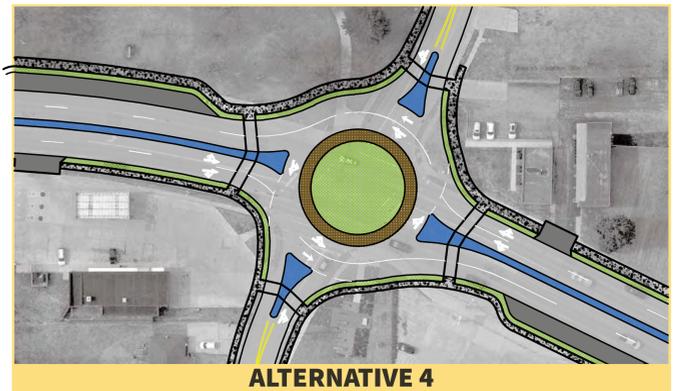
ALTERNATIVE 1



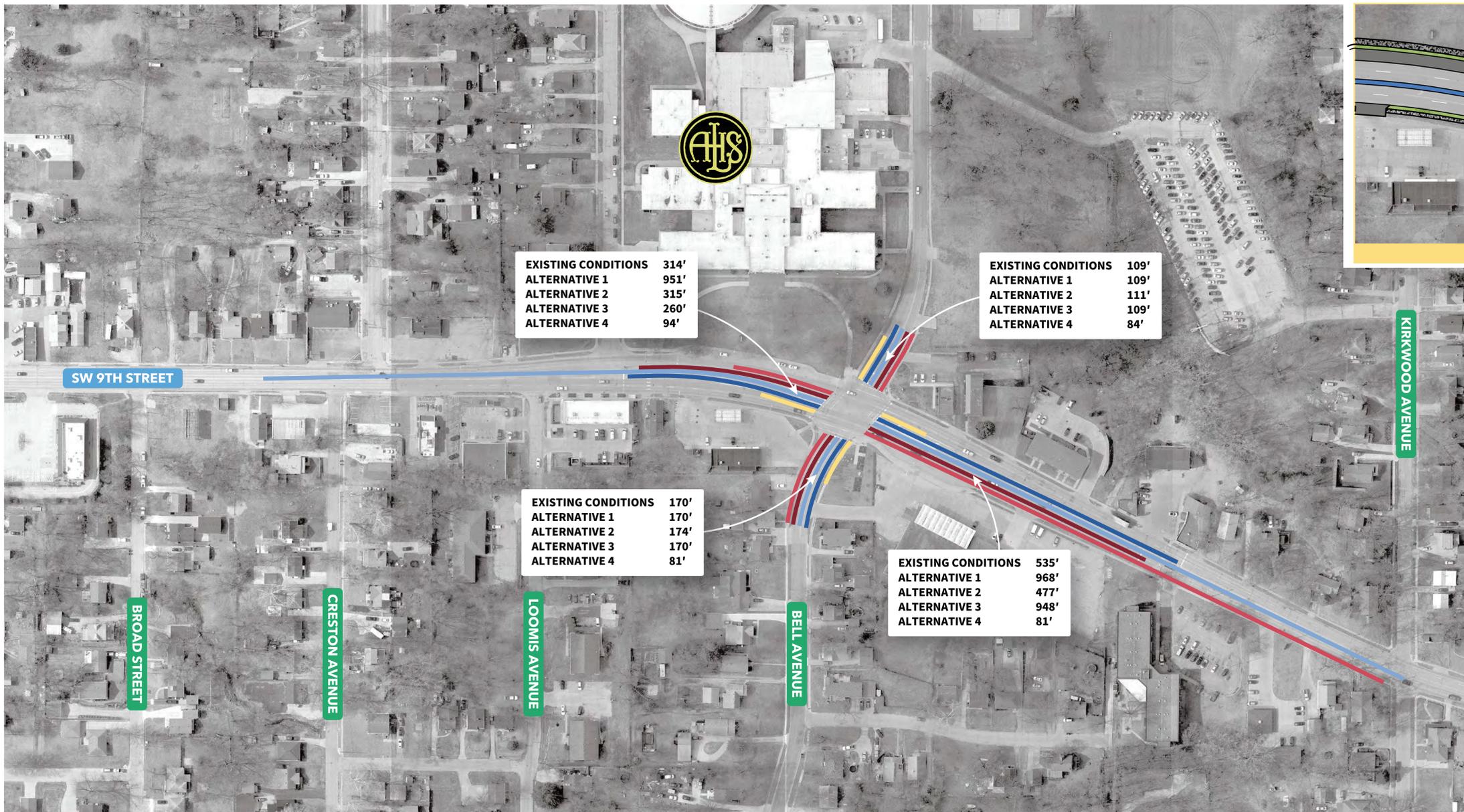
ALTERNATIVE 2



ALTERNATIVE 3



ALTERNATIVE 4



LEGEND

- █ EXISTING TRAFFIC QUEUING (2024)
- █ ALTERNATIVE 1 PROJECTED TRAFFIC QUEUE
- █ ALTERNATIVE 2 PROJECTED TRAFFIC QUEUE
- █ ALTERNATIVE 3 PROJECTED TRAFFIC QUEUE
- █ ALTERNATIVE 4 PROJECTED TRAFFIC QUEUE

SPEED LIMIT 30

HORIZ. SCALE: 1"=200'

0' 100' 200'



EXISTING CONDITIONS



ALTERNATIVE 1



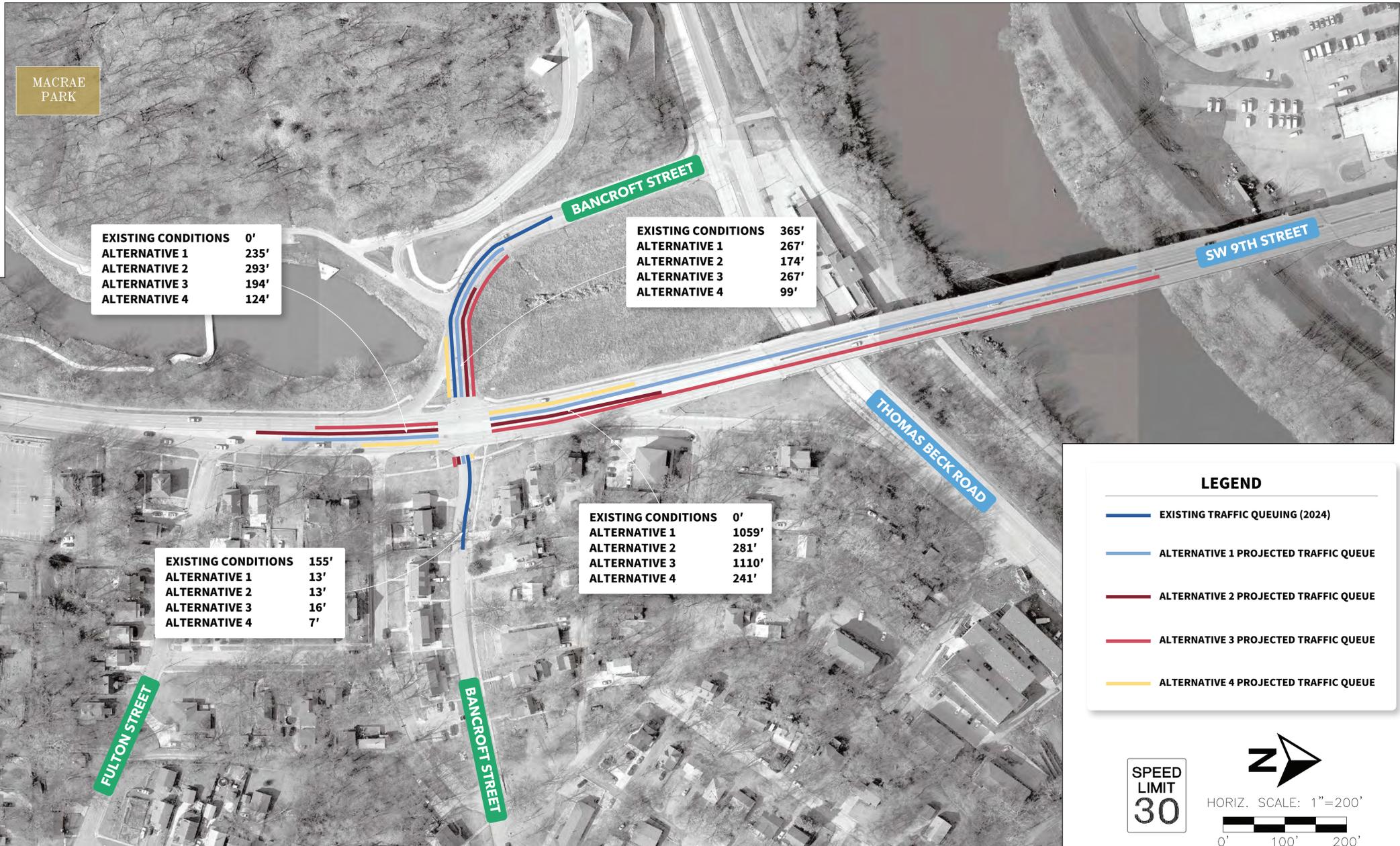
ALTERNATIVE 2



ALTERNATIVE 3



ALTERNATIVE 4



LEGEND

- EXISTING TRAFFIC QUEUING (2024)
- ALTERNATIVE 1 PROJECTED TRAFFIC QUEUE
- ALTERNATIVE 2 PROJECTED TRAFFIC QUEUE
- ALTERNATIVE 3 PROJECTED TRAFFIC QUEUE
- ALTERNATIVE 4 PROJECTED TRAFFIC QUEUE

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0' 100' 200'