

# Design Exception Request

FRA-71/270-28.27/25.99A

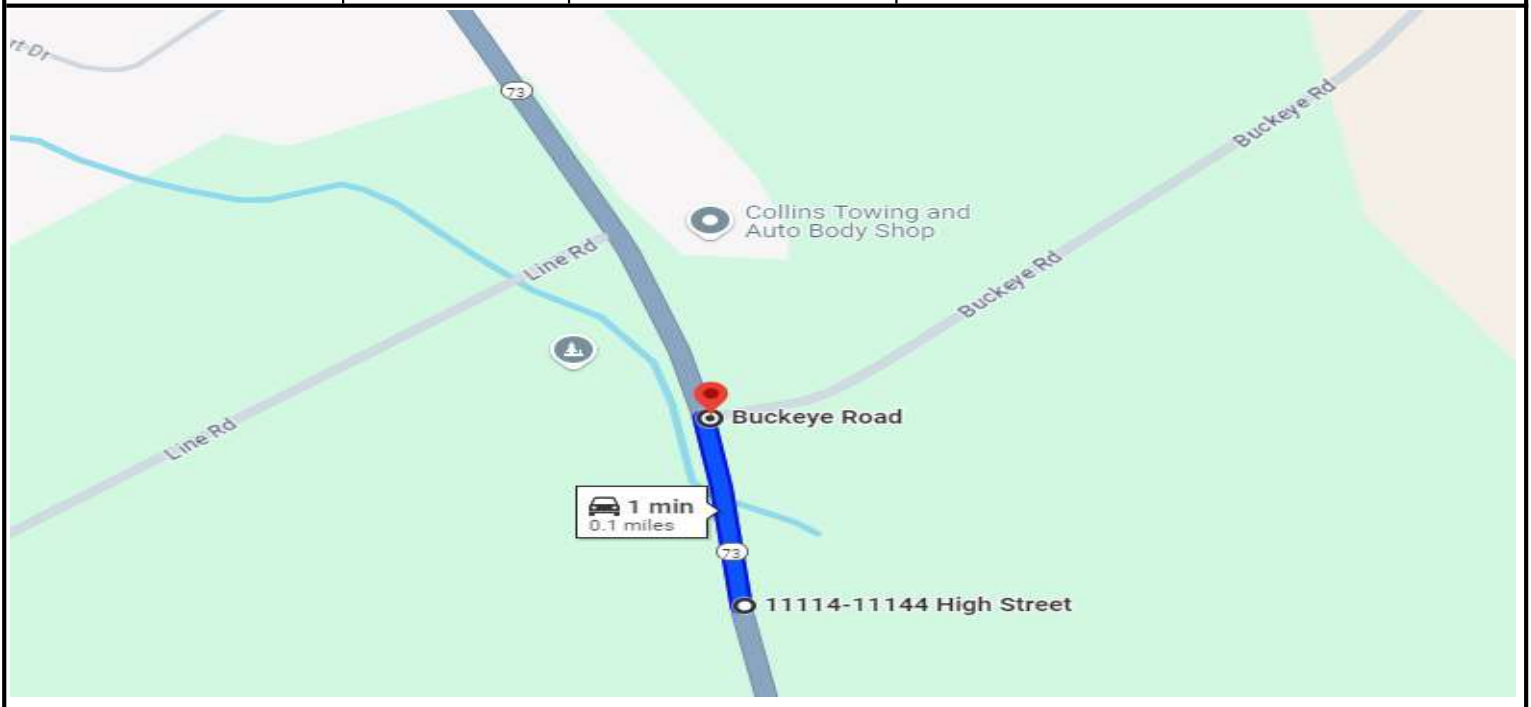
PID: 105435; Request 10

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



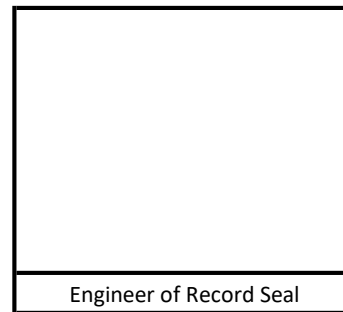
Submitted By:

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Gail H. Massie  
(Engineer of Record)

Approved by:

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Adam Koenig

Approval Date: 9/10/2024



# Design Exception Request

FRA-71/270-28.27/25.99A

PID: 105435; Request 10

## Controlling Criteria Identification

Section: IR-071; -

Controlling Criteria	Standard	Existing (a.)	Proposed
Lane Width			
Shoulder Width			
Horizontal Curve Radius	849' radius (meets 50 mph)	716' Radius (meets 45 mph)	637 and 697' (meets 45 mph)
Maximum Grade			
SSD (Horizontal & Crest Vertical)			
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. The design speed of the mainline is 70 mph so the standard minimum design speed of a directional ramp curve should be 50 mph. the existing ramp curve meets 45 mph and the proposed design meets the same speed as the existing condition.

**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 design this ramp geometry to meet 50 mph, all three overhead bridges would need to be completely replaced in a new location (I-270 EB/WB and Ramp K). Additionally, Ramp N (I-270 WB to I-71 NB) would have to be shifted well in to Sharon Woods Metro Park and the I-71 SB to I-270 WB ramp would have to be shifted out as well. These changes would be very costly and involve significant ROW impacts.

**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