

# **FOR IMMEDIATE RELEASE**

Contact:

Monica Menke-Watts  
Director of Communications

## **Butler Regional Highway construction crews to set bridge beams over Maud Hughes Road**

Butler Regional Highway construction crews will begin setting bridge beams over Maud Hughes Road on Thursday, February 11, 1999. The entire process will take approximately three months. This will be one of the largest bridges in southwest Ohio.

### **Bridge Facts and Information**

The bridge was designed by KZF, a Cincinnati architectural and engineering consulting firm. The bridge beams were fabricated by PDM Bridge in northern Wisconsin using steel plate manufactured by Bethlehem Steel. It took approximately five months to fabricate them.

The bridge is a continuous steel composite plate girder bridge. This means the beams are composed of individual plates that were welded together by PDM Bridge. The continuous part means there are no joints in the bridge deck, except at the beginning and end of the bridge.

Elimination of the joints reduces long-term maintenance problems caused by ice, water and debris. The composite part means that the deck of the bridge is poured using shear studs on the top of the beams -- this ties the deck to the beams, and the deck helps carry the loads.

The bridge -- which is actually a pair of side-by-side bridges -- crosses a large valley that contains the Gregory Creek, Maud Hughes Road and two Conrail train lines. Each bridge is approximately 1,400 feet long and has six spans. (A span is the distance between supports, e.g., from pier to pier or from pier to abutment.) The beams rest on neoprene bearing pads, which in turn rest on large, concrete piers. There are five piers per bridge -- some of which are 80 feet tall. The piers consist of three square concrete columns, which are almost 7 feet wide at the bottom. A concrete pier cap is poured on the top of the pier columns. The pier cap, basically, is a large concrete beam that is almost 6.5 feet deep and 5 feet wide. The pier columns are supported by steel piling, so they will stay secure in the ground.

Weathering steel was used for the bridge beams. Weathering steel does not need to be painted because it forms a thin, protective layer of rust that protects the steel from further corrosion. Because the spans of the bridge are so long (200 to 250 feet), the beams were shipped in pieces approximately 125 feet long. The beams will be bolted together with large steel plates called "splice plates." It takes 104 1/8 inch, high-strength bolts to bolt

together one splice plate. The beams are approximately 7.5 feet high, with the largest being more than 3 feet wide.

The bridges combined contain more than: á 8.6 million pounds of structural steel á 2.8 million pounds of reinforcing bars á 24.3 millions pounds of concrete

The combined cost of the two bridges is approximately \$11.3 million. Construction began in May 1998 and will be complete in late 1999.

For more information, please contact Monica Menke-Watts, TID Director of Communications, at (513) 942-4700.