OHIO DEPARTMENT OF TRANSPORTATION

CENTRAL OFFICE • 1980 WEST BROAD STREET • COLUMBUS, OH 43223

TED STRICKLAND, GOVERNOR • JOLENE M. MOLITORIS, DIRECTOR

Wednesday, June 30, 2010

The Honorable Ted Strickland
Governor
Ohio Statehouse
Columbus, Ohio 43215

Subject: **Addition of Bicycle and Pedestrian Lane on the new Cleveland I-90 Innerbelt Bridge**

Dear Governor Strickland,

Earlier this year, you requested the Ohio Department of Transportation (ODOT) explore whether the inclusion of a bicycle and pedestrian lane on the new Interstate 90 Innerbelt Bridge in downtown Cleveland would be possible. Over the past three months, ODOT's Assistant Director and Chief Engineer Keith Swearingen led a team of transportation professionals who took a serious and thorough look at this issue. During that process, ODOT's team listened to numerous advocacy voices and stakeholders to fully understand the community's desire to have a safe and accommodating bicycle facility that would symbolize Cleveland's commitment to sustainability and encourage more citizens to bike and walk.

To assure that previous analysis did not inhibit our ability to see new opportunities, ODOT took a different approach to evaluating this issue as part of this renewed second look. To start, we asked the very simple question: if bicycle and pedestrian access were added to the Innerbelt Bridge, what challenges would need to be overcome? As detailed in the attached report, the challenges are significant, including:

- **Additional Cost and Time Delay:** To design and construct the new bicycle/pedestrian facility and necessary entrance and exit ramps would add $25-$35 million, conservatively, to the project. In addition to the new design, environmental, right of way, and construction costs, a conservatively projected four-to-eight month delay would also add between $6 million and $12 million in inflation costs.

- **Safety:** With 120,000 vehicles daily traveling at the posted speed limit of 50 mph, safety for anyone using a proposed bicycle/pedestrian lane on the Innerbelt Bridge is ODOT's number one priority. A high barrier and protective fence on either side of the facility would have to be included, obstructing the view of downtown Cleveland's skyline for anyone crossing into the city and creating a dangerous situation for emergency responders.

- **Design Need for Ramp System:** Both the existing Innerbelt Bridge and the new bridge run well above the neighborhood streets. ODOT's traffic engineers have concluded that an extensive spiral ramp system would be needed at each end of the bridge in order for bicyclists to access the new lane. Because of these extensive ramps, a Tremont cyclist crossing the new Innerbelt Bridge would save just 20 seconds per trip, compared to traveling along existing bicycle routes.

- **Right of Way/Historic Property Impact:** The placement of the ramp system could require significant environmental reevaluation, especially if it requires the purchase of the Western Reserve Fire Museum and Education Center, a historic and valued asset of the community.

Knowing that the challenges are so significant, I asked my team to then explore how ODOT could still be responsive to the community's desire to see improved access. Toward that end, ODOT is proposing to construct a new barrier-separated, bicycle/pedestrian lane on both sides of the nearby Lorain Carnegie Bridge. Making this proposed improvement will go far in providing a facility that bicyclists and pedestrians of all ages and abilities can safely use and enjoy.

Biking and walking are critical components of a thriving, healthy, and complete multi-modal transportation system. I believe these strategic and financially-smart multi-modal investments in Cleveland will build upon the city's growing sense of place - where people want to live and businesses want to grow.

Sincerely,

Jolene M. Molitoris
Director

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TED STRICKLAND, GOVERNOR • JOLENE M. MOLITORIS, DIRECTOR

TO: Jolene M. Molitoirs
Director

FR: Keith Swearingen, P.E./P.S.
Assistant Director/Chief Engineer

DT: Thursday, June 24, 2010

Subject: Bicycle and Pedestrian Facility on the Cleveland I-90 Innerbelt Bridge

As requested in March of this year, the Ohio Department of Transportation (ODOT) has taken a renewed and thorough look at providing bicycle and pedestrian access on or adjacent to the new Interstate 90 Innerbelt Bridge over the Cuyahoga River Valley in downtown Cleveland. The team here at ODOT recognizes and prioritizes the need for a thriving, healthy, and complete multi-modal transportation system - with all of our modes of transportation working safely together. It is with this vision that ODOT's transportation professionals lead a serious review of this proposal.

In addition, ODOT's team listened and sought a deeper understanding of the community expectations for bicycle access on the new bridge. Advocacy voices behind the 'Access for All' campaign, including the groups Green City Blue Lake and Ohio City Bike Co-Op, offered tremendous insight to the community's desire to have a safe and accommodating bicycle facility that would symbolize Cleveland's commitment to sustainability and encourage more citizens to bike and walk. ODOT heard from a variety of stakeholders, including the University Circle Development Corporation, Ohio Canal Corridor, Rails-to-Trails Conservancy, Sustainable Transportation Action Team, and the Friends of the Crooked River. Of most benefit was an artist's rendition of what a bike and pedestrian lane on the bridge might look like. Even though the drawing was not based on engineering practicalities, the aesthetically beautiful image presented ODOT with a visual basis to better understand how these advocates envisioned people using any future bicycle accommodation.

As most people will recall, ODOT completed a detailed analysis in 2006 as to the "purpose and need" of including a bicycle facility after two sources of public input advocated for its inclusion during the extensive public involvement and environmental process. The previous analysis showed that no additional accommodation needs existed because bicycle connectivity already existed in very close proximity on the Lorain Carnegie Bridge and through the valley along West 3rd Street, Canal Road, and Commercial Road. ODOT determined that there was no "purpose or need" - a standard of proof required by federal guidelines - and included this determination as part of the environmental document, which was approved by the Federal Highway

Administration (FHWA) as evidenced by the issuance of its Record of Decision (ROD) in September 2009.

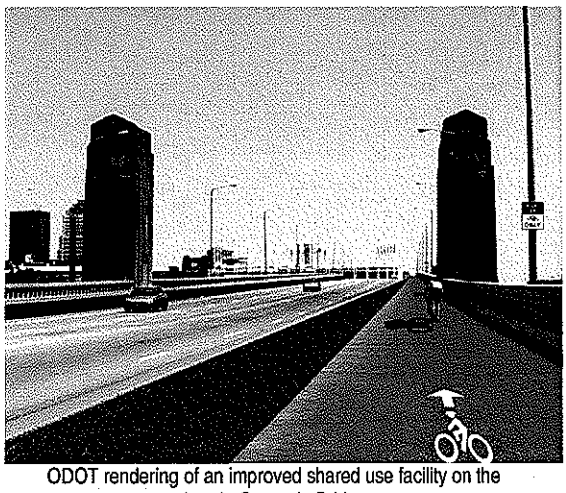
Instead of following the federal standard of proving a "purpose and need" as part of this renewed second look, ODOT's team of traffic engineers, structural engineers, transportation planners and environmental specialists began with two simple questions:

1. If ODOT were to add bicycle and pedestrian access to the new I-90 Innerbelt Bridge, what challenges would need to be overcome to fulfill the community's expectations?
2. If the challenges are so significant and the community's expectations cannot be met, how can ODOT still be responsive to the community's desire to see improved access?

To answer these questions, ODOT first reviewed the previous analysis performed in 2006 to see if any major circumstances had changed in the last four years. Connectivity still exists in very close proximity, as noted in the ROD. At the same time, several additional bicycle and pedestrian improvements will be constructed as part of the Innerbelt Bridge project. These include accommodating the proposed Towpath Trail between the bluff in Tremont and the Cuyahoga River Valley; providing bicycle lanes along the entire length of Abbey Avenue connecting the Tremont and Ohio City neighborhoods and improving access to the Greater Cleveland Regional Transit Authority's West 25th Street Station; providing a signed bicycle route between the Abbey Avenue Viaduct and the Lorain Carnegie Bridge connecting the Tremont and Gateway neighborhoods; and providing bicycle paths along the proposed extension of East 9th Street and along Broadway to connect the Gateway neighborhood to the Cuyahoga River Valley.

Second, ODOT convened a special "walking safety audit" to hear from Jim Sheehan of Ohio City Bicycle Co-op, along with Michael Neundorfer (co-convener of Cleveland's Sustainable Transportation Action Team) and Scott Carpenter (Western Reserve Fire Museum and Education Center). The purpose of this event was to better understand community expectations of a new bicycle/pedestrian lane on the new Innerbelt Bridge and to identify safety issues with using currently available bike and walking facilities located along Abbey Avenue and the Lorain Carnegie Bridge. The safety audit was invaluable in helping ODOT understand that bicyclists do not always feel safe crossing the Lorain Carnegie Bridge due to the close proximity to vehicles and lack of access to the sidewalk due to the height of the curb.

It has been suggested that an investment in the Lorain Carnegie Bridge could be a suitable alternative to an additional bicycle/pedestrian lane on the new Innerbelt Bridge. ODOT could convert the existing sidewalk and bicycle lanes into a barrier-separated, shared-use path on both sides of the Lorain Carnegie Bridge that would mirror what is desired on the new Innerbelt Bridge, without causing any potential delay to the design and construction of the Innerbelt Bridge project. This investment would make the Lorain Carnegie Bridge a safer, more family friendly and convenient option for those bicyclists and pedestrians wishing to travel



ODOT rendering of an improved shared use facility on the Lorain Carnegie Bridge

across the valley. The rendering illustrates what this improved facility could look like once completed.

Third, ODOT reached out and heard from various other advocates to get an understanding of the bicycle and pedestrian challenges in the project area. Matching the information gathered in the safety audit, it was clear to ODOT officials that the Abbey Avenue to Lorain Carnegie Bridge route as it exists today is not a desirable route from a safety perspective. ODOT garnered that Tremont area residents would be the primary users of this proposed facility and the majority of Ohio City bicyclists would not be diverted on a normal basis to use it, thus reducing the potential ridership. Lastly, ODOT heard how much the bicycling advocates care deeply about sustainability, not only for the environment but for their city. Active transportation options help sustain the environment and it has been determined that young professionals, a key to Cleveland's future, want these transportation options when choosing where to live. ODOT understands and fully supports this sentiment.

Fourth, a list of interstate bridges with either bicycle paths or sidewalks was compiled and evaluated for examples of accommodation and connectivity. The evaluation showed that the vast majority of these structures were isolated and did not have any other alternative for more than five miles, which is not the case in this particular situation. Of the three structures that had alternate facilities closer than one mile, none were as large in scale as the proposed I-90 structure.

Fifth, in determining safe and convenient accommodations in the vicinity of the new Innerbelt Bridge, two existing structures (Lorain Carnegie and the existing I-90 Bridge) were compared to the new bridge by looking at a number of factors, such as speed, vehicle volumes, length, etc. This comparison is most helpful when trying to determine the significant challenges ODOT would need to overcome to fulfill the community's expectations, and how ODOT can still be responsive to those who wish to see improved access.

For example, the current accommodations on the Lorain Carnegie Bridge include two six foot sidewalks and two six foot bicycle lanes. This is a non-interstate, low speed and low traffic route. This bridge is a city street with a daily estimate of 11,630 vehicles at speeds of 25-35 miles per hour. In contrast, both the existing and the new Innerbelt Bridge will be part of the interstate system with a daily estimate of 120,000 cars and trucks traveling 50-55 miles per hour.

Another noteworthy comparison is a noise analysis performed on the Lorain Carnegie Bridge and on the existing Innerbelt Bridge. The noise levels of 69.7 decibels on the Lorain Carnegie Bridge are in stark contrast to the much louder 86 decibels on the Innerbelt Bridge. It would be the difference of trying to have a conversation three feet apart versus trying to talk to someone while standing next to a roaring lawnmower. These noise levels on the Innerbelt Bridge are also contradictory of the community expectation seen in the artist's rendering of the proposed Innerbelt bicycle facility. With noise levels so high, it would be nearly impossible for people to have intimate conversations while standing on the structure, as envisioned by advocates.

In addition to these important comparisons, we also considered the estimated time for a Tremont resident crossing the valley on the new Innerbelt Bridge. The time savings is minimal. ODOT

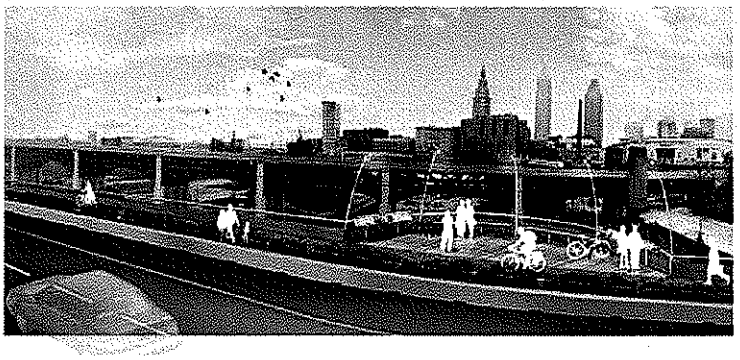
performed this analysis using the assumption that an average person would be traveling by bicycle at the a speed of 15 mph. Starting at the same spot in Tremont and taking into account the slope change for the approach ramps (7.5 mph up the ramp and 10 mph down), there was no estimated time savings for using the proposed facility on the new bridge versus using the Lorain Carnegie Bridge to get to the Gateway District. Despite the geographic distance being shorter for the new bridge, the ramp system needed to access the proposed bicycle lane would dramatically slow the trip. When taking into account someone walking a constant speed of 3.5 mph across both facilities, the new I-90 structure only saves two minutes and six seconds.

Sixth, ODOT reviewed other significant challenges about safety, placement of approach ramps, and other design expectations. Some of the conclusions drawn from this review are as follows:

- **Safety and Protective Fencing** - Ohio law prohibits pedestrians and bicyclists on freeways unless they are on a facility that is separated from the roadway and shoulders of the freeway and is designed and appropriately marked for pedestrian or bicycle use (Section 4511.051 of the Ohio Revised Code). Because the bridge is part of the interstate system with a daily estimate of 120,000 cars and trucks - traveling at the posted speed limit of 50 mph - safety for the traveling public and anyone using an adjacent bicycle/pedestrian facility remains ODOT's number one priority. From our conversations, we know that safety is also a top priority for bicycling advocates, but the two-to-three foot barrier envisioned in the artist's rendering of the proposed bicycle lane would not provide the high level of safety needed. ODOT must follow its policy regarding protective fencing on bridges, which would be required in this instance as protection to the traveling public. Fencing along the outside of the facility would additionally be required as protection for those working in the valley below the bridge.

- **Emergency Access** - While the need for protective fencing alleviates one safety concern, it adds another in the form of emergency access. The fencing would create an approximately 4,000 ft. enclosed area that would need to be separated from the highway and not accessible from the interstate, as required by law. If something were to occur to a pedestrian or cyclist while crossing the bridge, the person would have no outlet to escape or an effective way for emergency personnel to reach them.

Community Expectation



Artist Rendering Provided by Green City Blue Lake

More Realistic View

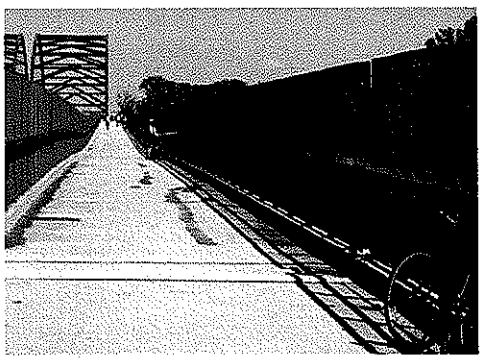
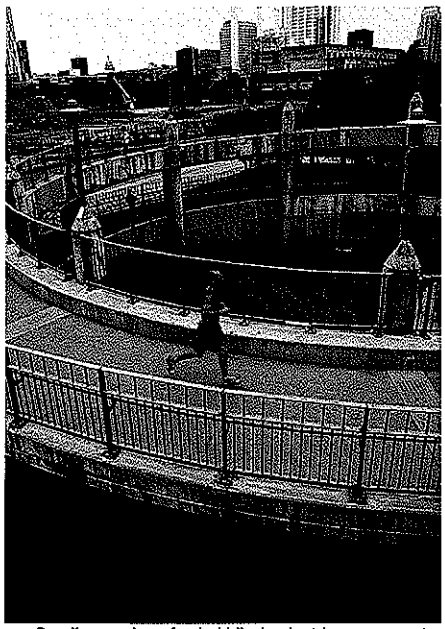


Photo Courtesy of the Missouri Bicycle Federation

- **Placement of Approach Ramps** - Because the new Innerbelt Bridge would be part of the interstate system, Ohio Revised Code (Section 4511.051) would require a separate approach ramp system in order to access the proposed bicycle and pedestrian facility. Both the existing Innerbelt Bridge and the new bridge are very high and run well above the neighborhood street system (as evidenced when drivers cross the bridge and see the rooftops of neighboring houses). ODOT's traffic engineers have concluded that an extensive ramp system would be needed in order for bicyclists to access the bridge. A steep grade on and off the bridge would be impractical and unacceptable. These ramps would need to be compliant with the American Disabilities Act. A likely option would be a spiral or zigzag ramp system.



Smaller version of spiral bike/pedestrian ramp system
(Photo of the Lamar Street Pedestrian Bridge in Austin, TX)

- **Additional Right of Way** - The needed ramp system would likely require the acquisition of additional right of way. It is likely that as much as one acre of land from each side of the bridge would need to be purchased to locate the ramps. ODOT's structural engineering and real estate staff analyzed the potential placement of these approach ramps. If the need for additional right of way would require the acquisition of the Western Reserve Fire Museum and Education Center - an historic and valued asset of the community located on the northeast side of the bridge - cultural and historic preservation issues would potentially delay the design and construction of the project.

- **Additional Design Challenges** - Such ramp placement would dictate either that the new bicycle lane be placed on the South side of the new bridge - facing away from downtown - or that the new bicycle lane be placed on the North side with a complex connection to each ramp, likely carrying cyclists and pedestrians under the bridge. Either alternative would be in stark contrast to the aesthetic concept provided by advocates. Once the second new I-90 bridge is constructed, it would put the bicycle and pedestrian facility in the middle of 10 lanes of interstate highway. Also, the artist rendering of the proposed bicycle facility design does not take into consideration the vehicle-generated wind, vibration, and exhaust emissions. Because of the previously mentioned safety concerns, a high barrier and protective fence on either side of the facility would have to be included, obstructing the view of Downtown Cleveland's skyline for motorists crossing into the city.

Finally, much has been made of the issue of whether the addition of the bicycle/pedestrian lane would add significant time and cost to the project. With comparisons to similar projects across the country to provide a sense of the magnitude of investment needed, ODOT's team of estimators and engineers predicted construction and material costs. At the core, to design and

construct both the new bicycle/pedestrian facility and the necessary entrance and exit ramps would add $25-$35 million, conservatively, to the project.

As noted above, the only way the new bicycle/pedestrian facility and connecting ramps could be added without the need for significant environmental reevaluation and additional right of way - and thus avoiding significant project delay - would be to locate the ramp system within the currently defined and federally cleared right of way between the new Innerbelt Bridge and the existing bridge. To consider placement of the ramp system outside of currently defined right of way, significant environmental reevaluation would be necessary, primarily due to the impact such a decision would have on the historic Western Reserve Fire Museum and the need to purchase additional property. Such reevaluation and concurrent design of the bicycle/pedestrian lane and connecting ramps could take from four to eight months.

On a major multi-year project such as this one, there will also be added costs caused by inflation. ODOT's 2010-2011 Business Plan estimates construction inflation at 4% in fiscal year 2011. On a $450 million project, inflation adds an estimated $1.5 million to the total project cost for each month that is added. Thus, a four-to-eight month delay would add between $6 million and $12 million in inflation costs, in addition to the new design, environmental, right of way, and construction costs.

Based on all of this information and community input, the challenges of adding bicycle and pedestrian access to the new I-90 Innerbelt Bridge would be significant and ultimately would not fulfill the community's expectations. If we are truly committed to providing a safe and accommodating bicycle facility that would symbolize Cleveland's commitment to sustainability and encourage more citizens to bike and walk, our best opportunity is additional investment in a route across the Lorain Carnegie Bridge.

ODOT proposes to convert the existing sidewalk and bicycle lanes on the Lorain Carnegie Bridge into a barrier-separated, shared use lane on both sides of the bridge, thus mirroring what is desired on the new Innerbelt Bridge. The additional investment in the Lorain Carnegie Bridge would not cause any delay to the design and construction of the new Innerbelt Bridge, which remains one of the state's most pressing transportation investments.

Making these proposed improvements will go far with providing a facility that bicyclists and pedestrians of all ages and abilities can safely use and enjoy. This strategic investment will build upon Cleveland's recent ranking as the number 39 city for biking by Bicycling Magazine – topping cities including Miami, Indianapolis and Baltimore.

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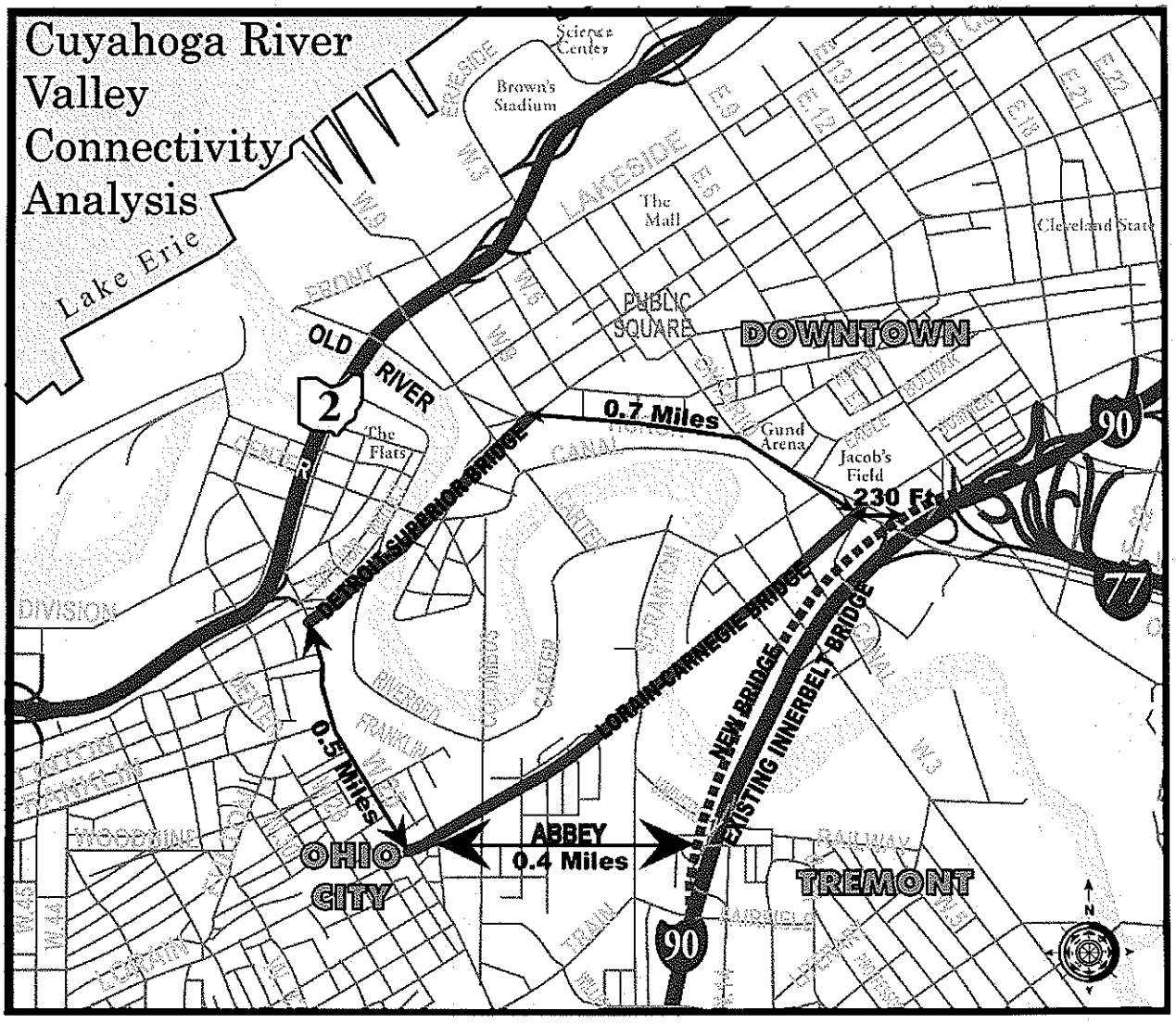

Map illustrating the relationship of the major river crossings in the Cuyahoga River Valley.
The map also illustrates the close proximity of the Lorain Carnegie Bridge to the I-90 Innerbelt Bridge.