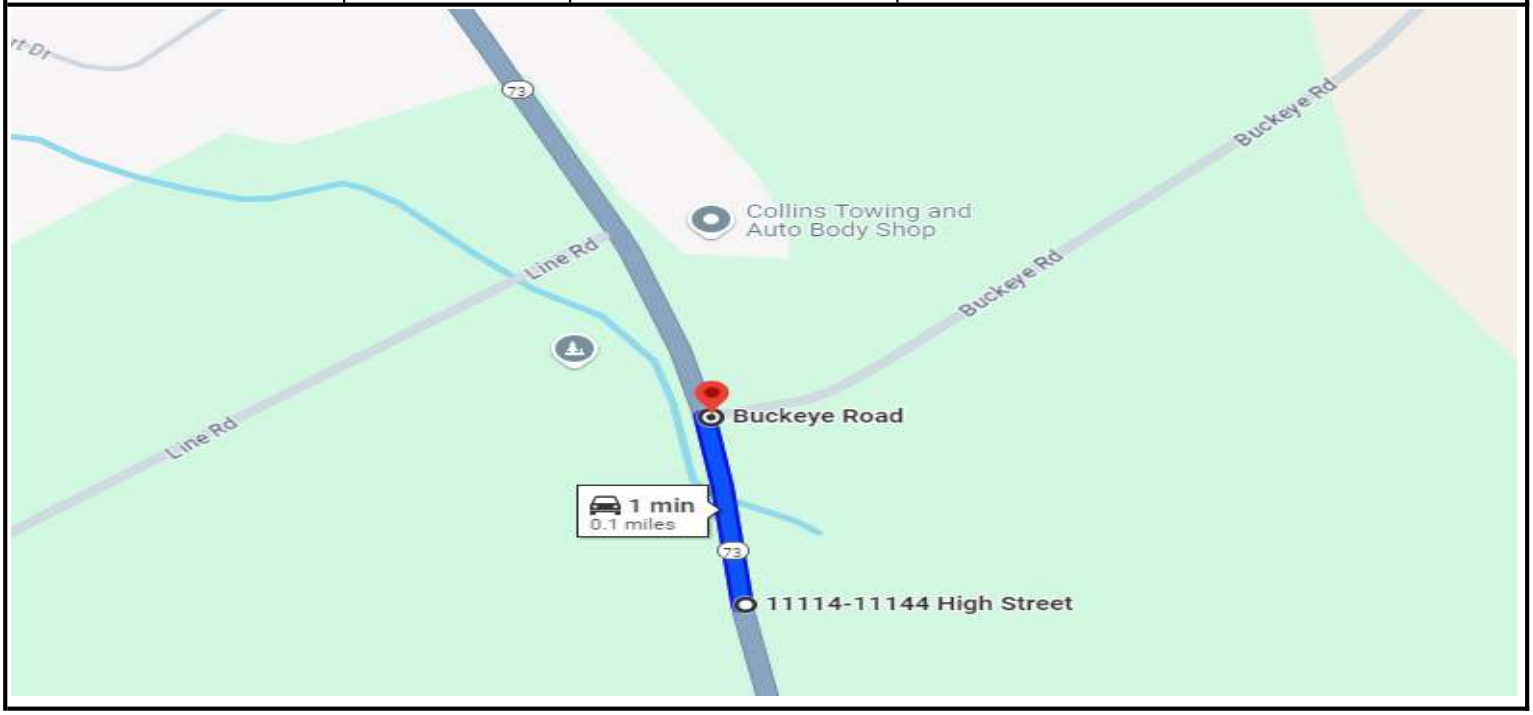
Design Exception Request

FRA-71/270-28.27/25.99A

PID: 105435; Request 01

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:

Engineer of Record Seal

Adam Koenig Approval Date: 8/26/2024

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Controlling Criteria Identification			
Section: IR-071; -			
Controlling Criteria	**Standard**	**Existing (a.)**	**Proposed**
Lane Width			
Shoulder Width	10'	10' (existing ramp is only a single lane ramp)	Min. 5.4'
Horizontal Curve Radius			
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

The standard outside shoulder width of 10' is not met on IR-071 NB under IR-270. The shoulder of the new two lane ramp varies with a minimum of 5.4' from stations 129+75 to 133+46 in order to not disturb the existing pier for the IR-270 over IR-71 bridges.

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.):
The addition of a second lane to the EB IR-270 to NB IR-071 movement will add much needed capacity to the interstate system on the north end of Columbus. The IOS study has been attached to this DE to show the added capacity a second lane will bring. The addition of capacity will reduce delay and congestion along with congestion related crashes. It is cost prohibitive to move the pier of the overhead bridges to accommodate a 10' shoulder in this short section of road (<400') . The overhead bridges are a pair each carrying 4-5 lanes of interstate traffic with a deck area over 57,000 sf. Replacing these bridges would cost over $15M in just structures items.

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