

Traffic officials consider designs for intersection

'Quadrant' model will reduce red light waiting time during peak traffic hours, engineers say.

By Michael D. Pitman
Staff Writer

FAIRFIELD — Because Bypass Ohio 4 at Ohio 4 is a failing intersection, traffic engineers say a different school of thought is needed to fix it.

The Ohio Department of Transportation has a host of alternative intersection designs — two of which will be used on the Bypass Ohio 4 widening project.

One alternative is being led by Butler County, which is a U-turn concept known as a "super street." These will be done at three bypass intersections and are the first of its kind in the state.

Fairfield is in charge of the other — a quadrant model at the bypass and Ohio 4. The ODOT-approved solution was chosen because the project will use a large piece of state-owned vacant land at the intersection. It's slated to begin this month.

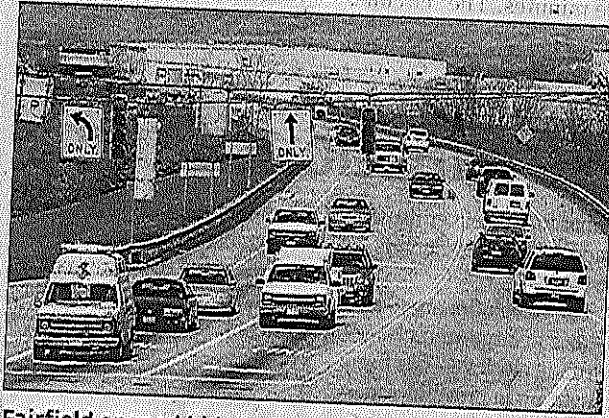
"The bypass is going to be largely improved," said Fairfield city engineer Ben Mann.

What's being done

Bypass Ohio 4, a six-mile limited access roadway, will be widened from Ohio 4 in Fairfield to just south of the Ohio 129 bridge in Fairfield Twp.

The overall multi-jurisdictional project will construct six lanes from Symmes to Tylersville roads, which will go down to four lanes until just south of the Ohio 129 bridge. The three "super street" intersections will be at Symmes, Tylersville and Hamilton-Mason roads.

From Symmes to Ohio 4,



Fairfield opened bids on Monday, April 19, for companies to be the general contractor for the city's portion of the Bypass Ohio 4 widening project. The project is estimated between \$9 million and \$10 million. Staff photo by Greg Lynch

there will be four lanes. Fairfield's portion will start just north of Port Union Road and will widen the road to the intersection. There will be additional southbound left and right turn lanes and a northbound right turn lane at Port Union.

The new diversion road will connect the bypass and Ohio 4. Like the three "super streets," no left turns will be allowed.

The bypass continues to Ross Road as traffic crosses Ohio 4. On northbound Ross, a second through lane will be added.

Why this alternative?

Because the capacity is nearly maximized, ODOT District 8 traffic engineer Jay Hamilton said something has to change.

"There's only so much traffic you can push through on a dual left turn only lane, and it's not feasible to make triple lefts in that area," Hamilton said.

The quadrant intersection will reduce traffic light phases, thus reducing red light waiting time during peak traffic hours, he said.

Mann said it also reduces the potential for accidents.

"You'll have so many conflict points," Mann said at a traditional intersection. "With a quadrant intersection, you'll have less points of conflict where cars can intersect."

The bypass and Ohio 4 has the city's fifth-most reported crashes (47) from 2006 to 2008.

Bypass Ohio 4 has an average daily traffic count of 18,950 and Ohio 4 has 40,300. Projected daily volumes by 2030 is 29,800 for the bypass and 48,900 for Ohio 4.

No left turns

Allowing left turns will allow the intersection to continually fail, Mann said. There would be too much delay.

"The biggest hurdle is probably going to be getting the people to understand the new traffic patterns," Hamilton said.

ONLINE

View video and photos that show how the quadrant intersection at Bypass Ohio 4 will work.
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