Interstate 29/35 Connections Project
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To: Jay Bestgen – de

From: Brian Kidwell
kcICON Project Director

Date: December 14, 2007

Subject: kcICON
I-29/I-35, Clay and Jackson Counties
Job No. J4I1507
Practical Design, 2008 Awards for Excellence

I am pleased to submit this Award for Excellence entry on behalf of the Paseo Corridor Constructors, the successful proposer on the kcICON project. As Missouri's first-ever design-build river crossing, kcICON embodies the vision of MoDOT Director Pete Rahn to innovatively deliver transportation improvements that reflect community goals.

The key to kcICON's success was MoDOT's development of a process that enabled it, the community and design-build teams to collectively work through aesthetic, technical and financial goals and issues that would shape Greater Kansas City's landmark bridge.

The result of this collaborative process, which likely will become a model for DOTs nationally, is an eye-catching bridge design yielding construction savings of more than 50 percent ($70 million versus up to $150 million if using design-bid-build).

Our process, led by MoDOT and HNTB in conjunction with the Paseo Corridor Constructors and their lead designer Parsons, also substantively involved the community in bridge design decisions in an unprecedented fashion, yielding broad roadway user and stakeholder support for the cutting-edge approach – and decisions – undertaken by MoDOT.

A. Pre-practical design versus current practical design

MoDOT needed to clear up the congestion – 102,000 cars daily - choking four miles of Interstate 29/35 stretching from Route 210 at Armour Road south over the Missouri River to the northeast corner of the Downtown Central Business District loop.

However, doing so would cost $315 million, according to an Environmental Impact Statement estimate using design standards from MoDOT's Practical Design Manual and from the American Association of Highway Transportation Officials. A new landmark Missouri bridge alone would cost $100-$150 million.

Unfortunately, only $245 million in funding had been identified. And facing a once-in-a-lifetime opportunity to build a major new river crossing, community leaders and roadway users insisted that this new bridge also be a striking visual icon for Greater Kansas City.

MoDOT resolved these often-conflicting factors in several ways. It set a contract price of $245 million. Project goals were developed through community and other input. Design-build teams were invited to propose the scope of work they would be willing to perform for the available funding and in alignment with the project goals. MoDOT worked closely with the teams to refine their proposed scopes based on feedback regarding new or alternative design standards they were proposing. The community was given the lead in setting aesthetic goals for its landmark bridge. And MoDOT evaluated the competing proposals using a sophisticated grading approach that involved professionals, subject-matter experts and community members.

This last point is particularly significant as the community was responsible for awarding up to one-fifth – 20 points – of the total score based on aesthetic considerations, an approach believed to be the first of its kind used in the United States (Attachment 1 – Evaluation Criteria).

The result: an innovative bridge design heralded as exactly the icon the community was looking for (Attachment 2 – *The Kansas City Star* article of November 15, 2007). And the winning proposal also offered the same functionality for the entire corridor as had been identified in the EIS – but at a much lower cost (Attachment 3 – Pre- and Post-Practical Design Comparison). Paseo Corridor Constructors' design effort was lead by Parsons.

B. Purpose and need

MoDOT and the community established specific goals for the project. They include: meet the $245 million budget; build a landmark river bridge; improve safety, mobility, aesthetics and capacity; engage stakeholders; and beat an October 2011 deadline.

To ensure that the goals were met with the most appropriate, efficient, effective and safe design, MoDOT developed a sophisticated, weighted set of criteria that enabled it and its community advisors to analyze and assess how well each team's proposal maximized the:

- Amount of work performed for the available budget;
- Volume and level of service for motorists;
- Speed with which the project is completed;
- Number of participating minority workers and minority/women-owned businesses;
- Local understanding of the project and its impacts;
- Beauty of the landmark bridge; and
- Length of time it will provide safe, efficient service.

C. Cost savings

The 50 percent cost savings for the bridge, as well as the 23 percent reduction in cost for the corridor, was achieved through good practical design practices. Proposers were given wide latitude to review state standards and propose alternative criteria that enabled them to develop and apply innovative engineering and construction techniques throughout all aspects of the project, including design, traffic management and construction phasing.

D. Roadway user expectations

The approach developed by Paseo Corridor Constructors as a result of the MoDOT process keeps open the existing bridge throughout construction of the new bridge in order to minimize traffic delays. This and other elements of the Paseo Corridor Constructors' approach accelerated the opening of the new bridge to June 1, 2011 – five months ahead of schedule.

MoDOT PROJECTS
2008 APPLICATION FORM
(required for each entry)

Job No. J4I1507 **Route** I-29 **County** Jackson/Clay

STIP Description (Scoping or Construction, state which STIP) Reconstruct and widen the corridor, including the MO River Bridge, from the NE corner of the downtown loop to Rte 210.

Is the submittal for the entire project or just a portion of the project? Please explain: This is a special design-build project with a fixed cost and flexible scope. The submittal is for the entire project.

Project Director MoDOT Brian Kidwell

Project Deputy Director Jim Shipley

Design Build Contractor Paseo Corridor Constructors

Key core team members as approved by the MoDOT PM (may include consultants) (limit of 9)

Rachel Lunceford (HNTB)	Warren Roberts	Kevin Irving (FHWA)
Randy Hartman	Mike Harms	Patrick Cassity (PCC)
Jennifer Benefield	Tom Allen	Tom Kellerman (PCC)

Project Budget:

Conceptual budget $ 315M **Initial STIP Budget** $ N/A

Final STIP budget $ 256M **Award amount** $ 232M

Other : Project provides an efficiently designed landmark bridge at a cost savings of 50%.

Value Engineering study during design? yes **X** no ☐ (if yes) **Project Stage** Conceptual

Total VE savings implemented $ N/A **VE Contact Person** Tom Allen

Construction-stage VE (VECP)? yes ☐ no **X** (if yes) **Explain**

Total VECP savings $ N/A **VECP Contact Person**

A special concept stage VE/Practical Design Review was conducted to determine how much project scope could be delivered for the budget. Opportunities for Value Engineering in design-build project delivery exist, although tactics and goals may differ from traditional design-build projects. A planning analysis/scoping VE study was conducted with the focus being on identifying alternates that address project purpose and need, as well as defining project scope and budget. This unique study identified ideas that reassured the project leadership team that the project goals could be successfully delivered within budget.

What would make this entry stand out from the rest of the entries when considering MoDOT's practical design philosophy? (In layman's terms - 100 words or fewer)

The preliminary cost estimate was upwards of $315 Million. Funding was not available to afford all of those improvements, so MoDOT, Paseo Corridor Constructors, and the community worked collectively to optimize value by developing an efficient design that achieved the project goals and delivers the project purpose and need. By providing the opportunity for the public to set down face-to-face with Paseo Corridor Constructors during the design-build procurement phase, an innovative and economical river bridge design was achieved that still fulfills the community's desire for a landmark structure over the Missouri River. Through innovative design and strategic procurement practices, MoDOT was able to ensure that the citizens of Missouri got the biggest bang for their buck.

Send entries to: MoDOT Design Division, ATTN: Jay Bestgen
1320 Creek Trail Dr., Jefferson City, Missouri 65109

ALL ENTRIES MUST BE RECEIVED NO LATER THAN CLOSE OF BUSINESS ON DECEMBER 15, 2007.

Attachment 1 – Evaluation Criteria

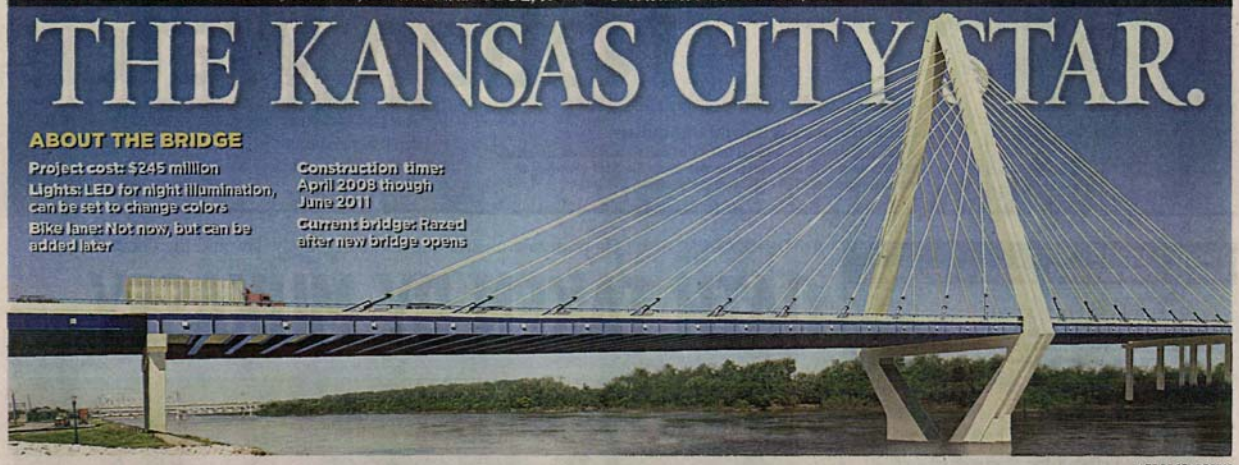
Criterion	Points
Project Definition	30
Method of Handling Traffic (MOT)	15
Completion Schedule	10
Disadvantaged Businesses/Workforce	10
Public Information	5
Landmark Missouri River Bridge(s) –	20
Landmark Missouri River Bridge(s) –	10
TOTAL	**100**

Attachment 2: The Kansas City Star Article of Nov. 15, 2007

KANSAS CITY EDITION ★ WWW.KANSASCITY.COM THURSDAY, NOVEMBER 15, 2007

TODAY'S WEATHER: HIGH 50, LOW 29, SUNNY AND COOL, NOT TOO WINDY. FORECAST | D10 50¢

THE KANSAS CITY STAR.



ARTIST RENDERING

PREVIEW

The Martin City Melodrama's Water Glass Symphony will ring in this year's parade of holiday entertainment.

SPORTS DAILY

New Chiefs starter Brodie Croyle says he's anxious but ready to "Hut! Hut!" against the Indianapolis Colts. | D1

A BOLD NEW PORTAL FOR KC: PASEO BRIDGE DESIGN PICKED

300-foot-tall pylon tower will anchor cable stays. Old bridge will be kept open during construction.

By BRAD COOPER and BILL GRAHAM
The Kansas City Star

The landmark Paseo Bridge is coming down for a new Missouri River crossing that will offer a dramatic entry to Kansas City.

The cable-stayed bridge design features a single 300-foot-tall, diamond-shaped tower under which vehicles will pass.

The pylon tower rises from the middle of the river, embracing the driving surface and creating the sense of driving through a portal.

Two teams competed to design and build the bridge as part of a larger $245 million plan to widen I-29/35 to three lanes in each direction from North Kansas City into downtown. The Missouri Highways and Transportation Commission made the selection Wednesday.

@ Go to **KansasCity.com** for Dave Helling's video report on the new design, for animations showing what the bridge will look like and to have your say on the project.

SEE BRIDGE | A14

MISSISSIPPI RIVER | Young adventurers go rafting along a waterway steeped in lore

Attachment 2 (cont'd)

BRIDGE: Design viewed as a signature element in how KC is perceived

FROM A1

"Kansas City, you had a dream, you had a vision. Today you have a reality," highway commission chairman Jim Anderson said before the contract was awarded.

The contract, which still must be finalized, went to a team led by Clarkson and Massman construction companies of Kansas City and Kiewit Western of Omaha.

The new structure will replace the 53-year-old Paseo Bridge, regarded by many as the most stately of Kansas City's bridges.

Contractors plan to keep the old bridge open during construction, but state highway officials already are warning commuters to consider alternate routes when work begins in April. Motorists should look for ramp and lane closures until construction is finished in June 2011.

The corridor carries about 100,000 vehicles a day.

The Paseo Bridge project has attracted intense community interest not just because of the short-term traffic inconveniences it will bring, but because of what it will mean for how people view Kansas City.

As much as the Golden Gate Bridge sets San Francisco apart or New York is linked with the Brooklyn Bridge, there is hope that a new Paseo Bridge will do the same for Kansas City. On Wednesday, some were practically giddy over the design of the new bridge, which has a tower about as tall as Liberty Memorial.

"I loved it. It was more than what I had imagined," said Sheila Tracy, president of the Northland Regional Chamber of Commerce.

Others said the design was groundbreaking for Kansas City, maybe even revolutionary. They noted that the way the cables are anchored on the bridge will give motorists a sense of driving through a passageway as they cross the river.

"There's no structure like this in Kansas City," said urban

square feet of business properties in the Paseo Industrial District in North Kansas City.

Local businesses are pleased that interstate traffic will keep moving during construction. But they're still worried about access to the highway.

Bicycling interests left Wednesday's announcement satisfied because the design includes the possibility of adding a lane for pedestrians and bikes sometime in the future.

"They said what they were going to do and they did it," said Brent Hugh, executive director of the Missouri Bicycle Federation.

While construction is under way, two narrow lanes will be open in each direction on the interstate corridor during rush hour. The interstate could be down to one lane at times.

"We have to get a lot of cars out of this corridor to make (the project) work," said Brian Kidwell, project director for MoDOT. "Traffic isn't good out there today. When we start construction, it's only going to get worse."

To reach Brad Cooper, call 816-234-7724 or send e-mail to bcooper@kcstar.com.
To reach Bill Graham, call 816-234-5906 or send e-mail to bgraham@kcstar.com.

A CHANGING CORRIDOR

It's more than just the bridge. Here are other key areas, and the problems that the $245 million project hopes to solve.

1. **Missouri 210/Armour Road**
This overloaded cloverleaf has tight ramps with cars leaving and entering the interstate on the same lanes.

2. **16th Avenue**
This is a partial interchange. The northbound off-ramp forms a loop with a tight turn. The exit lane can be mistaken for a through lane, causing sudden lane changes. Southbound on-ramp is too short and too steep for heavy trucks to get up to speed and merge safely.

3. **Bedford Avenue**
Works in conjunction with Levee Road interchange. Steep ramp for southbound traffic can be troublesome for big trucks entering the freeway. Plus, the close proximity of Macon Street to the northbound exit ramp forces trucks to make a tight U-turn to reach Macon.

4. **Levee Road**
There's a tight turn to get onto the ramp, so trucks start up the ramp at 5 mph and have a short distance to reach highway speed.

5. **Front Street**
This unconventional, sprawling interchange near the Isle of Capri Casino can be confusing. A more efficient interchange is planned for this location.

6. **The Paseo**
Can be a problem for southbound drivers in the left lane who may be forced to exit onto the Paseo when they don't want to. Resulting lane changes can conflict with vehicles entering the interstate at Front Street.

DAVE EAMES and BRAD COOPER
THE KANSAS CITY STAR

Simpson now faces trial in Nevada

The Associated Press

LAS VEGAS | O.J. Simpson must face trial on kidnapping, armed robbery and other charges stemming from an alleged sports memorabilia heist, a justice of the peace ruled Wednesday.

Defense attorneys had argued during a preliminary hearing that the case was based on the accounts of con artists and crooks, and they asked for the charges to be dropped.

Justice of the Peace Joe M. Bonaventure ruled all charges in the 12-count complaint would remain against Simpson and co-defendants Clarence "C.J." Stewart and Charles "Charlie" Ehrlich.

"This is what we expected," Simpson said. "If I have any disappointment it's that I wish a jury was here. As always, I rely on the jury system."

Bonaventure acknowledged that the testimony of the witnesses was an issue to be weighed by the court. The defendants were ordered to arraignment on Nov. 28.

The case stemmed from a Sept. 13 altercation in a hotel room where Simpson and a group of men are accused of stealing items from two sports memorabilia dealers.

Attachment 2 (cont'd)

City, maybe even revolutionary. They noted that the way the cables are anchored on the bridge will give motorists a sense of driving through a passageway as they cross the river.

"There's no structure like this in Kansas City," said urban planner Daniel Serda, one of a dozen civic leaders who advised the highway planners.

Mike Burke, general counsel for the Kansas City Port Authority, called the bridge's single-tower suspension design world-class.

"We've been looking for two years at different bridges built around the world," Burke said. "I think this rates with the best anywhere."

The team that won the contract scored 22 points higher than the other team, led by a joint venture partnership of American Bridge Co. of Corapolis, Pa., and Walsh Construction of Chicago.

It scored higher because it planned to widen more of the interstate corridor, didn't propose closing the old bridge during construction and received more points for aesthetics.

Plans call for widening four miles of the interstate between Missouri 210/Armour Road and the northeast corner of the downtown loop. Five interchanges in that corridor also would be rebuilt.

Business leaders north and south of the river say they're pleased so far, although cautious as they await more specifics about road closures.

Executives at the Isle of Capri Casino on Front Street were relieved to hear that the interstate will remain open. The casino took a hit in 2005 when the Paseo Bridge closed for a couple of months for repairs. But there are still unknowns, especially with Front Street being an interchange that will be rebuilt.

"Until we see the details on that Front Street interchange, we're not certain how it will affect us," said Mike Schafersman, Isle of Capri's operations chief.

At times during construction there will be no direct access from the highway to Front Street, said Jim Shipley, deputy project director for the Missouri Department of Transportation.

"We'll try to work with Isle of Capri to make it as smooth as possible," Shipley said.

Businesses on the north side of the Missouri River were also encouraged by what they heard Wednesday, said Ken Block, a principal in Block & Co.

The firm owns 600,000

Attachment 3: Pre- and Post-Practical Design Comparison

Pre-Practical Design

Initially, $315 million in improvements were developed for the Paseo Bridge and related I29/I35 Corridor using MoDOT Practical Design Manual and American Association of Highway Transportation Officials standards, including:

- Constructing a landmark cable-stay bridge over the Missouri River;
- Providing 4 lanes in each direction;
- Making substantial improvements to the north side of the downtown loop;
- Changing the Paseo Boulevard's left-hand exit and entrance to a right-hand exit and entrance;
- Building a single-point urban interchange at Front Street;
- Constructing braided ramps at Bedford Avenue and Levee Road;
- Building a half-diamond interchange at 16th Avenue; and
- Reconstructing the interchange at MO-210/Armour Road.

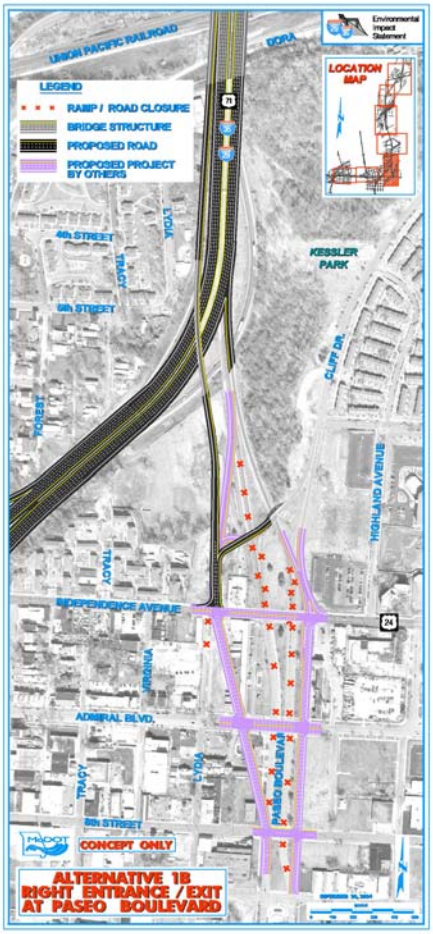
Post-Practical Design

The MoDOT and Paseo Corridor Constructors optimized the value received by Missouri taxpayers and roadway users by developing an efficient design that achieved the project goals, $245 million budget, schedule and needed levels of functionality by offering:

- A landmark cable-stay Missouri River bridge expandable to eight lanes and capable of accommodating a bicycle/pedestrian facility that will be less costly to build than a traditional tied arch using full standards;
- Three lanes in each direction, with retaining walls and ramp terminals located to make the project expandable to eight lanes total, lowering future conversion costs;
- Practical transition into the northeast corner of the downtown loop (the downtown loop is a separate issue, beyond the scope of the kcICON project);
- Left-hand exit and entrance at the Paseo, with revised striping to improve traffic flow;
- A single-point urban interchange at Front Street;
- A split-diamond interchange at Bedford Avenue./Levee Road, including collector-distributor lanes, that provide connectivity and local access;
- A half-diamond interchange at 16th Avenue; and
- A reconstructed and improved interchange at MO-210/Armour Road.

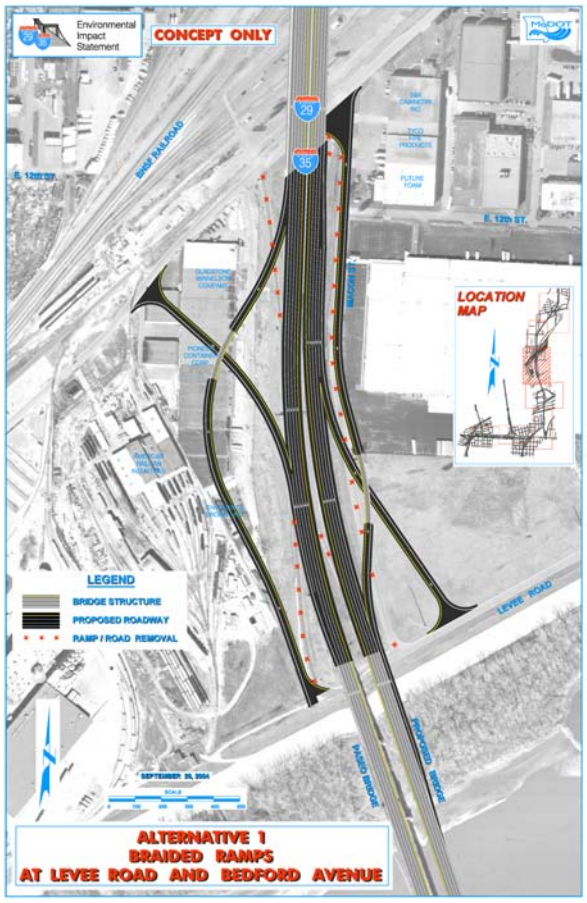
ATTACHMENT 4 - Project Elements

EIS - The Paseo Interchange



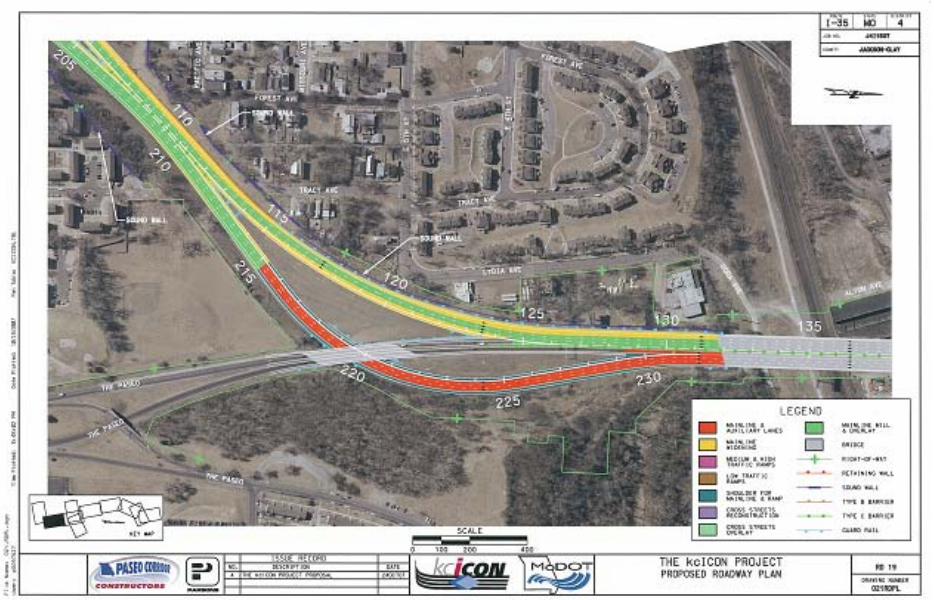
The EIS Contained a Right-Hand Entrance and Exit at The Paseo Interchange.

EIS - Levee/Bedford Interchange



The EIS Contained Braided Ramps at the Levee/Bedford Interchange.

The Paseo Interchange – Practical Design

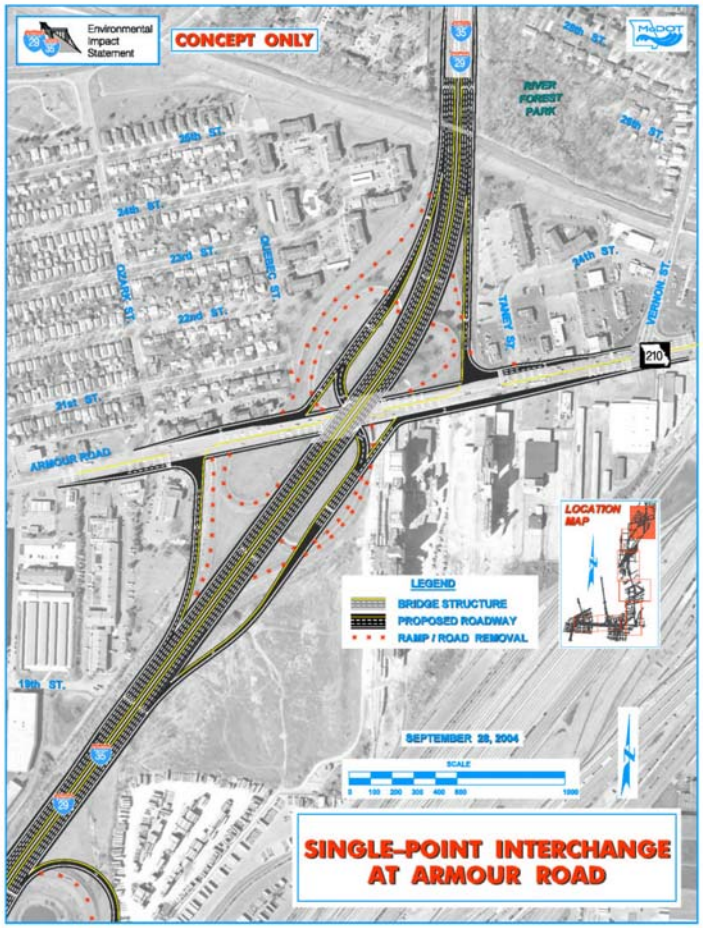


Using practical design The Paseo interchange will remain left-hand ramps with revised striping to improve traffic flow.

Levee/Bedford Interchange – Practical Design

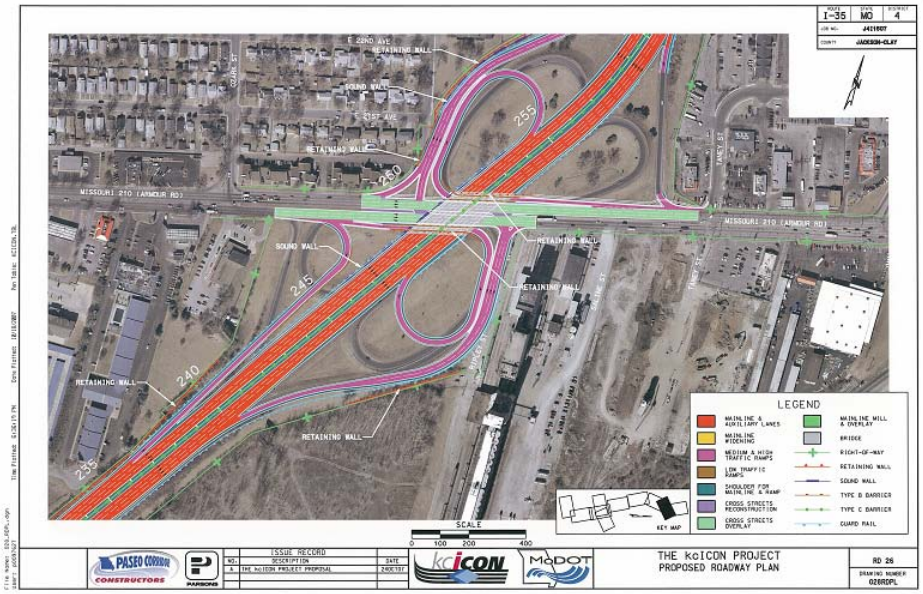
Using practical design the Levee/Bedford interchange was changed to a split diamond configuration with collector distributor roads to provide local connectivity.

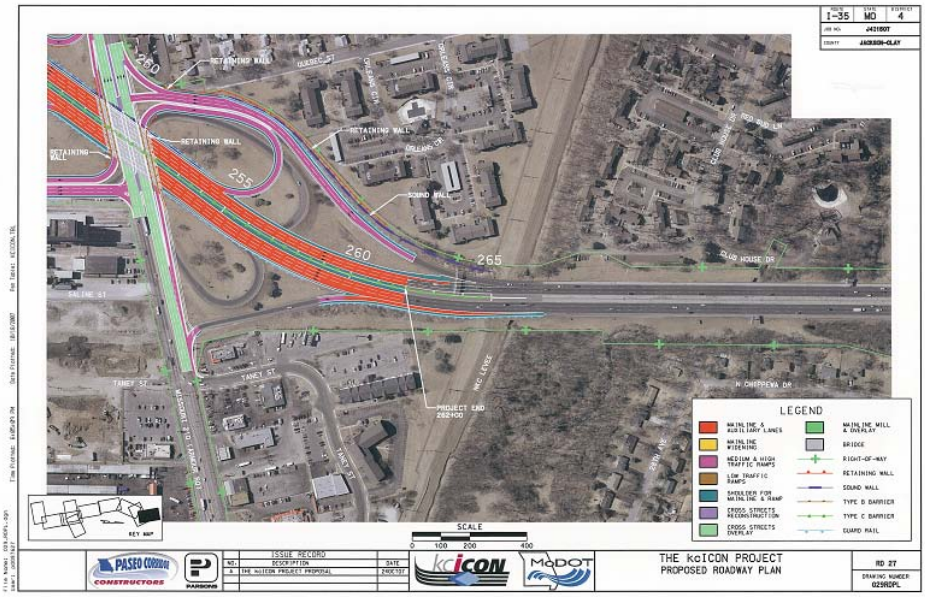
EIS - MO-210/Armour Road Interchange



The EIS Contained a Three-Legged Single Point at the MO-210/Armour Road Interchange.

MO-210/Armour Road Interchange – Practical Design





Using practical design a modified existing interchange was proposed. It reduces the number of signals