

BRENT SPENCE
BRIDGE CORRIDOR



City of Cincinnati Climate, Environment & Infrastructure Committee

June 4, 2024



INVESTING IN LOCAL COMMUNITIES. GROWING AMERICA'S ECONOMY.
brentspencebridgecorridor.com



Agenda

- Project overview
- Environmental decision update
- Innovation process update
- Recommended innovations
- Environmental commitments
- Next steps





Project Overview

Project Overview

Purpose and Need

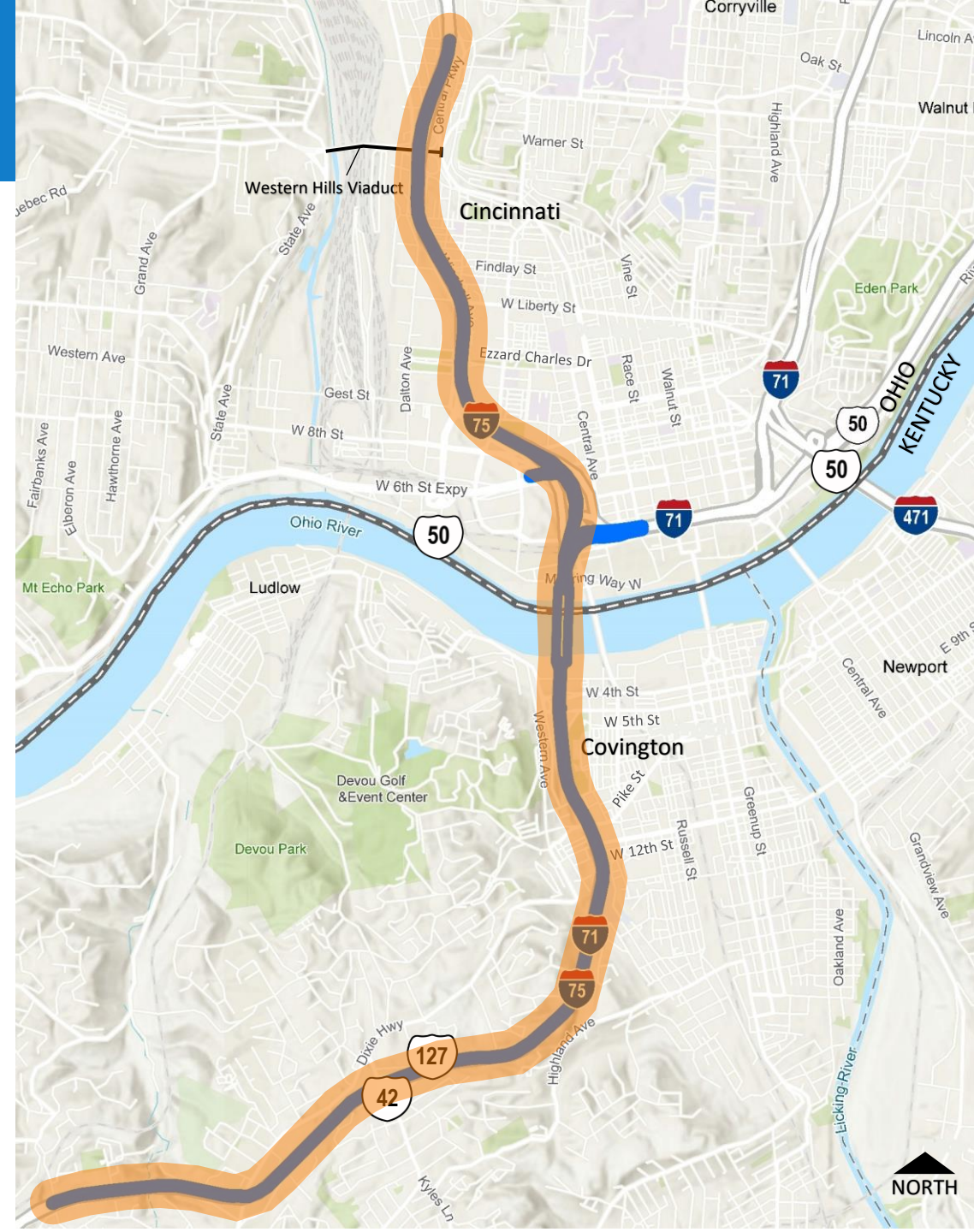
- Improve traffic flow and level of service
- Improve safety
- Correct geometric deficiencies
- Maintain connections to key regional and national transportation corridors



Project Overview

Project Description

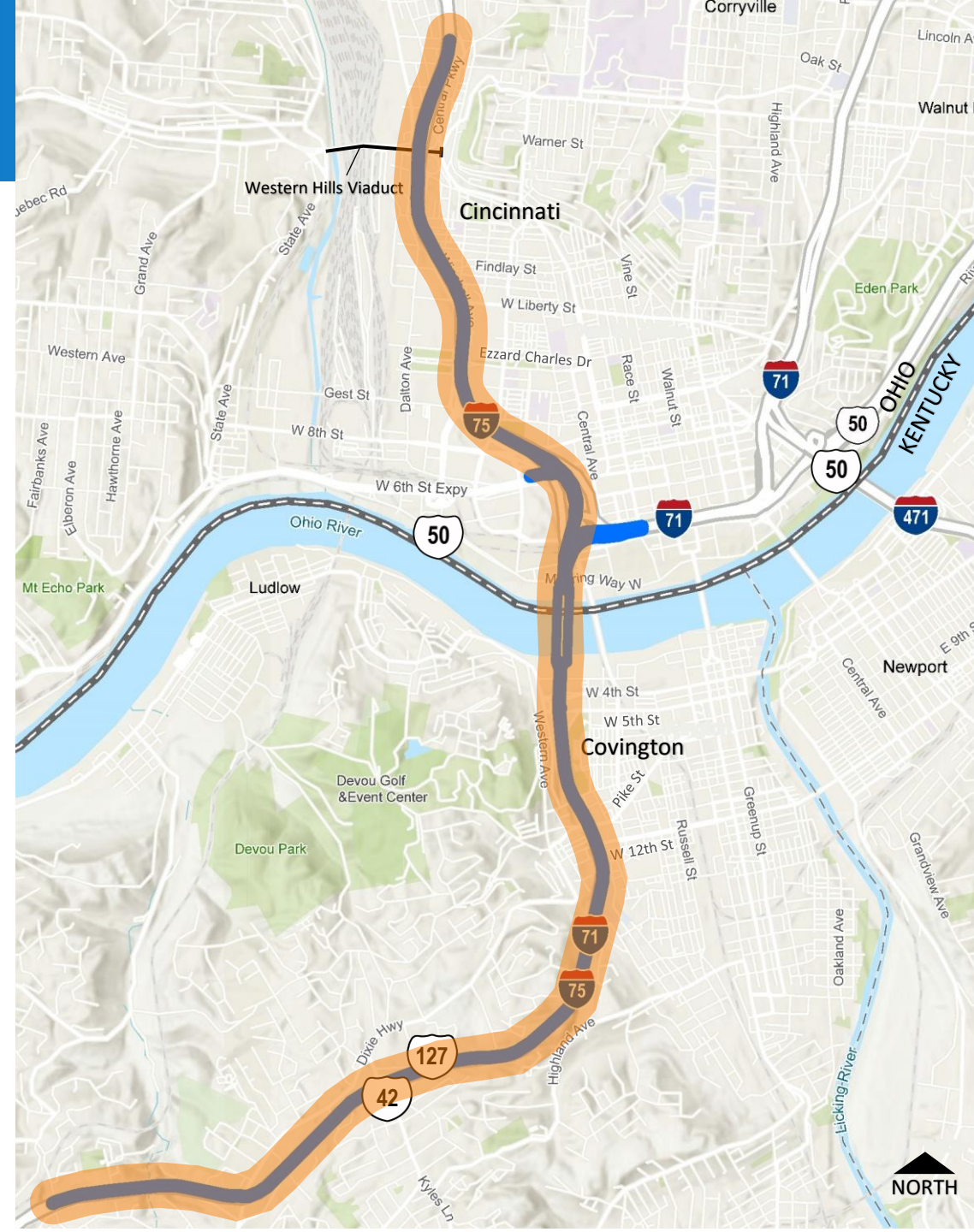
- 8-mile corridor from Dixie Highway (KY) to the Western Hills Viaduct (OH)
 - 5 miles of I-71/I-75 in KY
 - 3 miles of I-75 in OH
- Widen I-71/I-75
- Rebuild all overpass bridges and interchange
- Build a collector-distributor system between Covington and Cincinnati



Project Overview

Project Description

- Update the existing Brent Spence Bridge
 - Rehabilitate the structure
 - 3 lanes on each deck
 - Inside/outside shoulders
 - Carry local traffic
- Build new companion bridge
 - West of existing Brent Spence Bridge
 - 5 lanes on each deck
 - Carry interstate traffic



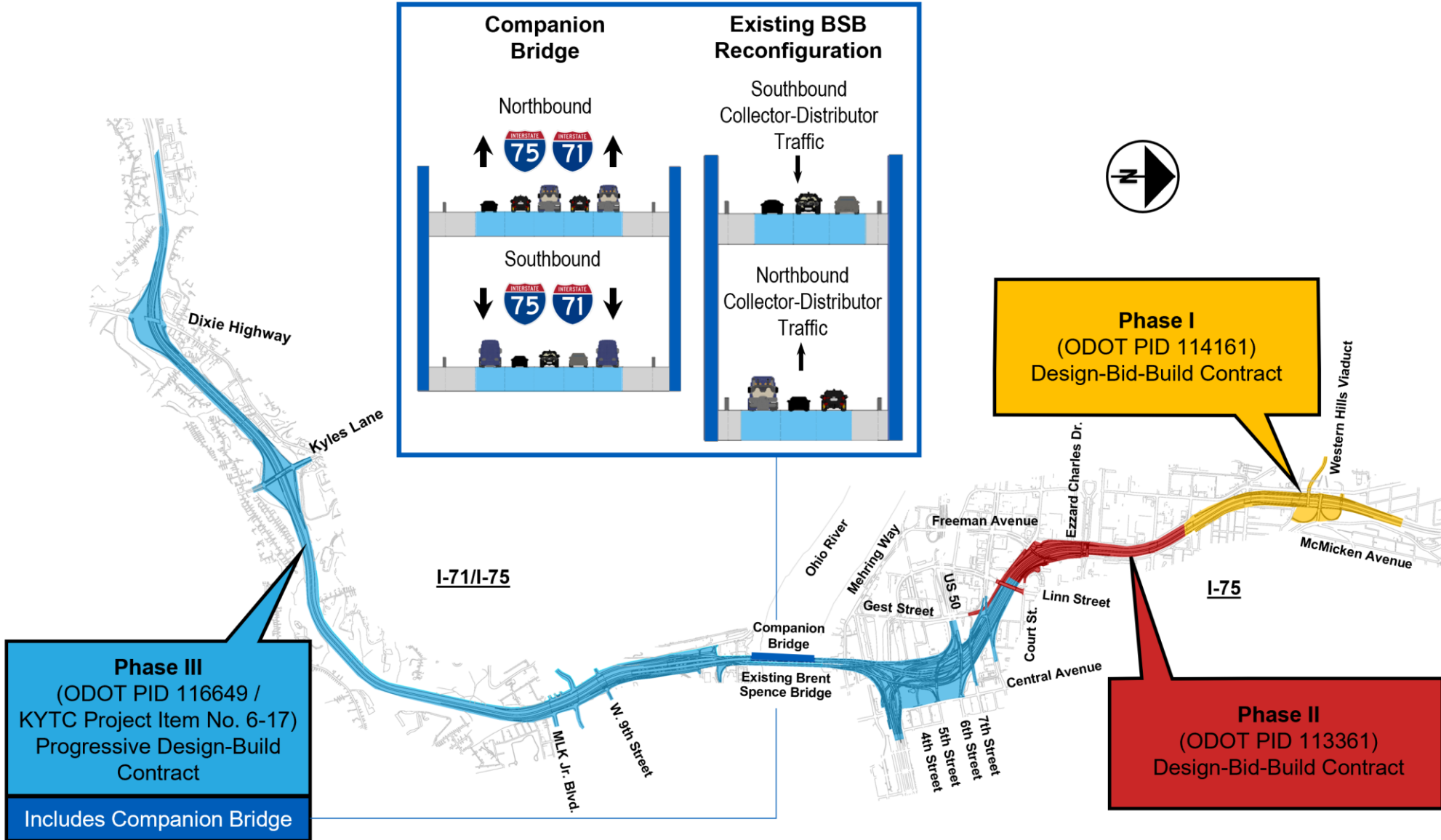
An aerial photograph of a multi-lane highway interchange with several overpasses. The highway is filled with traffic, including cars, trucks, and a FedEx truck. The surrounding area is lush with green trees and grass. In the background, there are buildings, a church with a steeple, and a water tower. A large blue triangular overlay is positioned on the right side of the image, containing white text.

Project Cost

\$3.6 Billion

(includes planning, design, property acquisition, construction, construction management services, agency labor)

Project Overview





Environmental Decision Update

Environmental Decision Update

- 5 public hearings held in February 2024
 - 209 public comments (165 commenters)
 - 6 federal, state and local agency comments
- Responses prepared for all comments
- Minor updates to the supplemental environmental assessment
- FHWA issued a Finding of No Significant Impact (FONSI) on May 8, 2024
- All documents on project website (www.brentspencebridgecorridor.com/documents)



BRENT SPENCE BRIDGE CORRIDOR PROJECT

REVISED SUPPLEMENTAL ENVIRONMENTAL ASSESSMENT

KYTC PROJECT ITEM NO. 6-17 | ODOT PID 89068
MAY 8, 2024





Innovation Process Update

Innovation Process Update

- Progressive design-build contract (Phase III)
- Supplemental environmental assessment evaluated the base design
- Innovation concepts
 - Improve project quality
 - Reduce costs
 - Shorten schedule
 - Support project goals
 - Support at the local level



Innovation Process Update

Contract Objectives

- Maximize the project scope within the programmed funding amounts through innovation, design optimization and effective risk mitigation
- Achieve effective project delivery
- Open the new companion bridge to traffic in 2029
- Minimize traffic disruption during construction, with minimal detours or diversion of traffic to local streets
- Minimize physical intrusion and impact
- Maximize public investment by minimizing the footprint
- Minimize the footprint to maximize potential developable space
- Improve neighborhood connectivity across the interstate
- Build the project with a context sensitive design that fits within the community
- Provide strong aesthetic value
- Improve the local road aesthetics when crossing the interstate
- Provide opportunities for workforce development and DBE utilization
- Create best environmental outcomes
- Design for sustained quality of life

Iconic Bridge



An aerial night-time rendering of a city featuring a prominent cable-stayed bridge. The bridge, which spans a wide river, is illuminated with a vibrant blue light that highlights its steel truss structure and the cables supporting the deck. The surrounding urban landscape is depicted with various buildings, parking lots, and streets, some of which are also lit up. In the background, a large stadium with a distinctive roof is visible. The overall scene is a detailed architectural visualization of a modern urban infrastructure project.

Iconic Bridge

Innovation Process Update

Timeline

Design-build team notice to proceed.....October 2023

Innovation workshopNovember 2023

Vet big ideas November 2023 – January 2024

Draft analysis of innovations February 2024

Continue to vet innovations March 2024 - present

Innovation Process Update

- 117 refinements evaluated by KYTC and ODOT
- Vetted with local municipalities
- By the numbers
 - 26 recommended
 - 24 dismissed
 - 67 still under review



A large steel truss bridge spans a river, with a city skyline visible in the background. The bridge's structure is composed of interconnected steel beams forming a series of triangles. Several cars are visible on the bridge deck. The background shows a city with various buildings, including a prominent one with a red roof. The sky is overcast. A large blue diagonal shape is overlaid on the right side of the image, containing the text.

Recommended Innovations

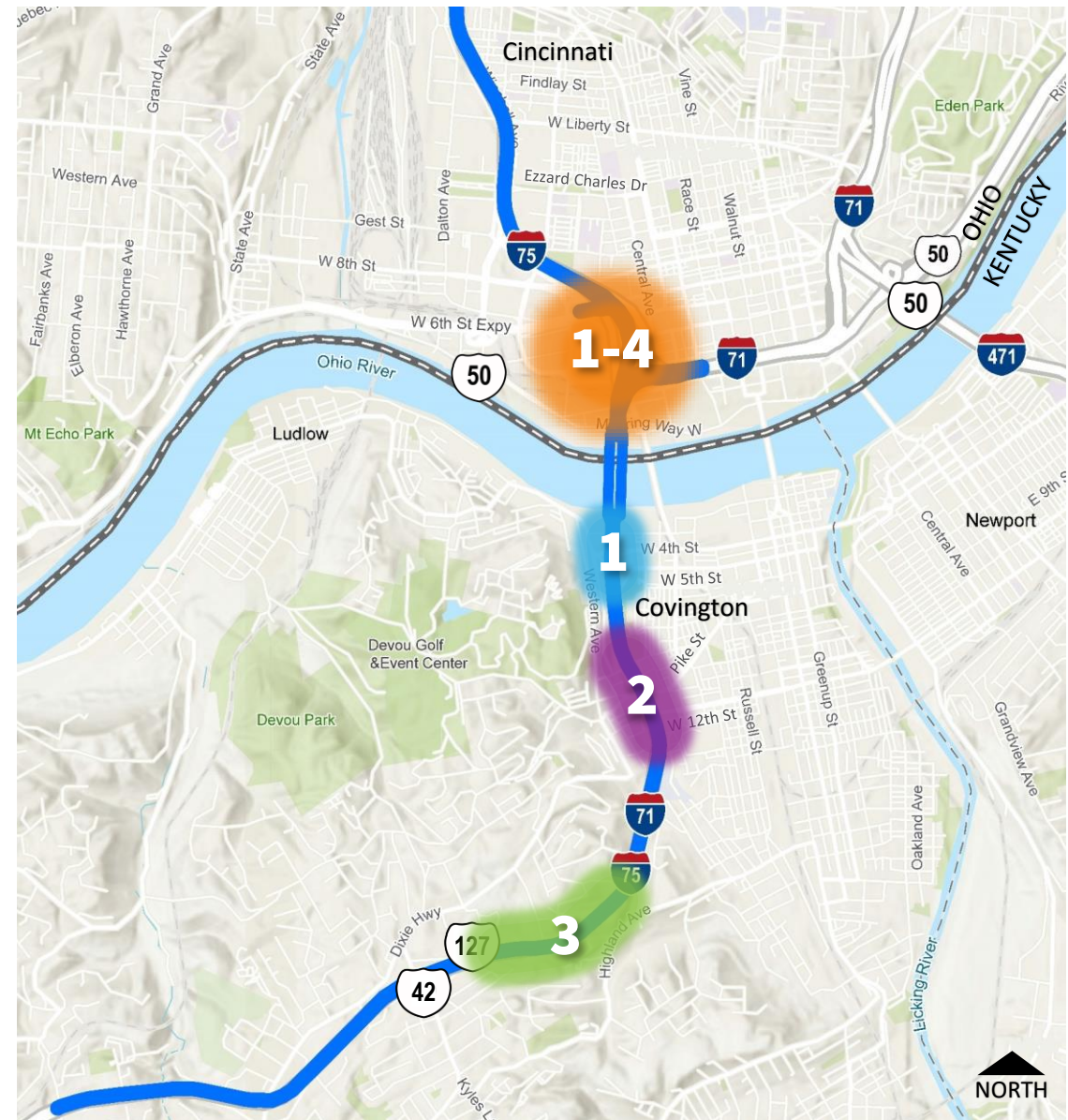
Recommended Innovations

Kentucky

- 1 Vertical profile optimization
- 2 Pike Street access optimization
- 3 Hillside cut alignment shift

Ohio

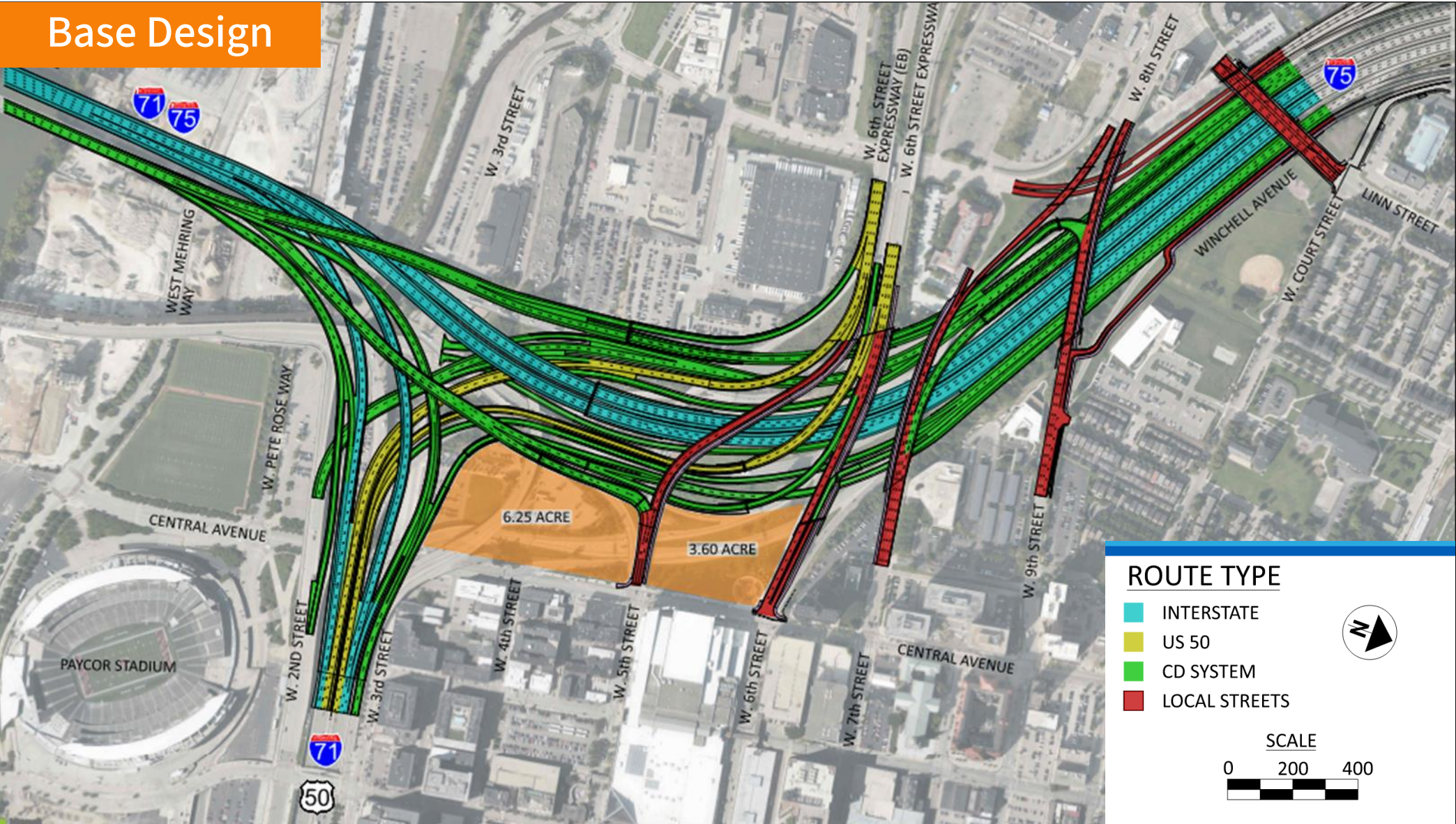
- 1 Southbound roadway reconfiguration
- 2 Combination of 2nd and 3rd Street connections
- 3 US-50 roadway consolidation
- 4 Realization of street grid concept



Ohio Recommended Innovations



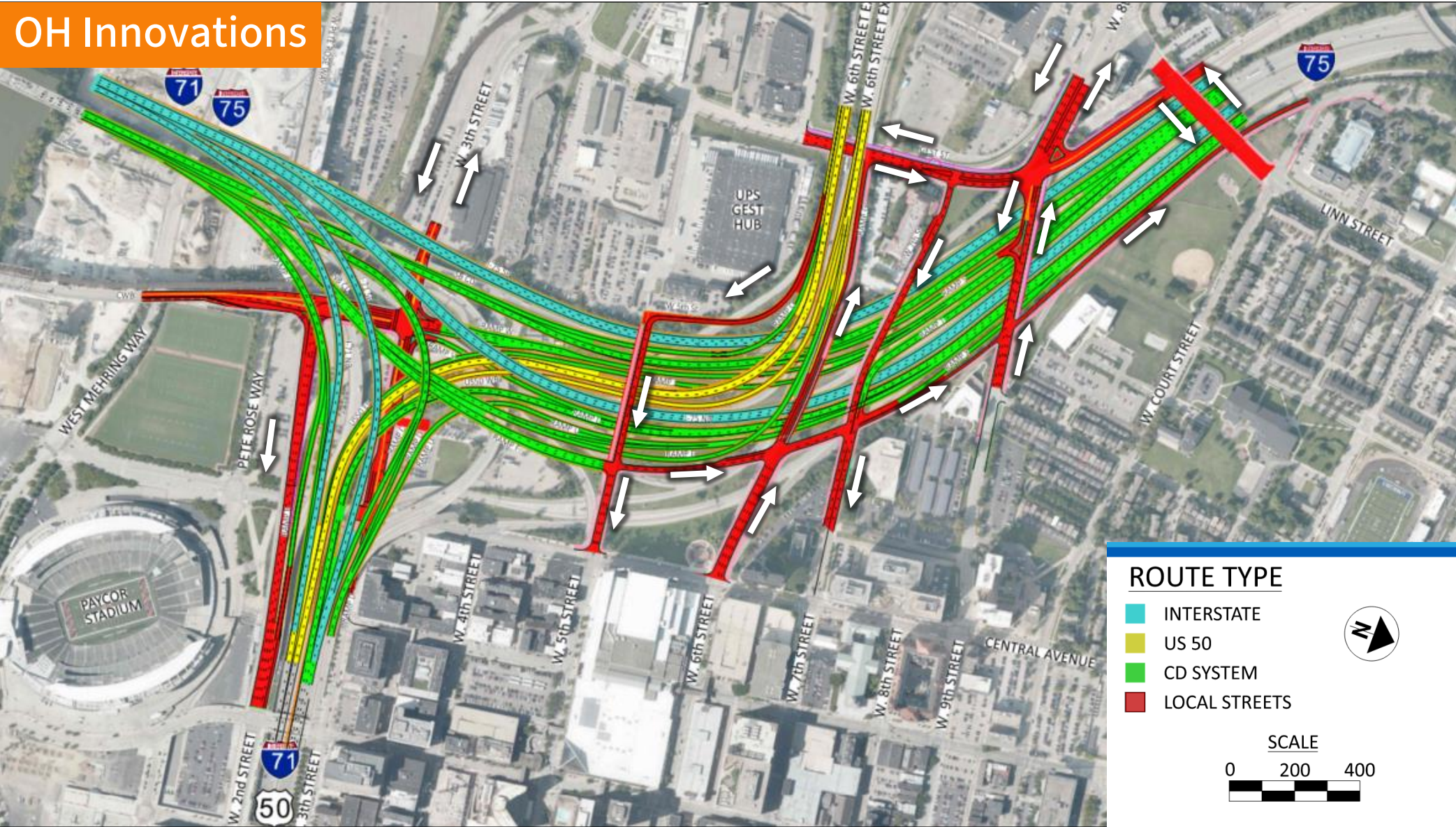
Base Design



Ohio Recommended Innovations



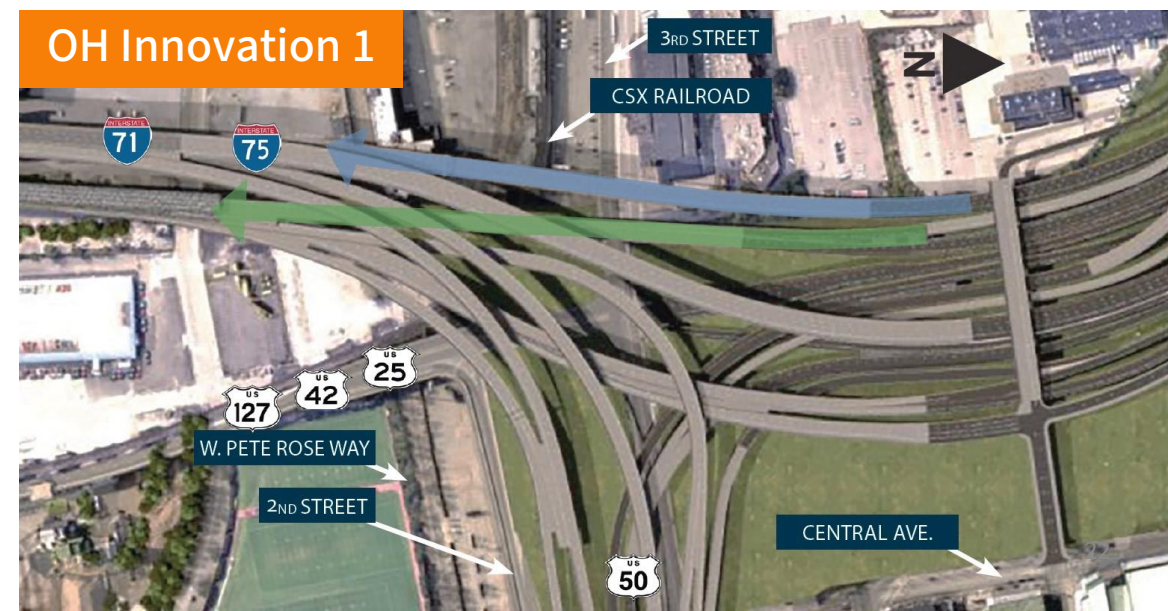
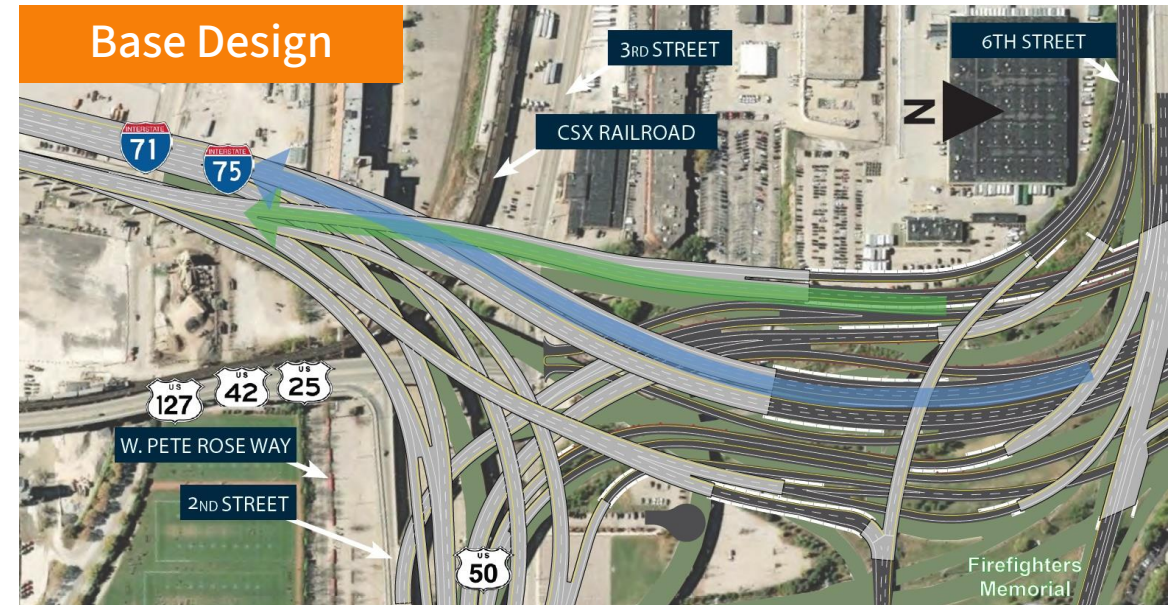
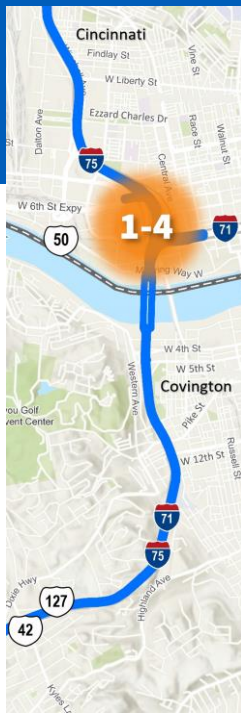
OH Innovations



Ohio Recommended Innovations

1 | Southbound Roadway Reconfiguration

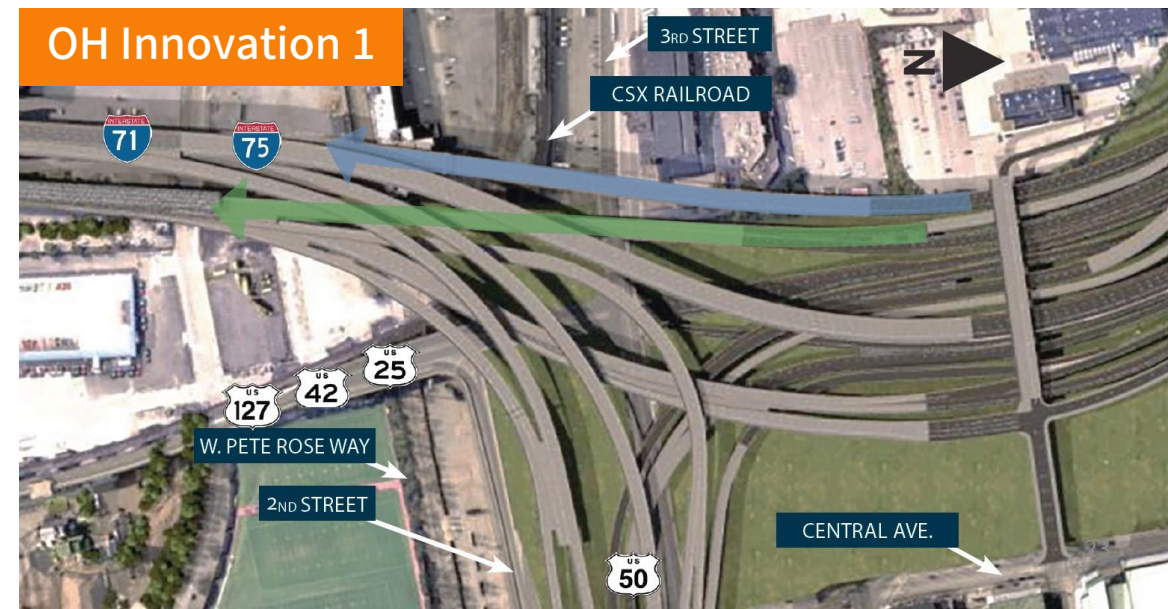
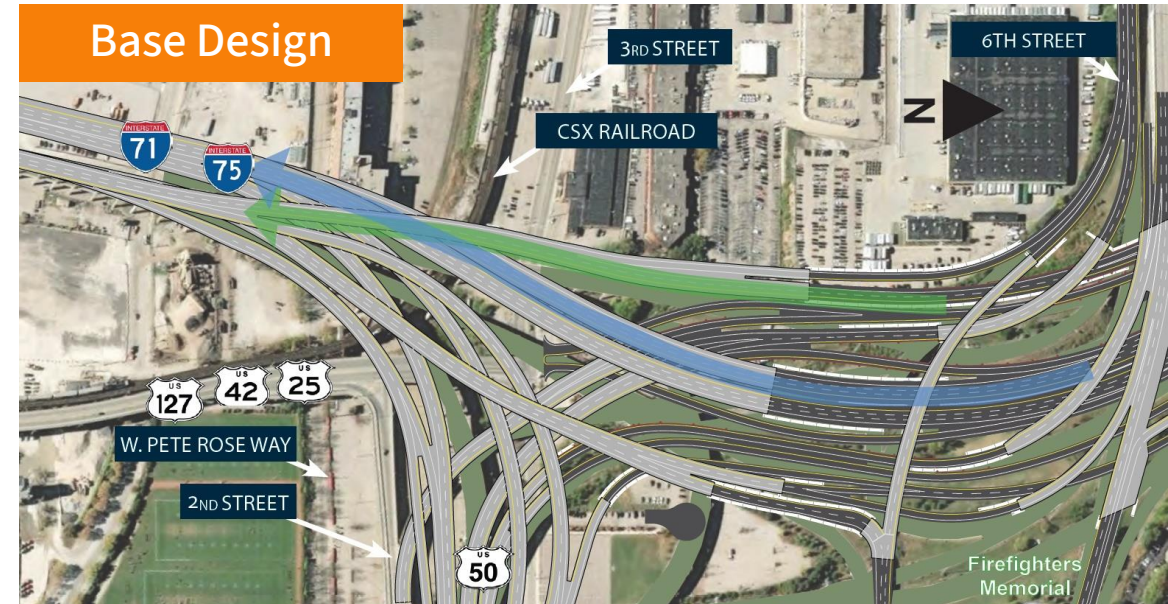
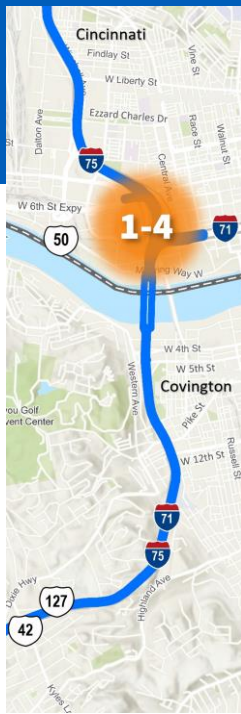
- Southbound I-71/I-75 moved to outside
- Southbound collector-distributor roadway moved to inside
- Southbound I-75 constructed offline
- Simplified bridge designs
- Simplified maintenance of traffic



Ohio Recommended Innovations

1 | Southbound Roadway Reconfiguration

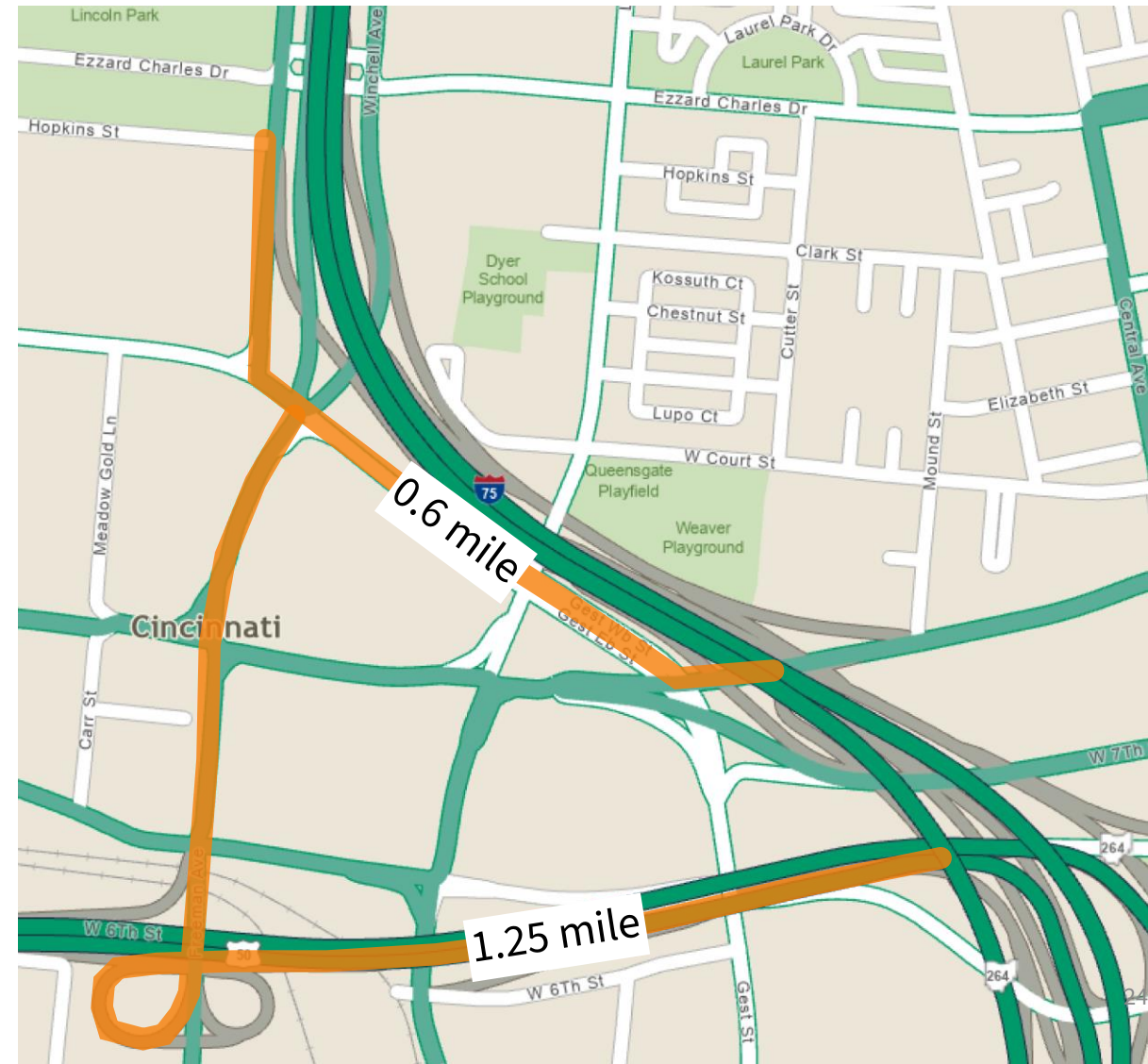
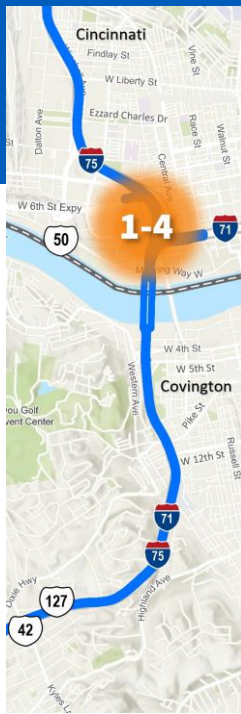
- Improves constructability
- Reduces costs
- Improves safety



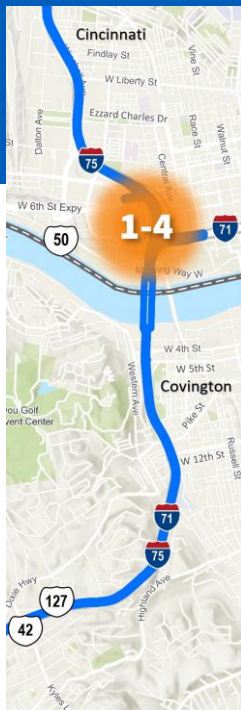
Ohio Recommended Innovations

1 | Southbound Roadway Reconfiguration

- Western Avenue ramp to southbound I-75 removed
- Alternate routes
 - Proposed 9th Street entrance (+0.6 mile)
 - Existing Freeman Avenue interchange (+1.25 mile)
- Low volumes
 - 300 vehicles in PM peak hour

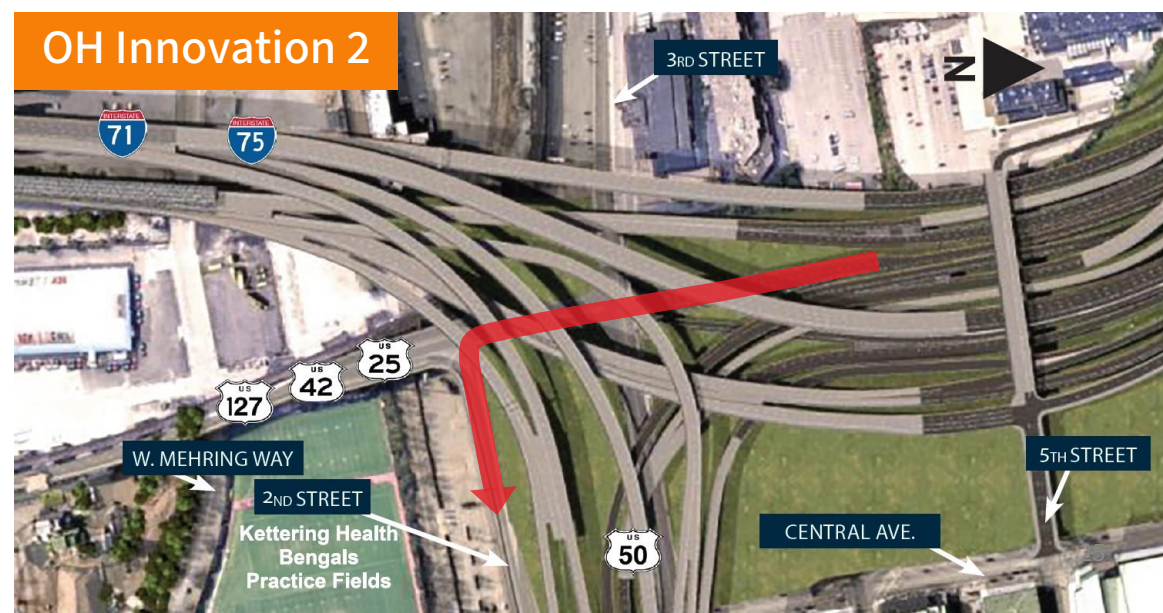


Ohio Recommended Innovations

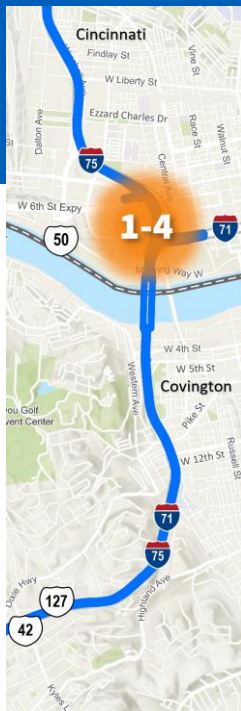


2 | Combination of 2nd and 3rd Street Connections

- Southbound I-75 ramps to 2nd and 3rd Streets
- Traffic rerouted through upgraded at-grade 2nd and 3rd Street intersections
- Reduced vertical design challenges

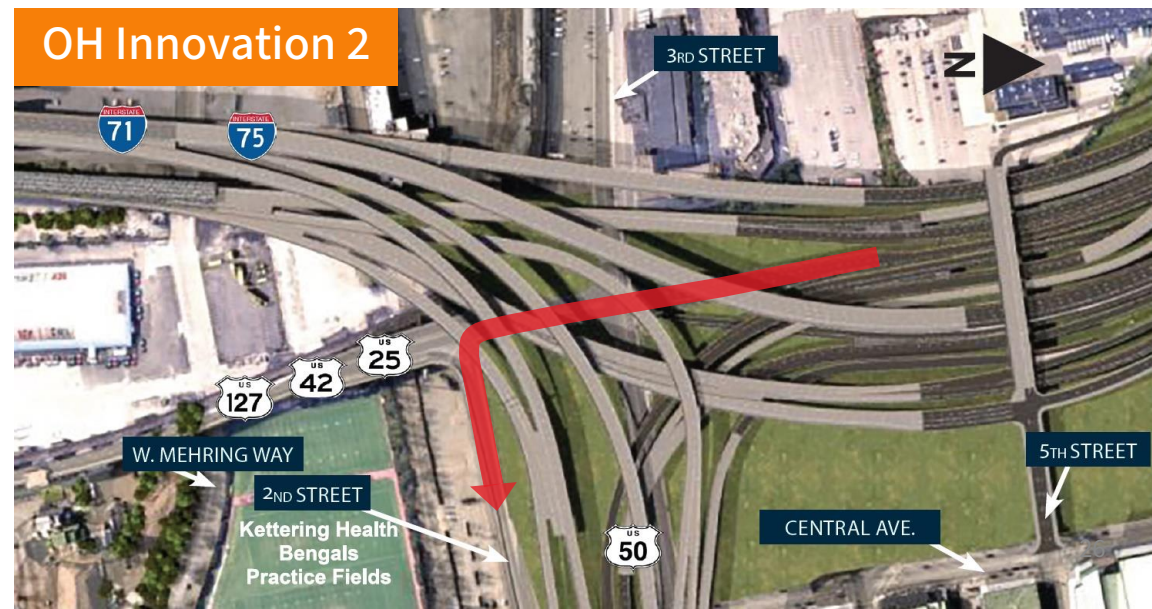
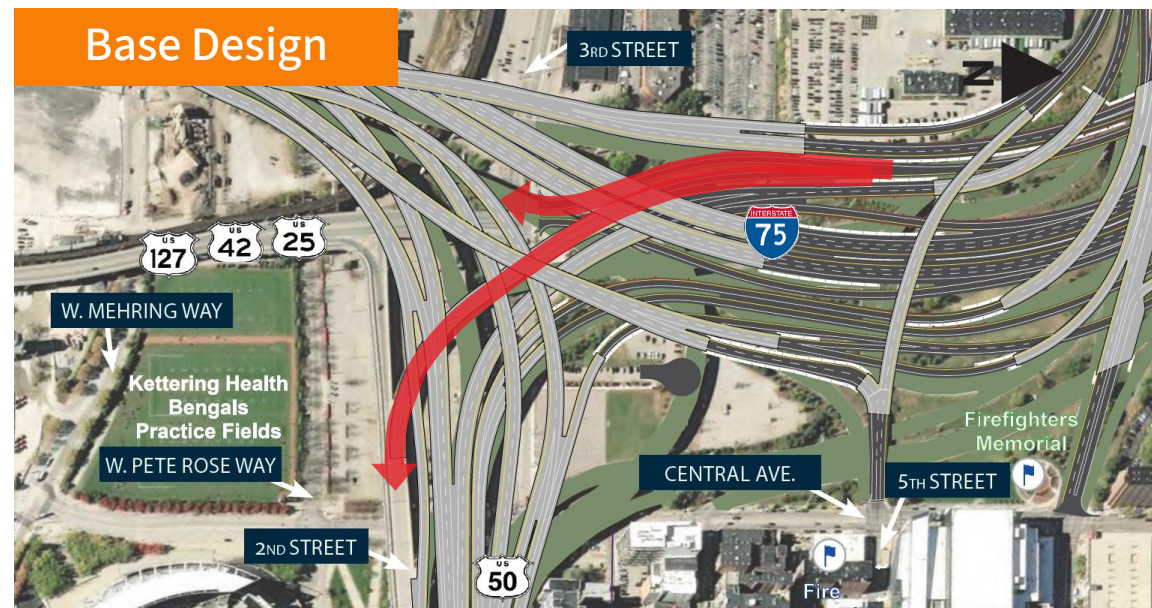


Ohio Recommended Innovations



2 | Combination of 2nd and 3rd Street Connections

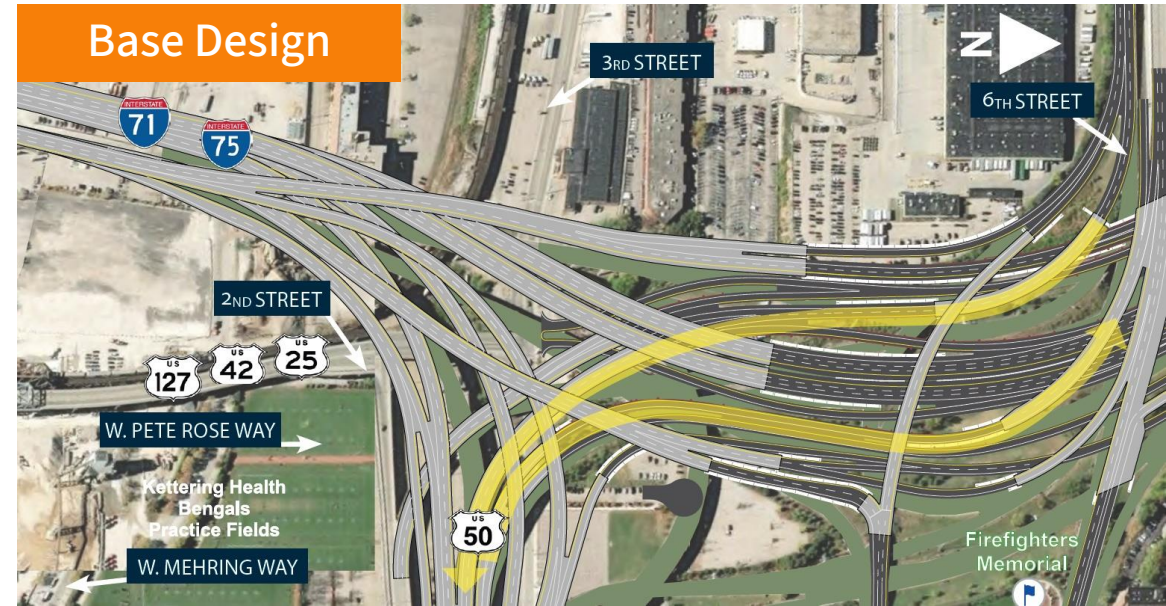
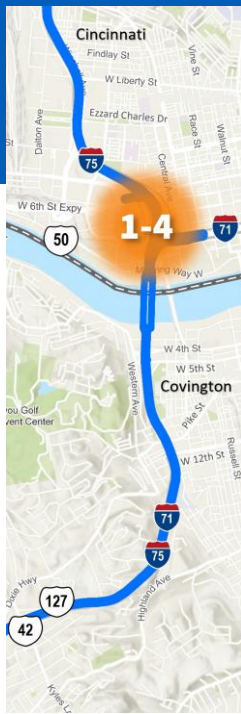
- Reduces costs
- Enhances street grid system
- Improves safety at the 2nd Street and Elm Street intersection
- Reduces impacts to city parking lots



Ohio Recommended Innovations

3 | US-50 Roadway Consolidation

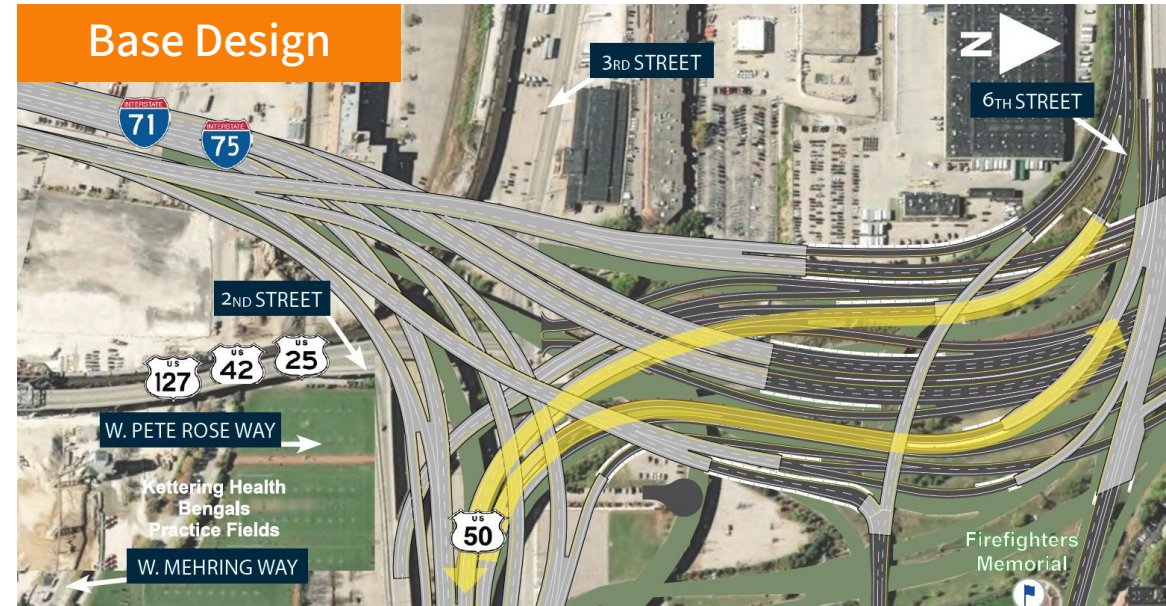
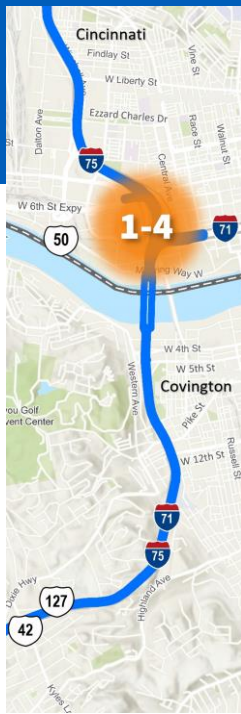
- Reconfigure US-50 eastbound and westbound to follow a single alignment



Ohio Recommended Innovations

3 | US-50 Roadway Consolidation

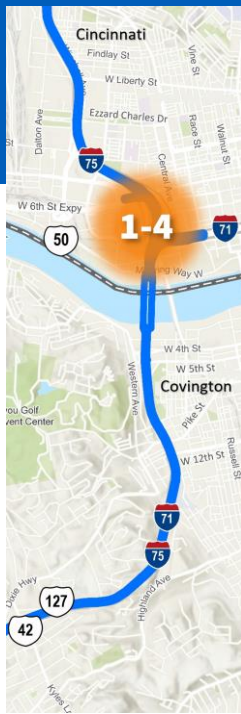
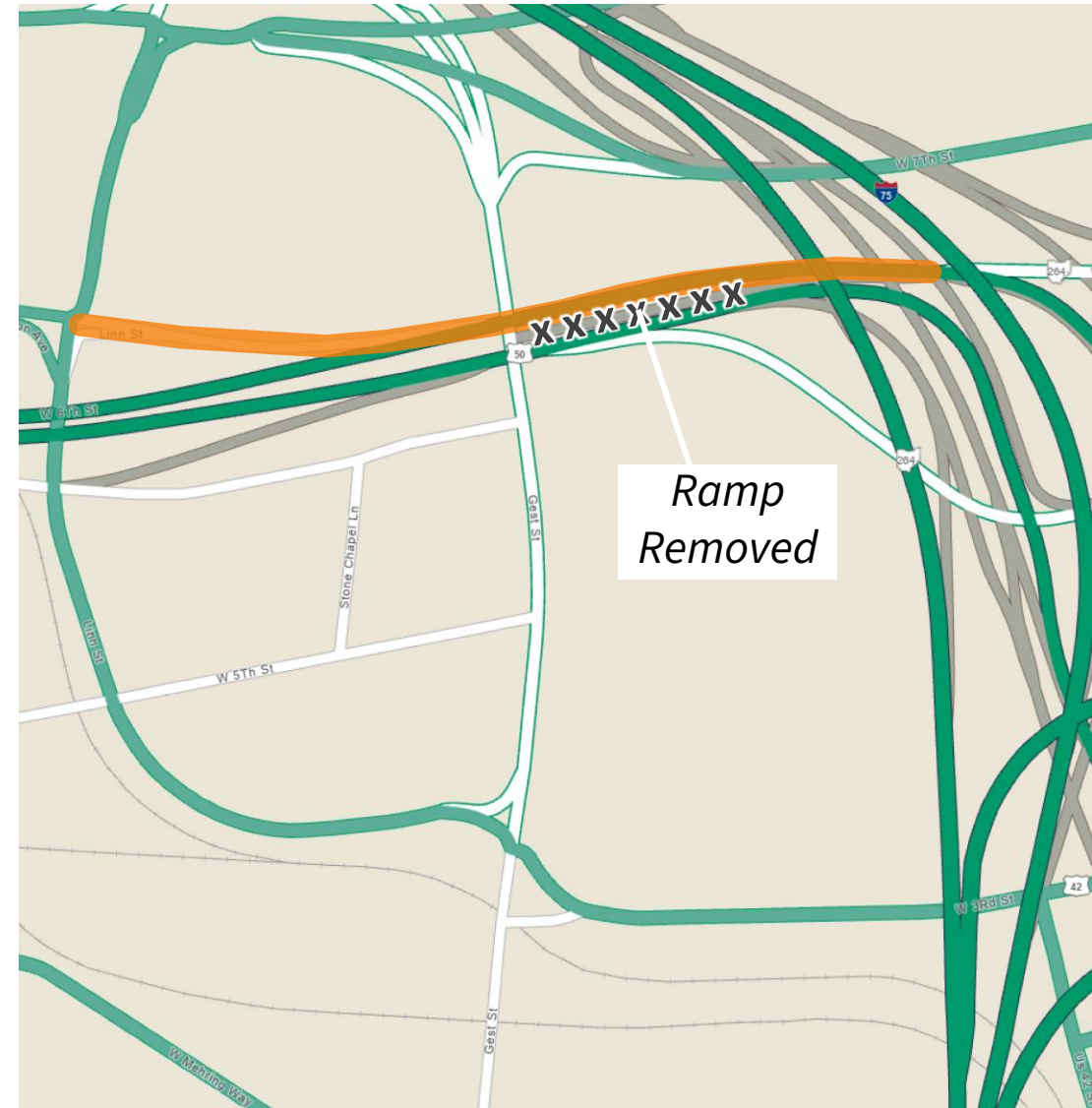
- Reduces footprint
- Improves geometrics
- Allows for future extension of 5th Street to Gest Street



Ohio Recommended Innovations

3 | US-50 Roadway Consolidation

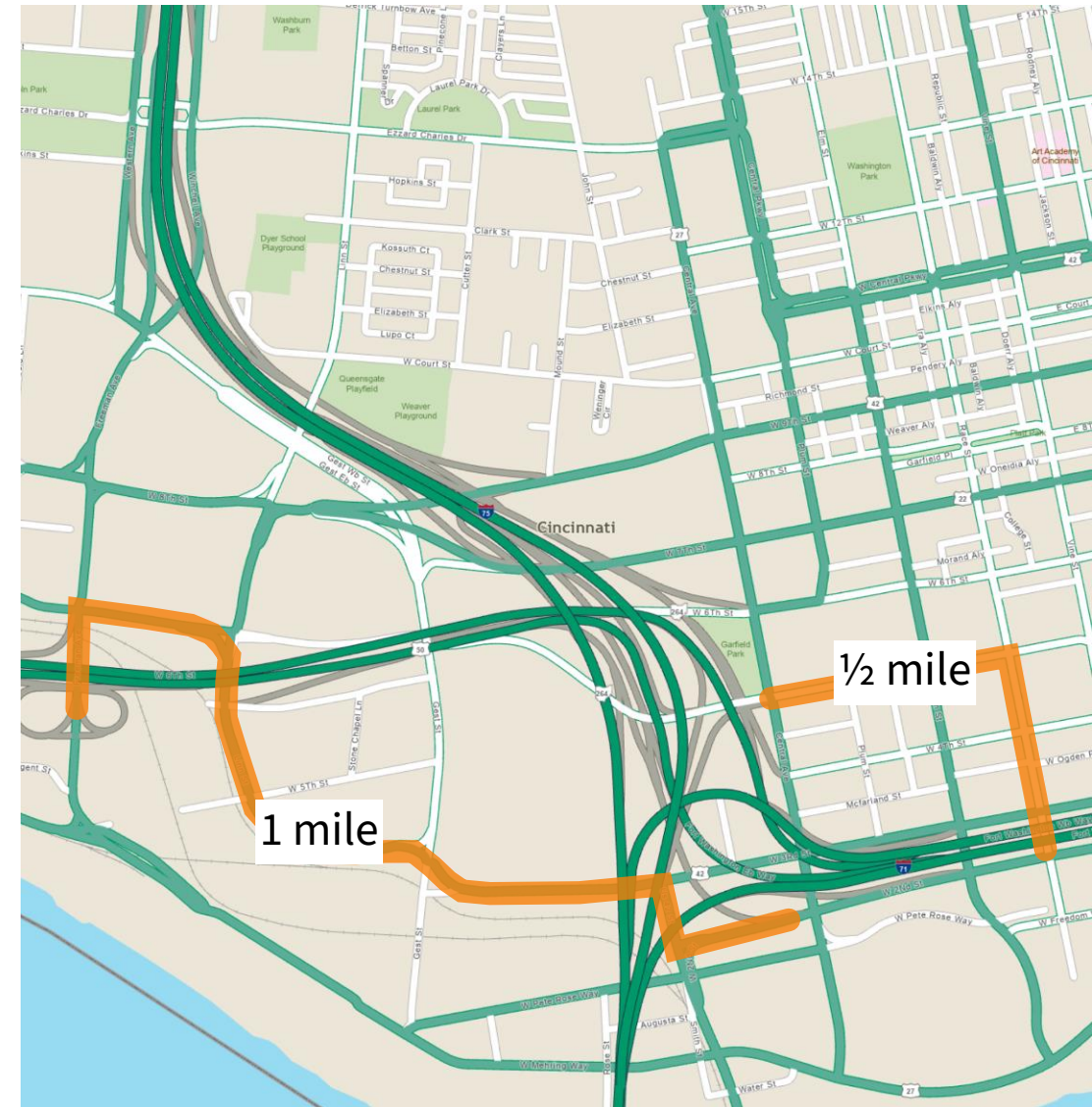
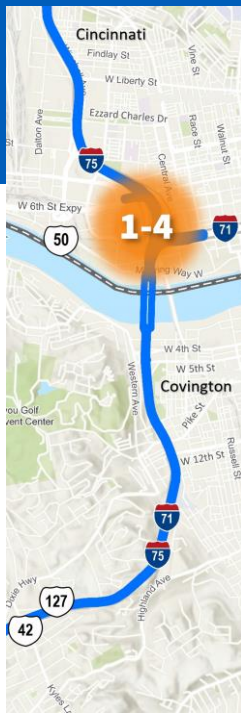
- Ramp from westbound US-50 to Gest Street removed
- Traffic rerouted to existing Linn Street exit
- Relatively low volumes
 - 580 vehicles in the AM peak hour



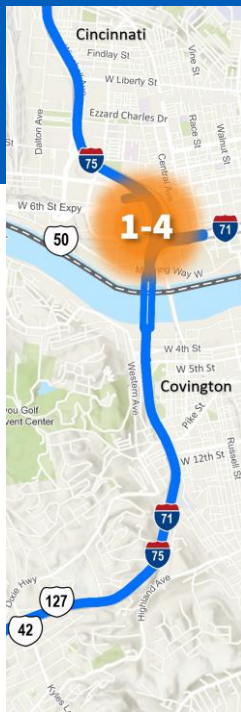
Ohio Recommended Innovations

3 | US-50 Roadway Consolidation

- Ramp from eastbound US-50 to 2nd Street removed
- Alternate routes
 - o Existing Freeman Avenue exit (+1 mile)
 - o 5th Street exit (+1/2 mile)
- Low volumes
 - o 220 vehicles in AM peak hour
 - o 90 vehicles in PM peak hour



Ohio Recommended Innovations



4 | Realization of Street Grid Concept

- New intersection at Gest and 9th Streets
- Improved intersection at Gest and 7th Streets
- New intersection at Gest and 6th Streets
- 5th Street extended to Queensgate with potential future extension to Gest Street



Ohio Recommended Innovations



4 | Realization of Street Grid Concept

- Improves connections to Queensgate for all modes of travel
- Shortens pedestrian crossing from downtown to Queensgate
- Condenses interchange footprint
- May open up additional developable land



Ohio Recommended Innovations

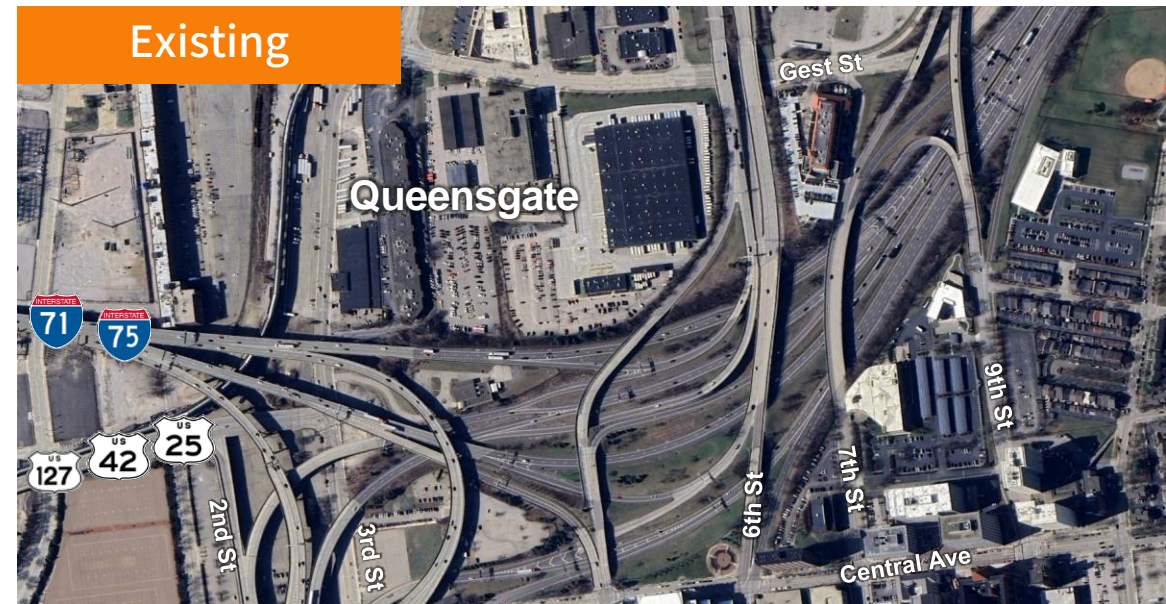
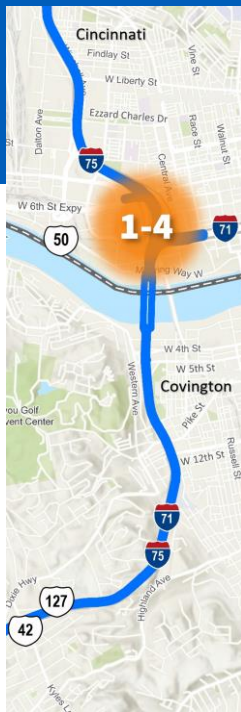
4 | Realization of Street Grid Concept



Ohio Recommended Innovations

4 | Realization of Street Grid Concept

- Improves east-west connectivity between downtown and Queensgate
- Connects across 3rd, 5th, 6th 7th, and 9th Streets

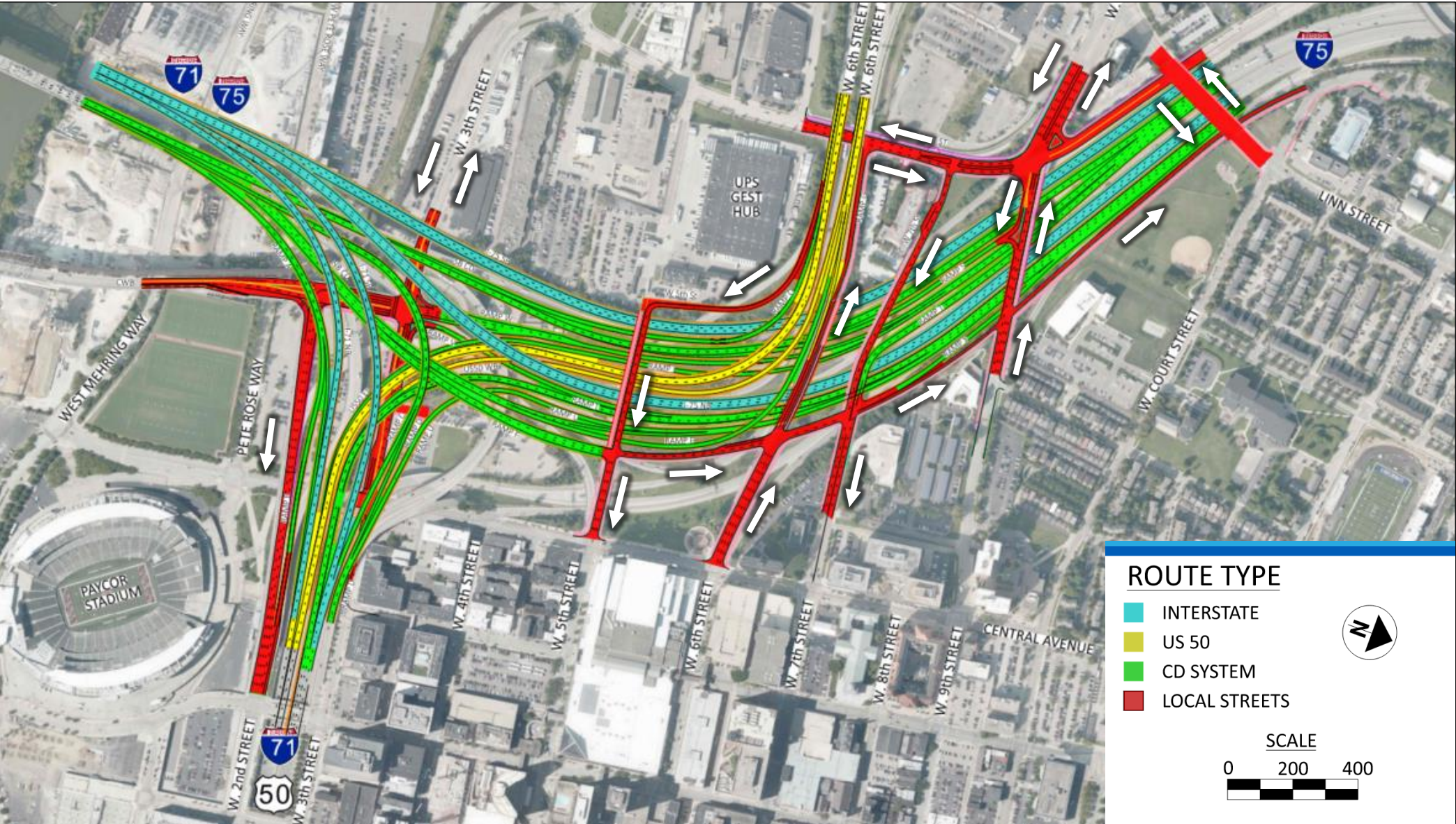


Ohio Recommended Innovations

4 | Realization of Street Grid Concept



Ohio Recommended Innovations





Environmental Commitments

Environmental Commitments

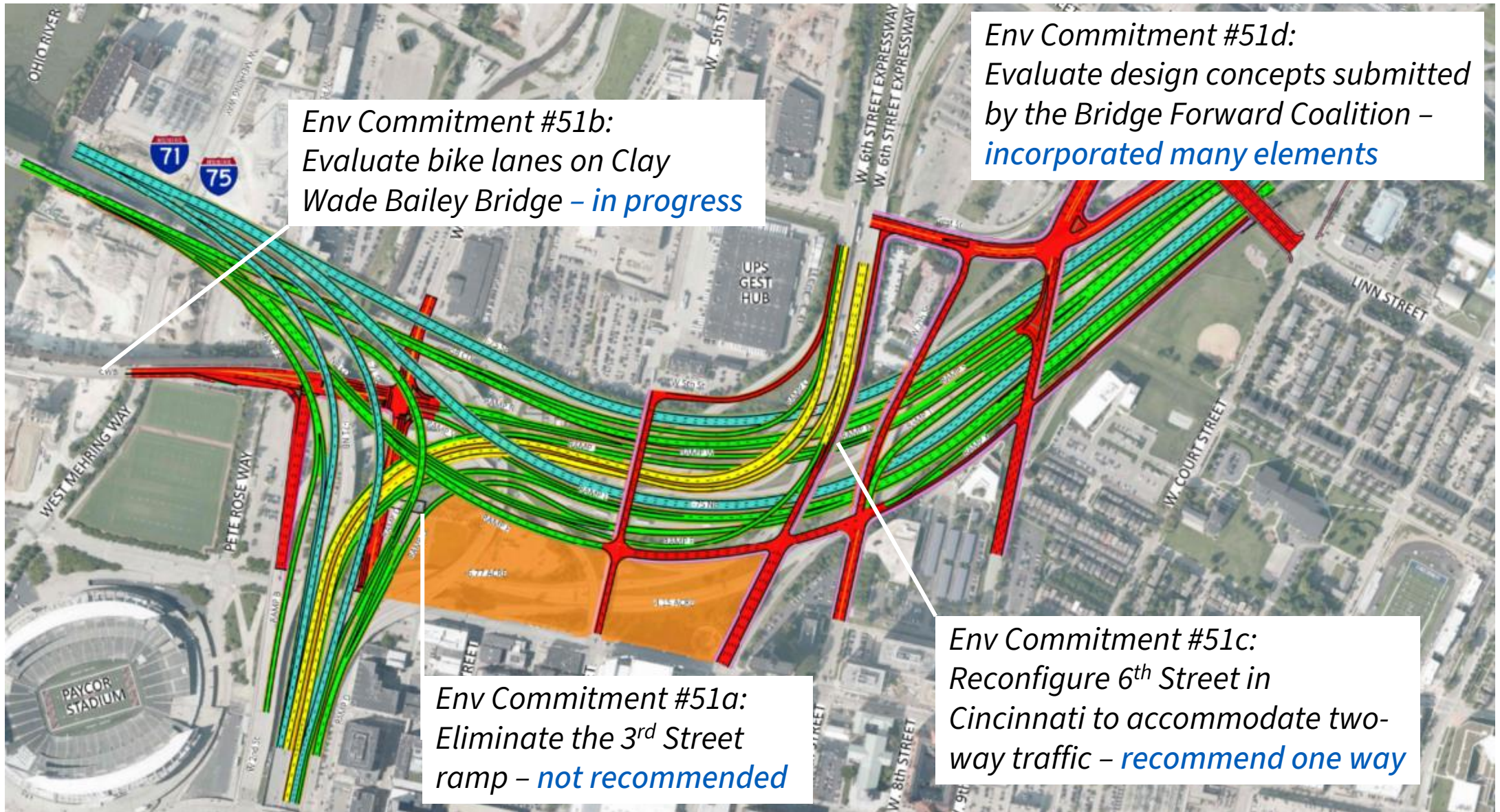
- Commitments to be carried out by KYTC and ODOT as the project progresses through detailed design and construction
- 62 total environmental commitments
 - Commitment 1: Innovation process
 - Commitment 51: Specific design refinements to be evaluated
 - Commitment 53: Ongoing PAC coordination

Environmental Commitment 51

The following refinements suggested during public involvement activities will be further evaluated during the innovation process for the Phase III progressive design-build contract:

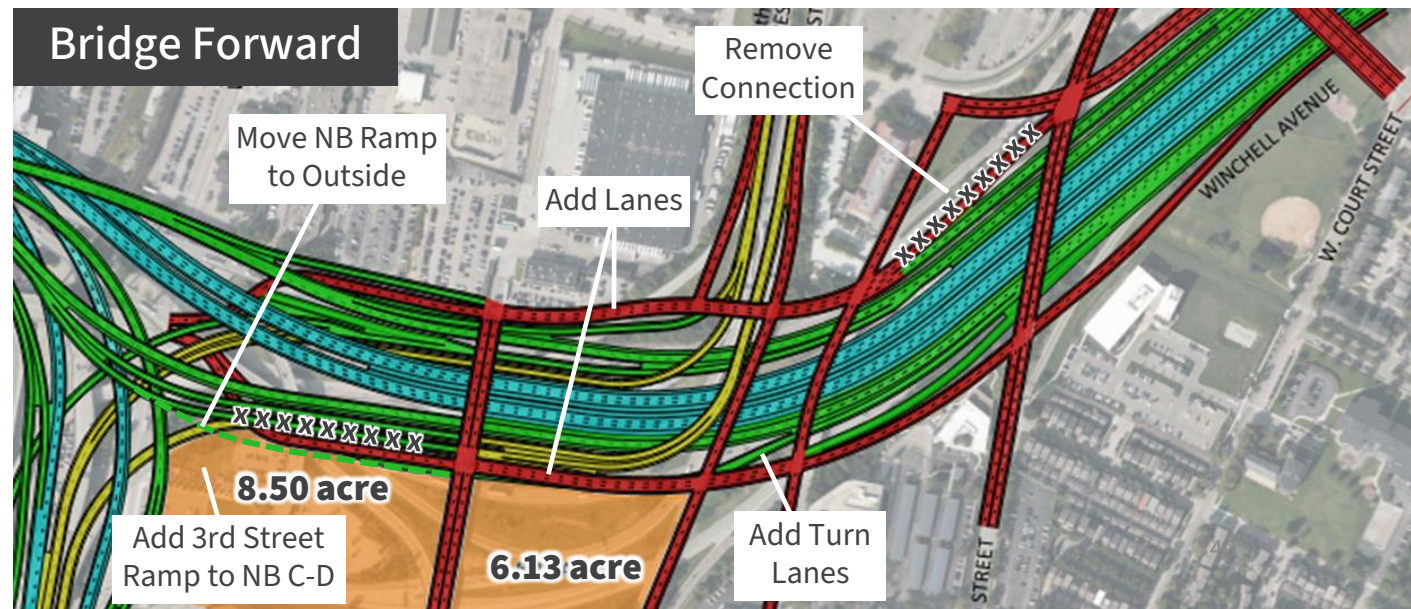
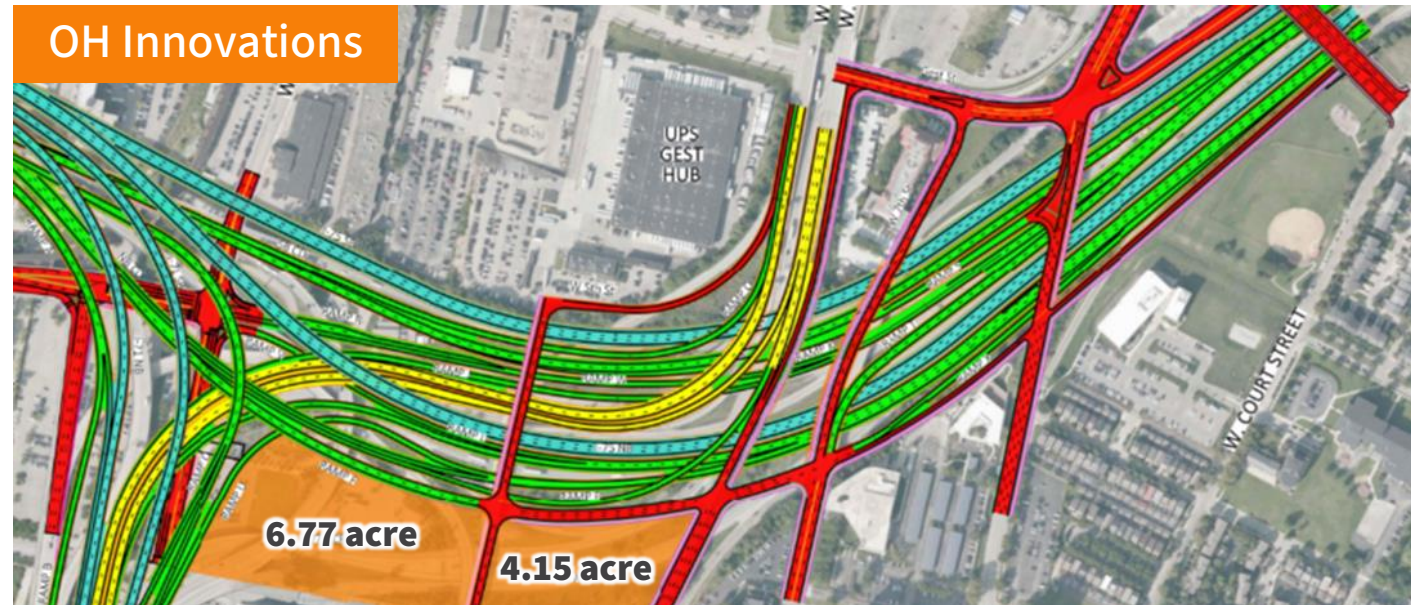
- Eliminate the 3rd Street ramp to the northbound collector-distributor system in Cincinnati and redirect traffic to the proposed connection at the end of the Clay Wade Bailey Bridge;*
- Reconfigure the lanes on the Clay Wade Bailey Bridge to add bicycle lanes;*
- Reconfigure 6th Street in Cincinnati to accommodate two-way traffic; and*
- Design concepts submitted by the Bridge Forward Coalition.*

Environmental Commitments



Environmental Commitments

- Recommended Ohio innovations and Bridge Forward design accomplish many of the same goals



Environmental Commitments

MEETS OR EXCEEDS OBJECTIVES								
DOES NOT MEET OBJECTIVES								
	<p>IN</p> <p>Similar to base design.</p>	<p>IN BF</p> <p>Queensgate connections via 6th, 7th, and 9th. Allows for future extension of 5th.</p>	<p>IN BF</p> <p>CBD to Queensgate connection approximately 575ft/460ft along 5th.</p>	<p>IN BF</p> <p>11 acres / 14 acres</p>	<p>IN</p> <p>Larger work area. Less temporary pavement. Reduced traffic impacts during construction.</p>	<p>IN</p> <p>Less overhead work. Improved safety for motoring public. Contractor preferred for worker safety.</p>	<p>IN</p> <p>1% decrease</p>	<p>IN</p> <p>Comparable to base design.</p>
	<p>BF</p> <p>Cannot function as submitted. Operations fail even with significant design changes.</p>				<p>BF</p> <p>Constrained work area. Trench work area. Multi-level construction.</p>	<p>BF</p> <p>Increased worker and motoring public exposure to high-risk traffic conditions.</p>	<p>25-30% increase</p> <p>BF</p>	<p>Additional 1-2 years.</p> <p>BF</p>
								<p>Recommended Ohio Innovations IN</p> <p>Bridge Forward Concept BF</p>



Next Steps

Next Steps

- Conduct outreach to community councils, neighborhood groups, and other stakeholders
- Update and confirm traffic and environmental studies for the recommended innovations
- Proceed to detailed design (Phase III)
 - 30% plans by August 2024
 - Contractual estimate update
 - Identify early work packages



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THANK YOU!

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