

Ontario County considered several different alternatives before deciding on a roundabout. They include:

- Alternative 1: No Action / Maintenance
- Alternative 2: Incremental Signing and Pavement Marking Enhancements
- Alternative 3: All-Way Stop Control
- Alternative 4: Signalized Intersection Control

Ultimately these other alternatives were dismissed because the County is committed to implementing a proven-long term safety improvement project that will proactively address the kinds of crashes that happen at CR 46 and Smith Road.

Ontario County added markings, signing, and flashing beacons to the intersection approaches in 2018.



Alternative 1, the “No Action / Maintenance” alternative, or null, would have retained two-way stop control at the intersection of CR 46 and Smith Road. No activities other than routine maintenance would be carried out. This alternative would not improve safety at the intersection.



Alternative 4 would have installed an actuated, two-phase traffic signal at the intersection. A traffic signal would not geometrically reduce the potential for high-speed, right-angle collisions; would result in additional traffic delays, idling, and noise; and could increase the probability of rear-end crashes. It would also be out of character for the rural environment.

Alternative 2 would have further enhanced the conspicuity of existing traffic control devices on both CR 46 and Smith Road by:

- A. Adding supplementary panels to the Smith Road stop signs with the text “Cross Traffic Does Not Stop”
- B. Installing a lane narrowing treatment on CR 46 at Smith Road consisting of a painted yellow median on CR 46 preceded by a no passing zone, centerline rumble strips within the painted median, and shoulder rumble strips.



Most crashes involve a right-angle collision. Many vehicles stop on Smith Road but fail to perceive and/or react to an approaching vehicle, ultimately pulling out into the intersection and causing a crash. The crest vertical curve to the east of the intersection may be playing a role in some of the collisions. Simply highlighting the intersection is unlikely to result in a substantial reduction in the number of s. These features may also lose effectiveness over time.

While a painted median could improve intersection conspicuity, nuisance noise and vibration would be concerns for adjacent residents.



Alternative 3

An all-way stop was also considered. This would have added stop signs on eastbound and westbound CR 46, requiring all approaching traffic to stop. This contrasts with a roundabout where entering vehicles need only come to a full stop when necessary to avoid a direct conflict with a circulating vehicle.

The Federal Highway Administration offers guidance to assess the applicability of all-way stops. Based on an engineering study, 2 of 5 criteria that consider traffic volume and crashes would not be satisfied at this location over the next 20 years.

Ontario County has consulted with the New York State Department of Transportation. The state typically reserves all-way stops for locations where they will improve operations or in low-speed, urban environments. The intersection of CR 46 and Smith Road sits in a rural, high-speed environment. An all-way stop would result in 4 more seconds of delay per vehicle in comparison with a roundabout. Less delay means less idling, less noise, and less air pollution.

Assuming vehicles obey the signs, an all-way stop could reduce the total number of crashes by 48%; however, a roundabout can reduce the total number of expected crashes by 72% and practically eliminate the potential for the type of high-speed, right-angle collisions that have resulted in injury or death at this intersection.



All-Way Stop vs. Roundabout

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|--|-----------------------------------|
| + Initial cost: \$18,000 | - Initial Cost: +/- \$2.5 million |
| - All traffic must stop | + Yield control |
| - More delay per vehicle | + Less delay per vehicle |
| - Reduce total crashes by 48% | + Reduce total crashes by 72% |
| - Still allows for right-angle crashes | + Avoids right-angle crashes |
| - Out of character on CR 46 | + Roundabouts nearby on CR 10 |