

Design Exception Request

FRA-71/270-28.27/25.99A

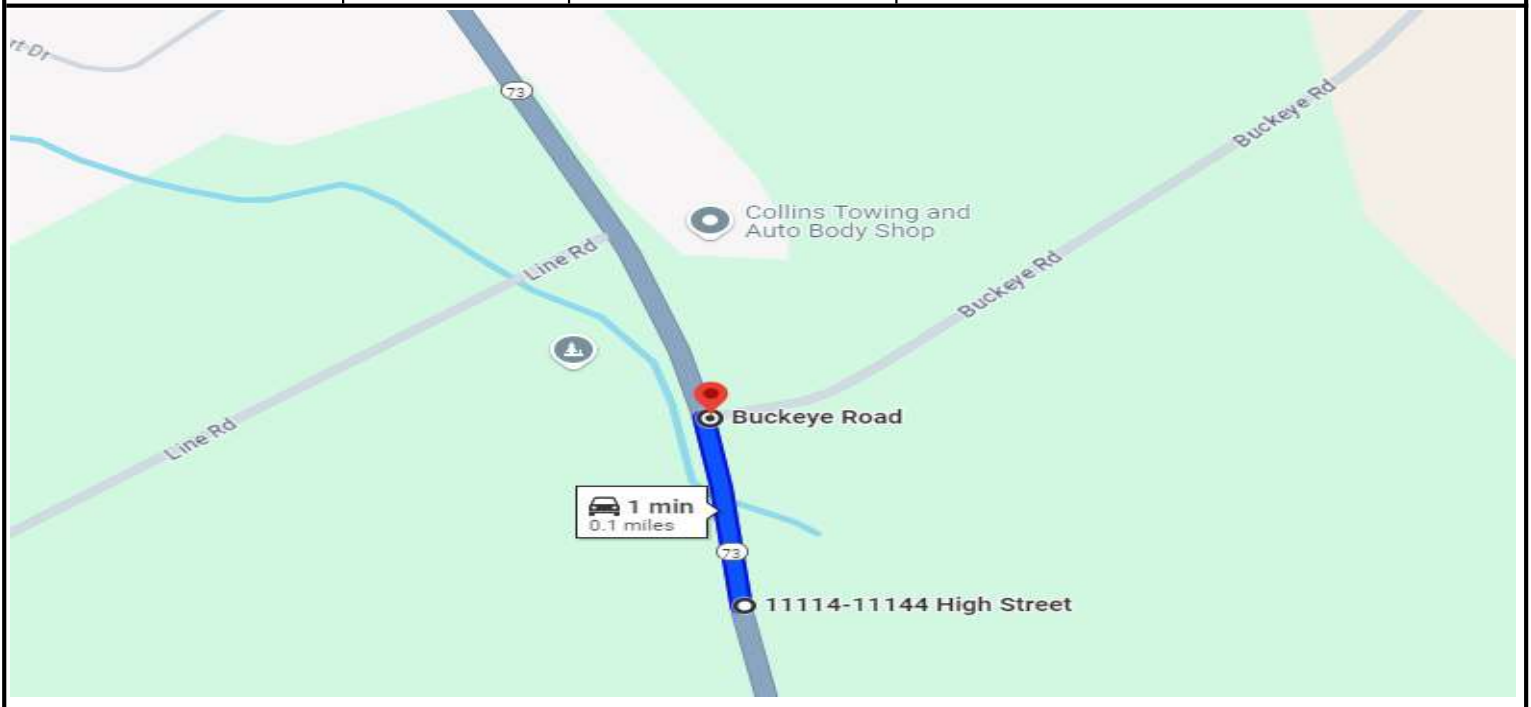
PID: 105435; Request 07

Letting Type: ODOT-Let

Design Designation

IR-071; -

Current ADT (2023)	162,190	Td	0
Design Year ADT (2043)	193,790	Design Speed	70
Design Hourly Volume (2043)	15,800	Legal Speed	65
Directional Distribution	52%	Design Functional Class	1 - Interstates
Trucks (24hr B&C)	20%	Functional Class Area Type	Urban
		NHS Project	Yes



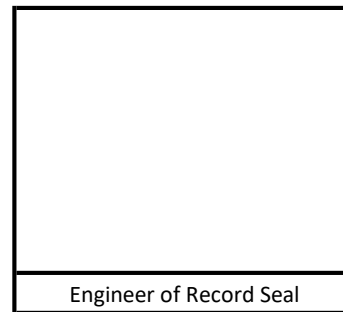
Submitted By:

Gail H. Massie
(Engineer of Record)

Approved by:

Adam Koenig

Approval Date: 8/30/2024



Engineer of Record Seal

Design Exception Request

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Controlling Criteria Identification

Section: IR-071; -

Controlling Criteria	Standard	Existing (a.)	Proposed
Lane Width			
Shoulder Width			
Horizontal Curve Radius			
Maximum Grade			
SSD (Horizontal & Crest Vertical)	425'	325'	325'-340'
Pavement Cross Slope			
Superelevation Rate			
Vertical Clearance			
Design Loading Structural Capacity			

(a.) "Existing" may be N/A (i.e. New alignment or new ramp)

Project Description

Widening of the IR-270 EB Exit ramp to include a second dedicated lane to NB IR-71. Reconstruction of bridges Ramp K over IR-71 and Ramp O over IR-71 and Ramp K over Ramp O. Work includes widening IR-71 from I-270 NB to the Polaris Parkway Exit Lanes.

Section Description

Ramp O, the I-71 NB to I-270 WB movement is being shifted to allow construction of a new bridge offline from the existing bridge. In advance of the overhead Ramp K bridge, the barrier/guardrail is 2' off the edge of shoulder or at the edge of shoulder. The proposed HSSD meets 40 mph under Ramp K and would require a 25 foot shoulder to meet 50 mph. It also meets 42 mph on bridge over I-71 and would require a 25' shoulder to meet 50 mph.

Proposed Mitigation

None.

Support for Deviation (Benefit-cost, R/W, Environmental, Constructability, Coordination with Other Projects, Relationship between any crash patterns and proposed design exception, etc.):

In order to meet the HSSD requirements for a 50 mph design speed, the Ramp K bridge overhead would need to be widened/replaced and the bridge over I-71 would need to be widened by 15' to have a 25' shoulder. This would be very expensive and does not have a high benefit cost ratio, given the crash history on this ramp.

Does the requested Design Exception location fall within a Safety Integrated Project (SIP) Map Location?

Yes, Red Location

Does the crash analysis (GCAT and CAM Tool) show any patterns that would be adversely impacted by the proposed Design Exception?

No