

lesser standards should not be used automatically, but only if higher values are not possible, practical, or cost effective (See Section on 3R standards in the [CDOT Roadway Design Guide](#) for these standards).

The project team should address all documented safety issues identified through the Safety Evaluation, DSR, FIR, and FOR processes. Existing roadway design features may be retained where they are performing in a satisfactory manner with regard to accident history. The proposed design should not worsen an existing condition (guardrail height, edge drop-off, drainage, etc.). Safety issues identified as being related to any of the 13 geometric design criteria will be addressed in the design process. Only those geometric design criteria directly related to the identified safety issue need to be addressed. Refer to the “Process for Addressing Safety Requirements on 3R Projects” flowchart (Figure 2-1) for guidance.

If a geometric design criterion is identified as being related to accident causality, then the designer will either bring this design element up to the relevant standard, or will complete a design variance according to the procedures described in Section 2.05 Design Exception (Variance) (Form 464) and the process flowchart (Figure 2-1). Design variances for Interstate projects require FHWA approval.

All existing guardrail, bridge rail, transitions and end and median terminals not meeting NCHRP 350 shall be upgraded to meet MASH 2016 requirements. All roadside safety devices meeting NCHRP 350 in good condition, determined to function as designed and meeting minimum height requirements may remain in place. See the AASHTO Roadside Design Guide and Sections 2.09 and 5.12 of the this manual for additional information. For assistance contact the Standards and Specifications Unit and Staff Bridge.

The Resident Engineer may implement safety improvements not specifically identified in the Safety Evaluation, DSR, FIR, and FOR if funding and special circumstances exist and written approval is obtained from the Program Engineer.

#### **2.07.03.05 Safety Issues Not Related to One of the 13 Geometric Design Criteria**

Safety mitigation recommendations identified through the Safety Evaluation, DSR, FIR, and FOR processes that are not related to one of the 13 geometric design criteria should be incorporated into the plans. If the decision is made not to implement recommendations for improvement, this decision should be documented in the meeting minutes or explained in a design decision letter.