What is the proposed project?
The project will reconstruct the intersection of Alex-Bell Road and Mad River Road. The current four-way stop condition will be replaced with a signalized intersection with left-turn lanes or a modern roundabout. The project is proposed by the Montgomery County Engineer. Both roads are County roads maintained by the County Engineer.

Why is this project needed?
This intersection experiences a high level of traffic congestion, with long queues on all four approaches, in both the morning and afternoon peak hours. It also experiences a significant number of crashes that result in injuries as well as property damage.

Why is a roundabout the preferred alternative for this intersection?
The project team has confirmed that a roundabout intersection is a good fit for this location. A single-lane roundabout can readily handle the present and future traffic volumes and a mix of vehicle types. Roundabouts are a proven way to safely and efficiently move traffic through an intersection. Several thousand modern roundabouts have been built and are in use around the United States, including many in Ohio. Roundabouts are strongly recommended by the Federal Highway Administration as a proven safety measure. Visit http://safety.fhwa.dot.gov/intersection/roundabouts/fhwasa08006/ for more information. Some of the benefits of a modern roundabout are:

- Improved safety: A study of four-way stop intersections converted to roundabouts showed a 35% reduction in crashes, a 76% reduction in injuries, and a 90% reduction in fatalities. This is because roundabouts operate at low speed, about 20 m.p.h., and eliminate the t-bone type crashes that can occur with a conventional intersection.
- Improved efficiency: A single-lane roundabout moves traffic just as well as a signalized intersection in the peak traffic times of day. The roundabout performs better in the off-peak hours because there is no need to sit and wait for the signal to change.
- Reduced maintenance cost: There is no traffic signal to maintain and replace, and no need for electric service.
- Reduced noise and emissions: The stops, starts and idling required at a traffic signal are the main contributors to noise and air emissions at an intersection.
- Aesthetics: The center island of a roundabout can be landscaped to provide an appealing look for the neighborhood.
What property will be acquired to construct the improvement? Will any homes be lost?

Under the traffic signal alternative #1 (below), the project would extend about 500 feet along each leg of the intersection. Strips of permanent right-of-way and temporary construction easements will likely be needed from adjoining property owners throughout the project limits.

Under the roundabout alternative #2a (lower left), the project would extend about 250 feet along each leg of the intersection. Strips of permanent right-of-way will likely be needed throughout the project limits, plus temporary construction easements. It is possible that the construction limits will require the relocation of one residence on the south side of the intersection.

Under roundabout alternative #2b (next page), the roundabout would be located more to the north toward the pond and further away from the residence. Alternative #2b would require a strip of permanent right-of-way and temporary easement from the property that is potentially a historically significant site. However, it is unlikely that the residence to the south would have to be relocated.

Impacts to all properties will be more precisely determined during detailed design engineering. Once final construction limits have been determined, individual property owners will be contacted by representatives of Montgomery County if permanent or temporary right-of-way acquisitions are required.
What is the purpose of a roundabout?

Roundabouts are designed to be safer and more efficient than a traditional intersection. The geometry creates a low speed (20 mph) environment inside the circulatory roadway, as well as at the entry and exit locations. The geometry also prevents high angle crashes such as “T-bone” and left turn angle crashes. Lower angle, low speed crashes tend to be less severe than higher angle, high speed crashes. Crash reductions of 35% are common with roundabout conversions.

More efficient operation results from the yield at entry – drivers only have to watch for traffic from the left, and, if there is an adequate gap available, they can enter the roundabout without stopping. Once in the roundabout, drivers have the right-of-way, so they will not have to stop or yield to exit. If the driver does need to yield at entry to traffic inside the roundabout, their delays are brief and typically less than the time they would have been delayed at a traffic signal.

How do you drive in a roundabout?

See the “Driving Roundabouts” handout.

How will large vehicles, including emergency vehicles and school buses, be able to negotiate a roundabout?

The design of the intersection will allow semi-trucks, school buses, and other large vehicles to navigate the roundabout while still providing adequate visual and physical indicators to guide and slow passenger vehicles. One way this is accomplished is with “truck aprons” – an area between the central island and the traveled way that is mountable by larger vehicles but not used by passenger vehicles.

What will happen to the two bridges over Holes Creek?

The bridge on Mad River Road, just south of Alex-Bell Road, is structurally deficient. The load limit was recently reduced to 9 tons. The County Engineer will replace the concrete beams on this bridge in the fall of 2019. It will be necessary to close Mad River Road for about three months to accomplish this bridge rehabilitation.

The bridge on Alex-Bell Road just east of the intersection is also structurally deficient, with a load limit of 15 tons. The County Engineer intends to replace the concrete beams on this bridge as well, but a schedule for this bridge rehabilitation has not yet been set. At this time, we believe that the rehabilitation work on this bridge will be performed ahead of the intersection improvement project.
What is the expected cost of the project?

Based on the current conceptual design, estimated costs for construction and right-of-way acquisition range from $1.8 million for the traffic signal alternative to $1.5 million for the roundabout alternative.

How will the project be funded?

The County Engineer plans to pursue federal funds through the Miami Valley Regional Planning Commission and state funds through the Ohio Public Works Commission. Any matching funds will come from the County Engineer’s revenues. The next round of federal funding applications to MVRPC will be this fall, for funding available in 2024.

What is the anticipated construction schedule?

If federal funding is granted in the next round of applications to MVRPC, the earliest the project could be constructed is 2024. Construction could be completed in one construction season.

Will vehicular traffic be maintained during construction?

No. Due to the limited width of existing pavement within the project area, maintaining traffic through the intersection during construction would lead to significant temporary pavement, complicated phasing, additional impacts to adjacent properties, and a longer construction duration. Multiple detour routes will be established.

Will the proposed improvements impact any historic resources?

Possibly. As described on the previous page, roundabout alternative #2b could encroach into a property to the north that is potentially a site of historical significance. If we are successful in obtaining federal funding for this project, the project will be evaluated under Section 106 of the National Historic Preservation Act (NHPA), to determine its effect on historic resources. Under the NHPA, federally-funded projects are required to avoid, minimize or mitigate for adverse effects to historic properties. Note: individuals wishing to participate in the project as Section 106 Consulting Parties should complete and submit a Section 106 Consulting Party Request Form.

The environmental review, consultation and other actions required by applicable Federal environmental laws for this project are being, or have been, carried out by ODOT pursuant to 23 U.S.C. 327 and a Memorandum of Understanding dated 12/11/2015, and executed by FHWA and ODOT.

What is the current status of decision-making on this project?

No final decisions regarding any proposed improvements have been made at this time. The Montgomery County Engineer’s Office is seeking public input, in order to ensure the best possible decisions are made for our communities. We welcome your input and encourage you to provide comments.

How can I submit comments?

To provide comments, you may return the comment form included in this packet in person at the public meeting or send by mail to the addresses on the comment form; you may call, email, or send a letter to the individual in the box above. Please reference “Mad River Road at Alex Bell Intersection” in any emails or letters. Comments are requested no later than July 31, 2018.