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## CO 83 Roundabout at CountyLine/Palmer Divide Rd. -Preliminary Design

## About the Project

The southeastern region of the Colorado Department of Transportation (CDOT) (Region 2) has identified a need to evaluate traffic operations and design of a roundabout at the intersection of CO 83 and County Line/Palmer Divide Avenue located at the boundary of Douglas County and El Paso County. See the **Project Map** below for the specific location. A project team consisting of representatives from CDOT Regions 1 (serves Douglas County) and 2, Douglas and El Paso Counties, FHWA, and a consultant design team was formed to advance the design of a roundabout at this intersection and better understand the functional characteristics, associated impacts and costs for future implementation. Characteristics of a properly designed roundabout include elements that provide optimal safety and operations specifically for high speed conditions approaching the roundabout. Design elements may include geometric approaches to slow traffic, advanced signing, pavement markings and raised channelization. With proper design, drivers adjust their speed to navigate the roundabout safely.

For more information, see the FHWA brochure on Roundabouts and Rural Highways.

• A temporary traffic signal was installed to address increased traffic demand at the CO 83 and Palmer Divide Avenue intersection during construction of the <u>I-25 South Gap Monument to CastleRock</u> project, with the intention of replacing the signal with a roundabout. A traffic signal is not currently warranted at CO 83 and Palmer Divide Avenue and is not anticipated to meet warrants in the coming years. Traffic signal warrants establish minimum criteria for evaluating the need for a traffic signal at a specific intersection. Implementing a signal at unwarranted locations is shown to have negative impacts on traffic flow, including increased crashes, delay, and traffic violations. With that in mind, CDOT Region 2 evaluated and selected a roundabout to address traffic operational and safety concerns, including conflicts created by high-speed conditions, now and into the future. Roundabouts are a safer type of intersection as they reduce fatal and injury crashes by 78% (FHWA). They are also efficient in terms of keeping people moving. Even while calming traffic, they can reduce delay and queuing when compared to other intersection alternatives. For more information about roundabouts, there are video and case study links provided on this project website page.

## **Contact Us**

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