

BRENT SPENCE
BRIDGE CORRIDOR



Fort Wright Meeting (KY)

December 1, 2022



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



The meeting will open with introductions of the Project Team in attendance (2 min).

Welcome

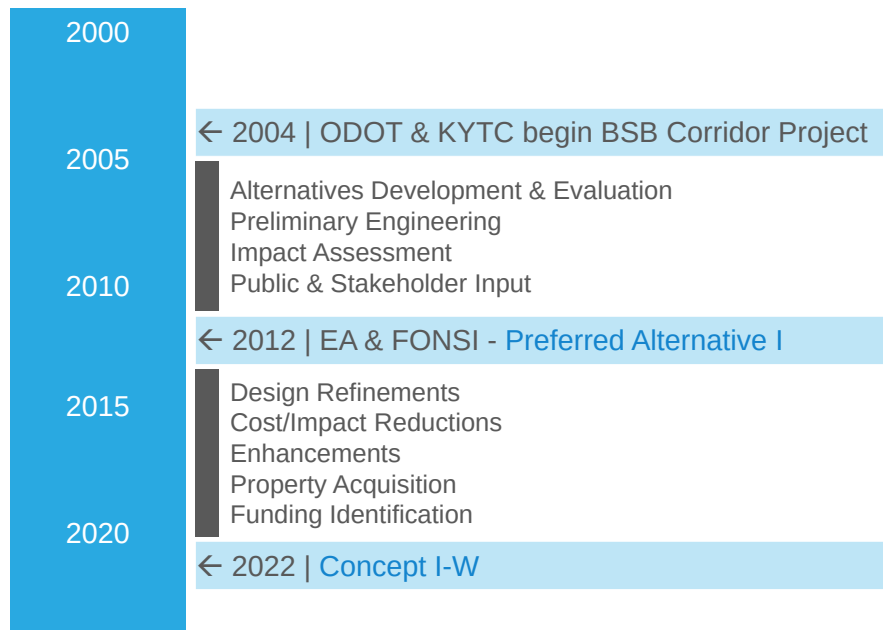
- Meeting purpose
 - Share updates on the Brent Spence Bridge (BSB) Corridor Project
 - Offer residents in Fort Wright the opportunity to share feedback with the Project Team
- Agenda
 - General project overview
 - Project specifics in the Fort Wright area
 - Discussion/feedback from Fort Wright residents



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The reason we're here tonight is to give a brief overview of the Brent Spence Bridge Corridor Project both for those of you who aren't familiar with the project and for those of you who have been following the progress over the past decade. We're also here to give specific details about what the project will look like in and near Fort Wright. Most importantly, tonight we're focusing on hearing from the residents of Fort Wright. We're here to answer your questions and to listen to your feedback about the project.

Project History



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For those of you who haven't been following the project for the last 15 years, let's go over a quick history.

In 2004, ODOT and KYTC formally began studying ways to improve 7.8 miles of I-71 and I-75 in Kentucky and Ohio. In Kentucky, that includes I-71 and I-75 from just south of Dixie Highway to the Brent Spence Bridge. Through a series of preliminary engineering and planning studies, we developed several potential alternatives for improving the corridor. We completed preliminary engineering and evaluated the impacts of each alternative. We also held several public meetings to gather feedback on the alternatives. The whole process led to the development of an Environmental Assessment (which is abbreviated "EA" on this slide) that compared the benefits and impacts of the alternatives and recommended one alternative – called the preferred alternative - to move forward into detailed design and construction. After reviewing the EA and gathering more feedback through public hearings, the Federal Highway Administration issued a decision called a "Finding of No Significant Impact" (also called a FONSI, as shown on this slide), which marked the formal approval the project and allowed the preferred alternative – Alternative I – to move into the next stages of design.

Since the approval of the FONSI in 2012, KYTC has been studying ways to improve the design, simplify the construction, reduce costs, reduce impacts, and incorporate additional enhancements into the project. These studies resulted in several refinements to Preferred Alternative I, which we are referring to as "Concept I-W" and what we will be presenting to you tonight.

Also since 2012, KYTC has begun purchasing the land needed to build the project.

Project Description

Ohio

- Widen I-75
- Rebuild all overpass bridges and interchanges
- Build a collector-distributor system
- Tie into Mill Creek Expressway-Hopple Street Interchange project
- Tie into the Western Hills Viaduct project
- Add a northbound exit to Ezzard Charles Drive
- Connect to I-71 and US-50E

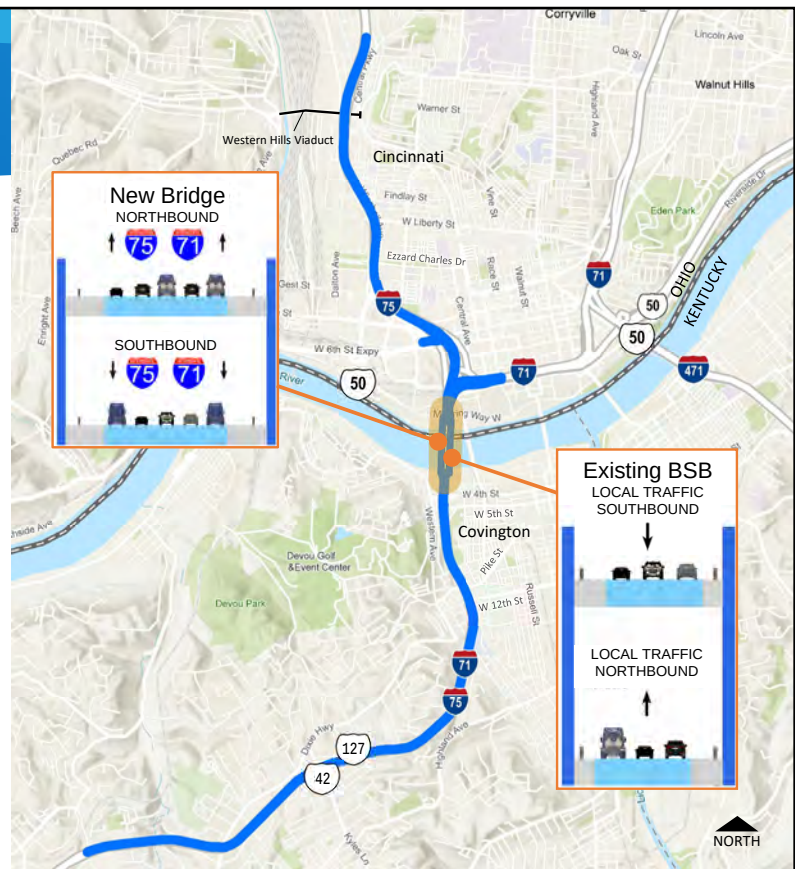


In Ohio, the project will add one lane in each direction to I-75, remove left exits, and rebuild all bridges and interchanges. A collector-distributor system will also be added to connect I-75 traffic to and from the local street network and US-50 West.

Project Description

Brent Spence Bridge

- New double-decker companion bridge
 - 5 lanes each deck
 - Carry through (interstate) traffic
- Rehabilitate and reconfigure existing bridge
 - Three lanes each deck
 - Increased inside/outside shoulders
 - Carry local traffic



Note: Bridge details will come in with click (marked by #).

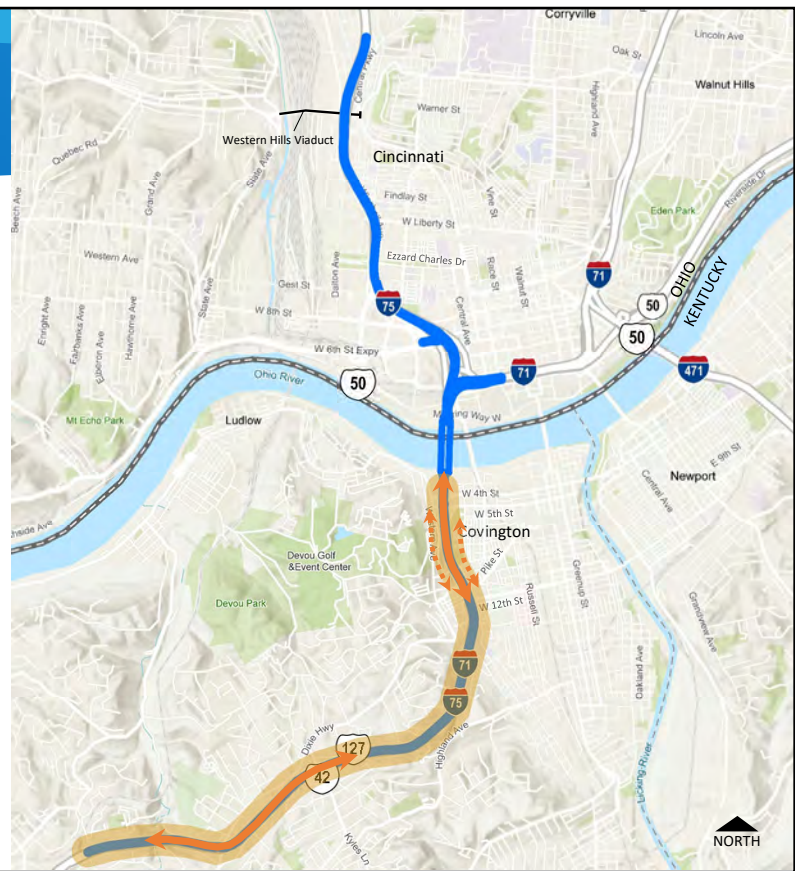
Let's move south to the Brent Spence bridge crossing. The project will build a new double decker companion bridge with five lanes on each deck west of the existing BSB. The new bridge will carry through (interstate) traffic. (#)

The existing double-decker Brent Spence bridge will be rehabilitated and reconfigured to reduce the number of lanes on each deck from four to three and increase inside and outside shoulder widths. The existing bridge will carry local traffic only.

Project Description

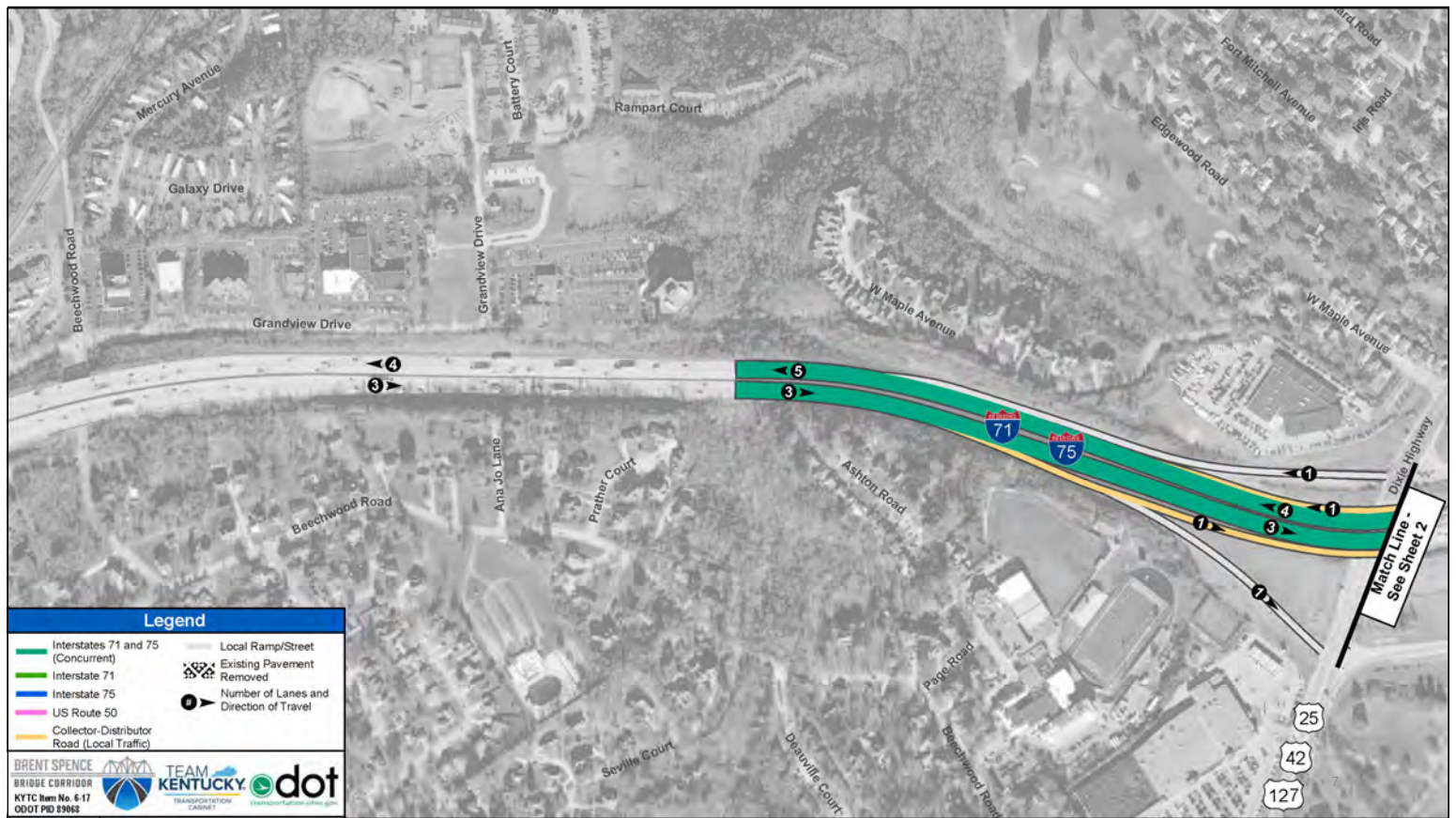
Kentucky

- Reconstruct and widen I-71/I-75
- Rebuild all overpass bridges and interchanges
- Extend frontage roads in Covington
- Construct a collector-distributor system from 12th Street north
- Construct collector-distributor systems between Dixie Highway and Kyles Lane



Note: Project details will come in with click (marked by #).

In Kentucky, the project will reconstruct and widen I-71 and I-75 and rebuild all overpass bridges and interchanges. (#) The project will also extend existing frontage roads connecting 5th Street and Pike Street going northbound and 4th Street and Pike Street going southbound to improve connectivity in Covington. (#) A collector-distributor system will also be built beginning northbound at 12th Street to connect interstate traffic to and from the local street network. (#) Lastly, collector-distributor lanes will be built from south of Dixie Highway and north of Kyles lane to reduce the need for traffic to weave between ramps and the through lanes on the interstate.



This slide shows how traffic will move through Fort Mitchell and Forth Wright. The green shows through traffic on the interstate. As shown in the orange, a collector distributor road will start just south of Dixie Highway. The purpose of the collector-distributor road is to reduce the number of places where traffic is entering and exiting the freeway to reduce the number of times vehicles weave in and out of the through travel lanes to access local roads. As shown here, in the northbound direction, traffic traveling to Dixie Highway and Kyles Lane will exit onto the collector-distributor road south of Dixie Highway. Vehicles traveling to Dixie Highway will then leave the collector-distributor road and take a ramp to Dixie Highway (shown in grey). Traffic traveling to Kyles Lane will continue north on the collector-distributor road.



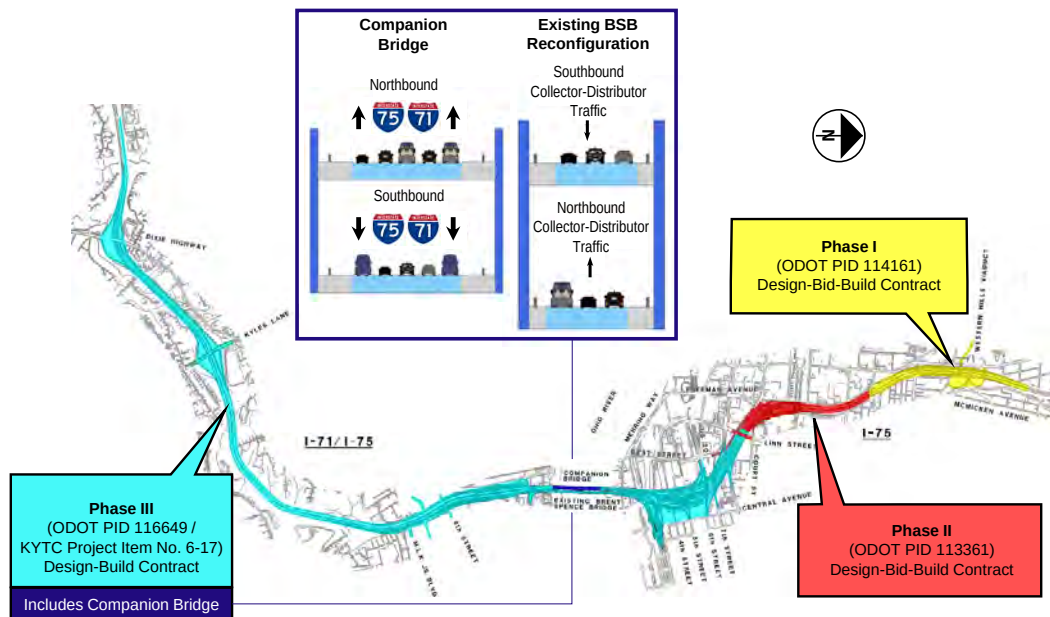
Moving further north, traffic from Dixie Highway will travel down a ramp to enter the northbound collector-distributor road. Next, traffic traveling to Kyles Lane will leave the collector-distributor road and use a ramp to reach Kyles Lane. Northbound traffic will travel through on the collector-distributor road, and more traffic will enter from Kyles Lane.



Finally, the traffic on the collector-distributor road will join with traffic from the Kyles Lane ramp and enter the interstate going northbound. Notice that there will be only one northbound exit and one entrance between Dixie Highway and Kyles Lane instead of one exit and one entrance for each road. Consolidating these access points will improve traffic flow and reduce high-speed crashes on the interstate.

The traffic movements we just walked through will be reversed in the southbound direction, providing the same access scheme and improvements in traffic flow and safety.

Project Description

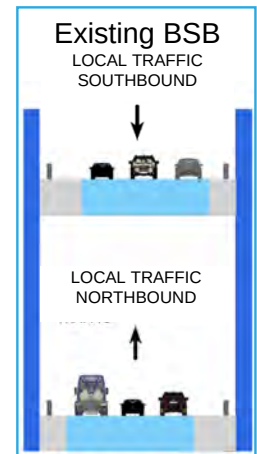
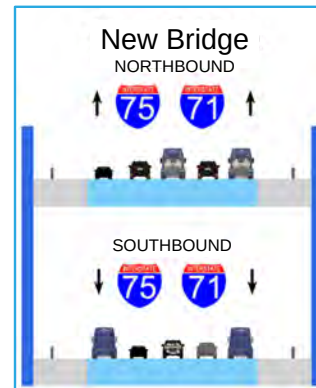


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The project is going to be built in three phases. Phases I and II (shown in yellow and red) will be built in Ohio. Phase III (shown in blue) will build everything else, including the new companion bridge. The entire Kentucky corridor will be built in Phase III, which is following a progressive design-build process that will begin in 2023.

What Has Changed?

- Reconfigured how traffic travels across the Ohio River
 - Companion bridge carries through (interstate) traffic
 - Existing bridge carries local traffic
 - All northbound and southbound traffic on one deck
 - Width of companion bridge substantially reduced



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As mentioned earlier, since the 2012 EA and FONSI, KYTC has been studying ways to improve the design, simplify the construction, reduce costs, reduce impacts, and incorporate additional enhancements. One of the biggest changes is how traffic will travel across the Ohio River. The Preferred Alternative identified in 2012 mixed local and interstate traffic on both bridges. The 2012 design also placed northbound and southbound traffic on the same bridge decks, which required additional width for a median to safely separate opposing traffic.

Concept I-W carries all interstate traffic on the new companion bridge and all local traffic on the existing Brent Spence Bridge. In addition, all northbound and southbound traffic is grouped on their own bridge decks. As a result, the width of the companion bridge was reduced from 172 feet to 107 feet, substantially reducing the cost of the bridge. This configuration will also improve traffic flow and safety by separating through and local traffic.



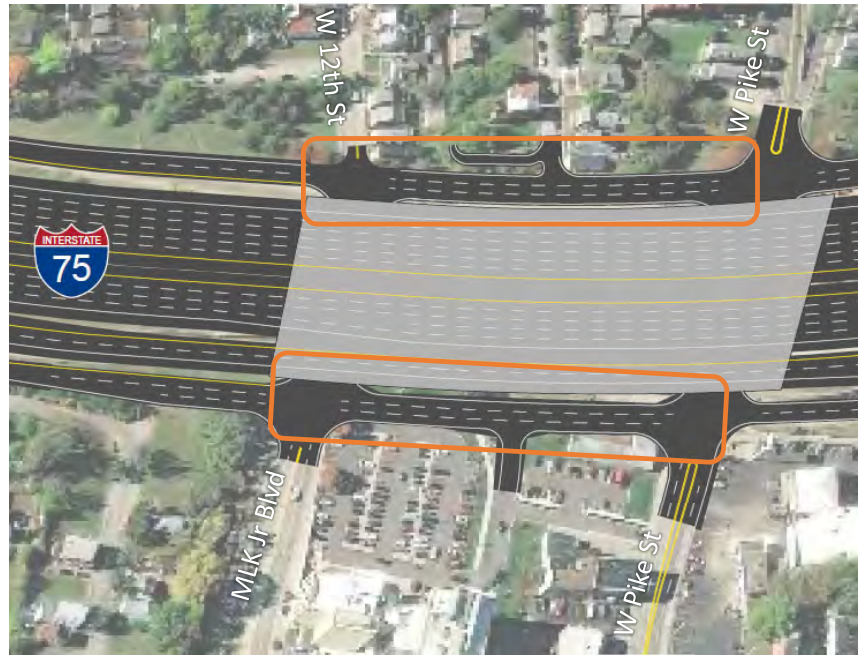
This drawing shows what the new companion bridge and the existing Brent Spence Bridge might look like after the project is built. Please note that the final design of the companion bridge will not be complete for a few years. It is possible it could be a cable-stayed design.



Here's another view from Covington.

What Has Changed?

- Reduced shoulders
- Reduced design speeds
- Reduced lanes on frontage roads
 - Residential | 40+ then vs. 4 now
 - Commercial | 6 then vs. 5 now
- Reduced relocations



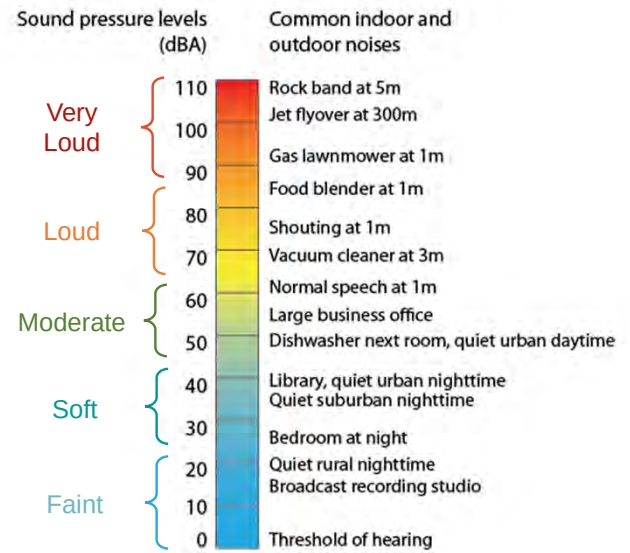
Since 2012, the design has been refined to reduce shoulder widths on I-71, I-75, and collector-distributor roads to 10 feet to match current design standards. Previous design standards were 12 feet.

In addition, the design speeds on I-71, I-75, and the collector-distributor roads were adjusted to match the posted speed limits – which is 55mph for the interstate and 45 mph for the collector-distributor roads. This is 5 mph less than the 2012 design. We also completed additional traffic analyses and were able to reduce the number of lanes on the frontage roads between West 12th Street and Pike Street in Covington. There were originally 5 lanes northbound and 4 lanes southbound, and we were able to reduce both directions to 3 lanes.

These changes coupled with additional refinements to the design have substantially reduced the overall area needed to build the project in Kentucky. As a result, we've been able to substantially reduce the number of residents who will need to be relocated to build the project. In 2012, we estimated that over 40 residences would need to be relocated. Today, only 4 residences need to be relocated. In 2012, we estimated 6 businesses would need to be relocated. Now that number is 5.

Noise

- Noise: Unwanted sound.
- Decibel (dB): Used to measure the intensity of a sound.
- A-weighted decibel (dBA): Gives a scale for noise levels as perceived by the human ear.
 - Change in 1 dBA = barely perceptible
 - Change in 10 dBA = doubling or halving of sound



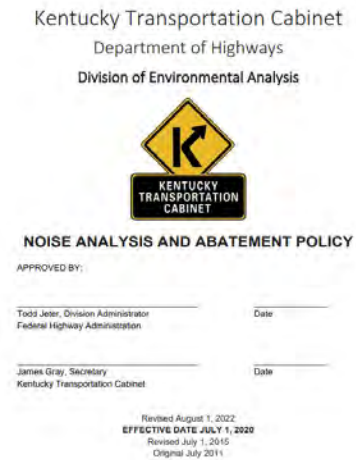
Source: Minnesota Pollution Control Agency

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Now let's dig into how the project will impact Fort Wright, starting with noise. To give some context, let's take a moment to go over some noise fundamentals. It's fairly obvious that noise is unwanted sound, but how do we measure it? Many of us have heard of a decibel, which is the unit we use to measure the intensity of sound – similar to how we use a foot to measure distance or a pound to measure weight. For highway noise analysis, we use an A-weighted decibel, which measures how sound is perceived by the human ear. The chart to the right gives a feel for the A-weighted decibels associated with common sound sources. For example, when you are right next to a gas-powered lawn mower or near the stage at a rock concert, it will be very loud – with A-weighted decibels in the 90-110 range. When you are vacuuming or making that smoothie in the morning, you are experiencing loud sounds in the range of 70 to 85 decibels. Your normal daily activities like having a conversation and working at your desk expose you to moderate sound levels in the range of 50-65 decibels. As you can see, sound levels fall off quickly from there. An important thing to note is that sound is measured on a logarithmic scale. We won't go into all the math behind that, but it is good to know that a difference of 1 decibel is barely perceptible to the human ear, and a change of 10 decibels is about equal to a doubling or a halving of the noise you hear.

Noise

- KYTC Noise Policy
- Developed in partnership with FHWA
- Define thresholds for whether a noise barrier is feasible and reasonable
 - Are areas of frequent human exterior use present?
 - Does the noise level exceed certain established thresholds?
 - Does the noise level substantially increase?
 - Can a barrier effectively block noise?
 - Does a barrier provide enough noise reduction to justify cost?
 - Does the community want a noise barrier?
- Noise walls must meet all feasible and reasonable thresholds.



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KYTC has a formal Noise Policy that was developed in partnership with the Federal Highway Administration that guides how traffic noise is evaluated for transportation projects. The first thing we examine is whether there are areas where people congregate outside. This could include someone's yard, a picnic area, or a recreation area, among others. The second thing we examine is whether the predicted noise level approaches or exceeds certain thresholds for different uses, which we call receptors. For example, the threshold for a hotel or office receptor is 72 dbA, while the threshold for a house receptor is 67 dBA. We also determine if there is a substantial increase – specifically a 10 dBA increase - in the predicted noise level when compared to what existed before the project. If the noise level is predicted to approach or exceed the established thresholds or to have a substantial increase, that area is considered to have a noise impact.

If a noise impact is identified, we evaluate if a barrier is feasible, or, "Can it effectively block noise?" In Kentucky, that means determining if a barrier can provide a minimum 5 dBA reduction for three of the impacted receptors. In addition, the barrier must not pose any overriding engineering, constructability, safety, or maintenance issues.

If a barrier is found to be feasible, then KYTC evaluates whether it is reasonable to construct the barrier. When evaluating if a barrier is reasonable, we look at whether a barrier meets certain noise reduction design goals and if it is cost effective. Specific criteria for evaluating these factors are spelled out in KYTC's noise policy. A noise wall must be found to be BOTH feasible AND reasonable in order to be built.

If a noise barrier is found to be both feasible and reasonable, then KYTC will ask the people who will benefit from it if they actually want it. If they agree, a noise barrier will be built.

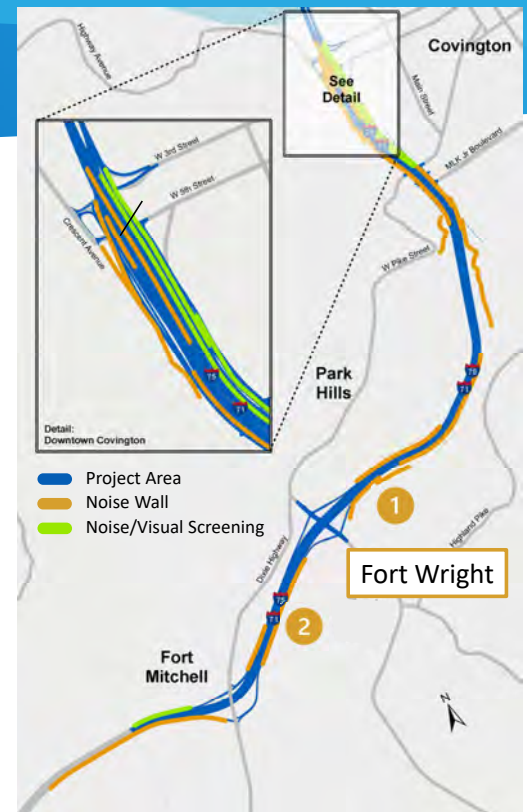
Noise – Ft. Wright (KY)

Noise wall reasonable/feasible per KYTC Noise Policy

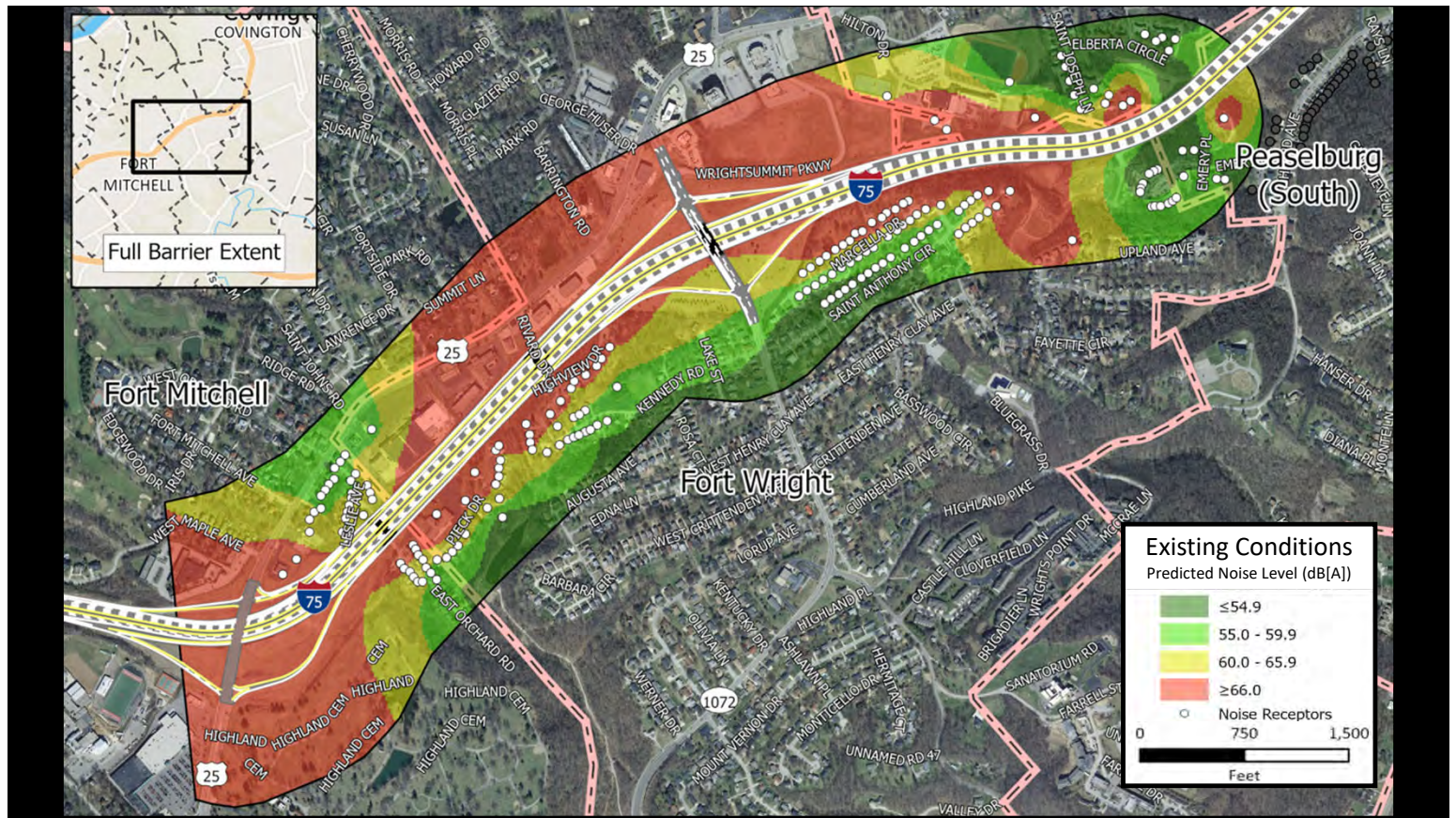
- 1 • Highland Pike to Kyles Lane (Ft. Wright/Peaselburg)
 - Without wall = 64 dBA
 - With wall = 57 dBA
- 2 • South of Kyles Lane
 - Without noise wall = 68 dBA
 - With noise wall = 59 dBA

Sound pressure levels (dBA)	Common indoor and outdoor noises
70	Vacuum cleaner at 3m
60	Normal speech at 1m Large business office

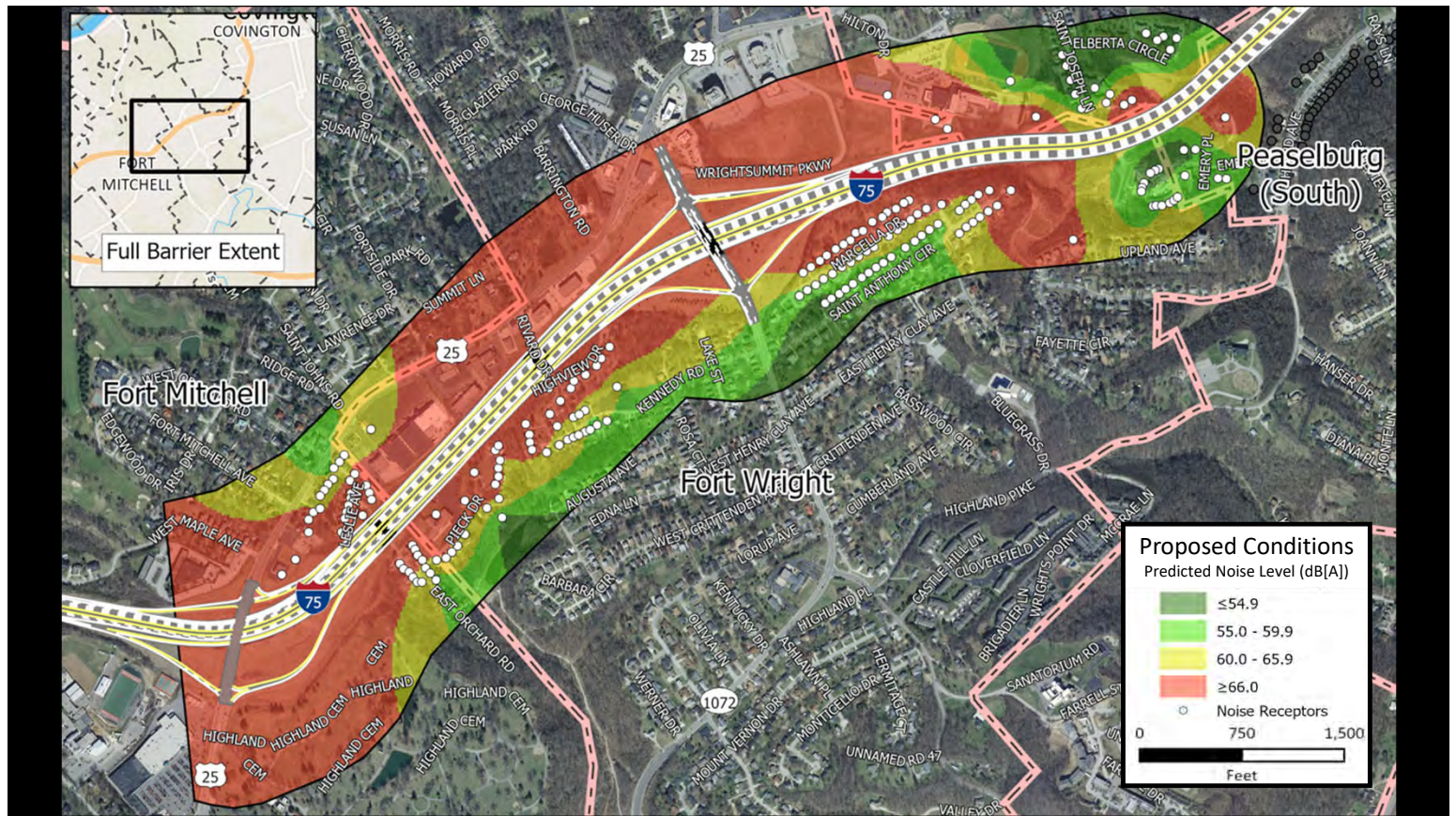
Note: Sound levels represent the average for the area benefitted by the wall.



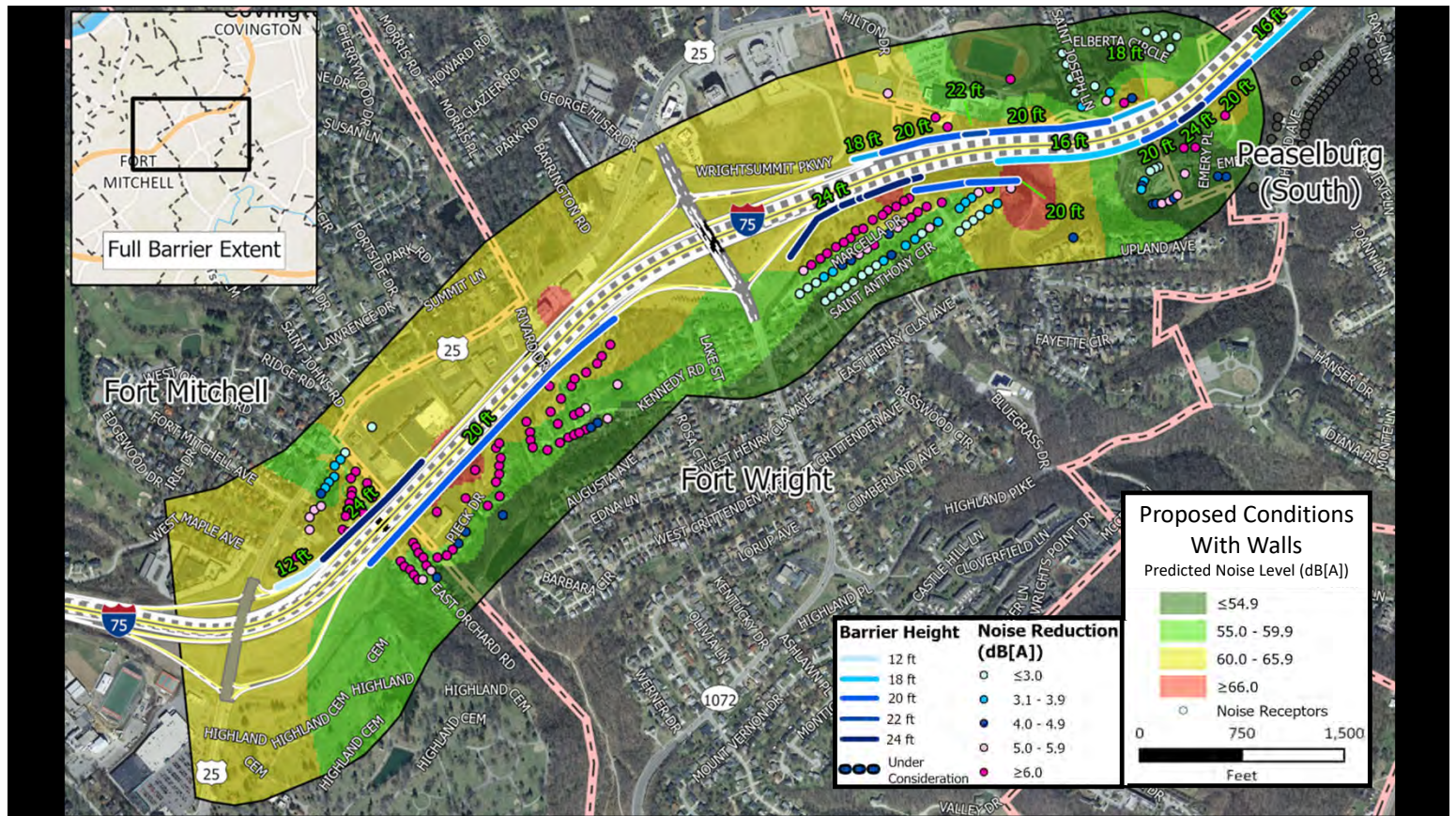
In Fort Wright, a noise wall system north of Kyles Lane (shown by the number 1) was found to be feasible and reasonable. The average exterior noise levels are predicted to be around 64 decibels without a noise wall and 57 decibels with a noise wall. Another noise wall south of Kyles Lane (shown by the number 2) was also found to be reasonable and feasible. The average exterior noise levels are predicted to be around 68 decibels without a noise wall and 59 decibels with a noise wall. These sound levels are averages for all the people who will benefit from the walls. The sound levels will vary depending on where each receptor is located. For reference, the average exterior sound levels with the noise wall in both locations are predicted to be slightly less than what you'd experience in normal conversation.



This slide highlights the receptors evaluated as part of the noise analysis for Fort Wright. The color gradient indicates existing noise readings, with red representing areas with higher sound levels and green representing quieter areas.



This slide shows how sound conditions are projected to change for the evaluated receptors by the year 2050 after the project is built. The color gradient indicates predicted noise levels, with red representing areas with higher sound levels and yellow representing moderate sound levels.



This slide shows predicted noise levels for the evaluated receptors under proposed (2050) conditions with construction of a noise wall. For the receptors, anything with light pink and dark pink have a reduction of 5 decibels and are considered benefitted receptors.

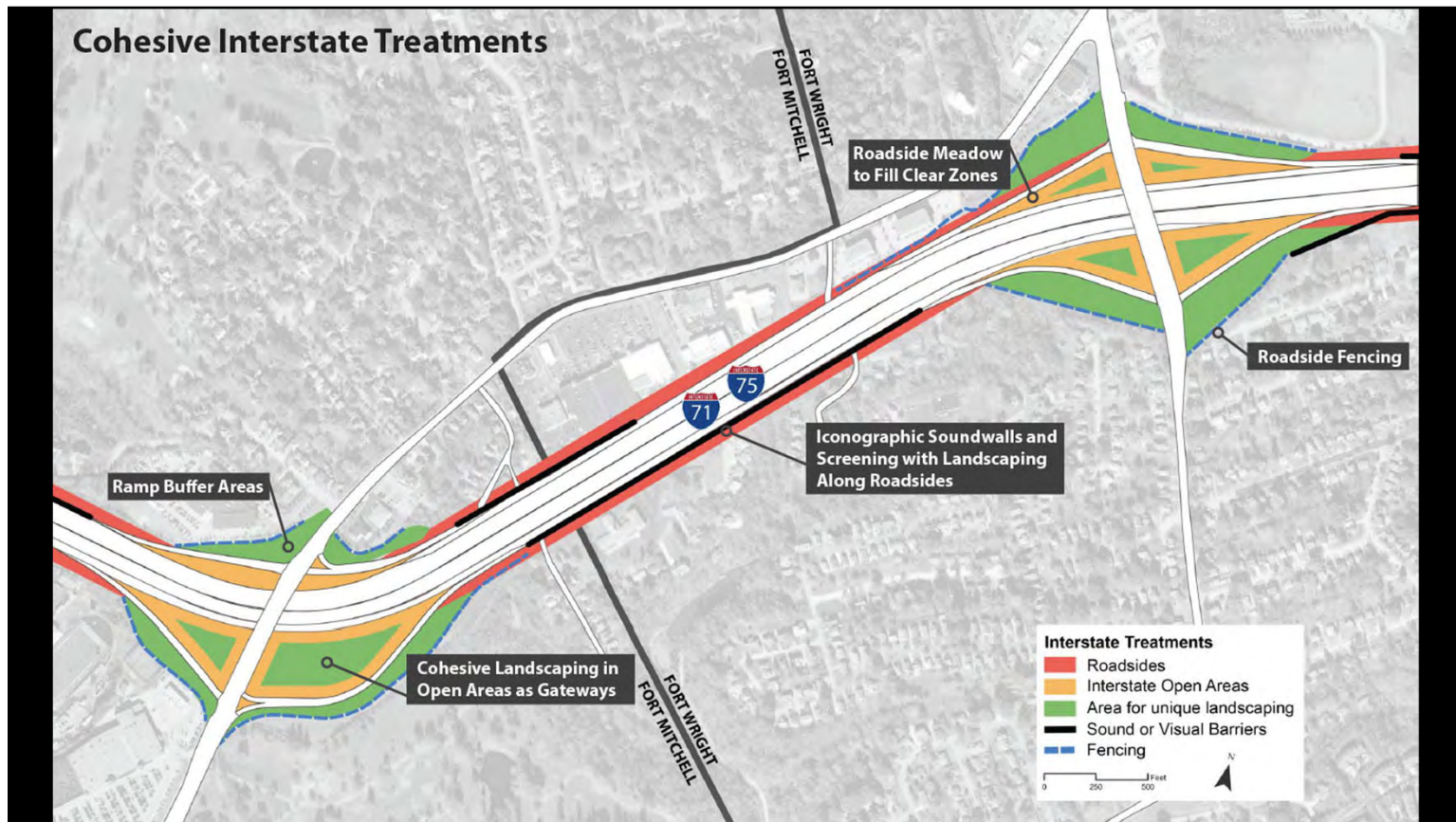
Enhancement Measures

- Working with Fort Wright to develop aesthetic guidelines
 - Landscaping
 - Streetscapes
 - Gateways
 - Treatments for piers, abutments, retaining walls, noise walls, and pedestrian paths

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KYTC is working with Fort Wright to develop plans for landscaping, streetscapes, gateways, and treatments for piers, abutments, retaining walls, noise walls, and pedestrian paths throughout the Brent Spence Bridge Corridor. An aesthetics committee was formed to provide input on the design and aesthetic appearance of the Brent Spence Bridge and roadway corridor. The role of this group is to evaluate aesthetic treatments through the corridor, including structure type and corridor theme. Multiple aesthetics group meetings will be planned throughout the design process to discuss opportunities to balance aesthetic design goals with a desire to encourage innovation in design and construction.

Cohesive Interstate Treatments



This slide shows some of the potential locations of the enhancements discussed on the previous slide as it relates to Fort Wright. While it is an opportunity for a unique gateway at the Kyles Lane interchange, it is important that those treatments do not conflict with those selected for the Dixie Highway interchange.

Gateway Opportunities



Off-Ramp Signage



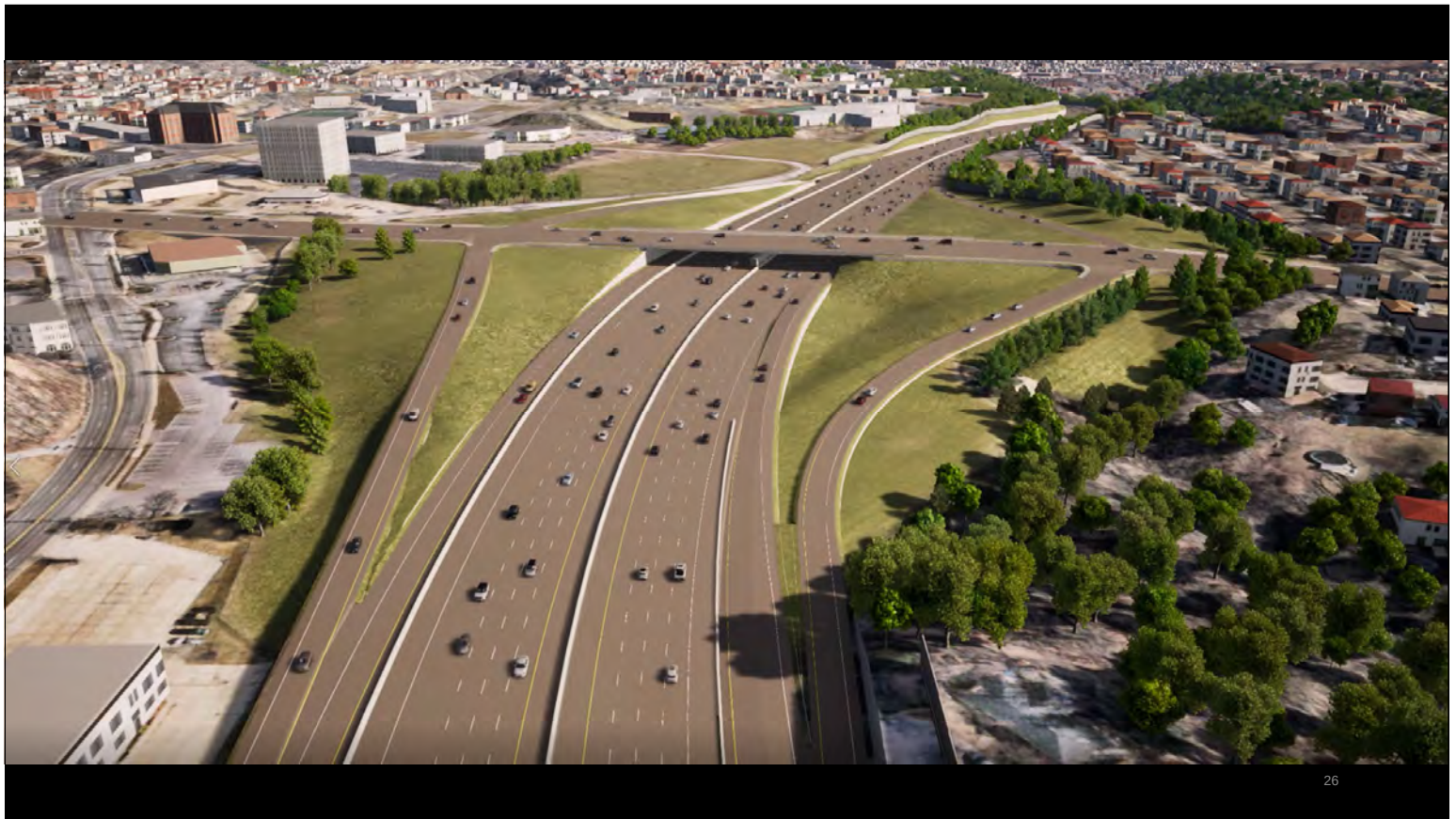
Hillside Signage and Landscaping



The City of Fort Wright provided the project team with information from a 2021 Interchange Study, which became the baseline for enhancements and gateway opportunities.



This slide shows what the finished project might look like from Kyles Lane. Notice the noise wall system in Fort Wright along the east side of the highway. On the west side, notice the noise wall constructed at the top of the slope adjacent to Notre Dame Academy.

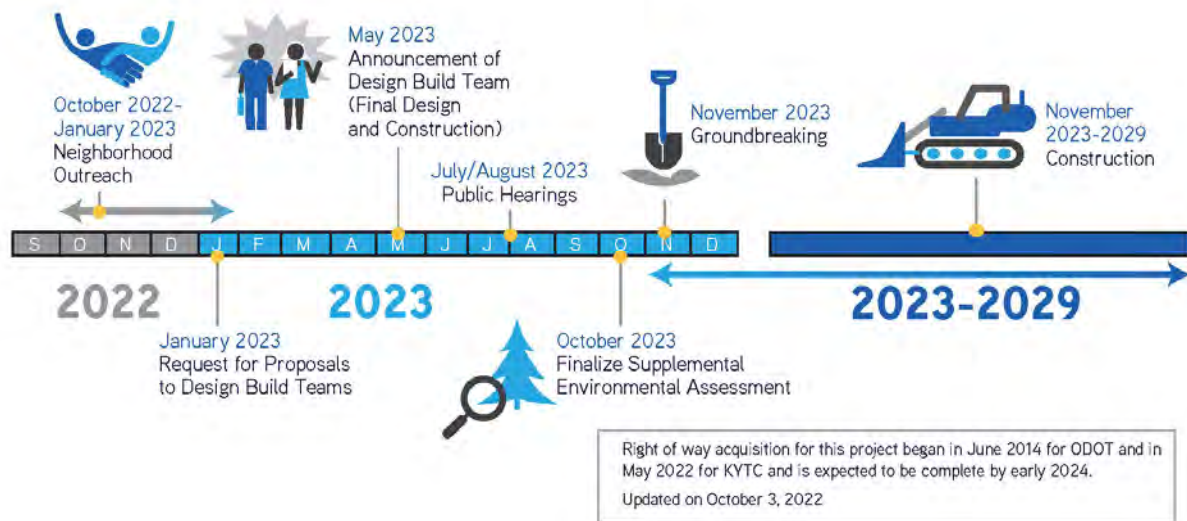


This view shows how the finished project might appear when looking north on I-71 and I-75 at towards Kyles Lane. Notice the noise wall on the east. Also notice the opportunities for ramp buffer areas and landscaping in open areas for unique gateways.



This view shows how the finished project might appear when looking north on I-71 and I-75 at Dixie Highway. Note the proximity of Kyles Lane to the north and the need for aesthetic treatments that work together to unify the corridor.

Schedule



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This slide shows the project schedule from today to the completion of construction.



THANK YOU!

For more detailed information or to provide feedback visit:
www.PublicInput.com/bsbc



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This concludes our formal presentation. We would like to hear your thoughts about the project. You can also visit a PublicInput.com to review information about the project and provide your feedback.