

# Ohio Rail Grade Crossing Pilot Study

## August 2020 Update



**Ohio**

Rail Development  
Commission

**CPCS**

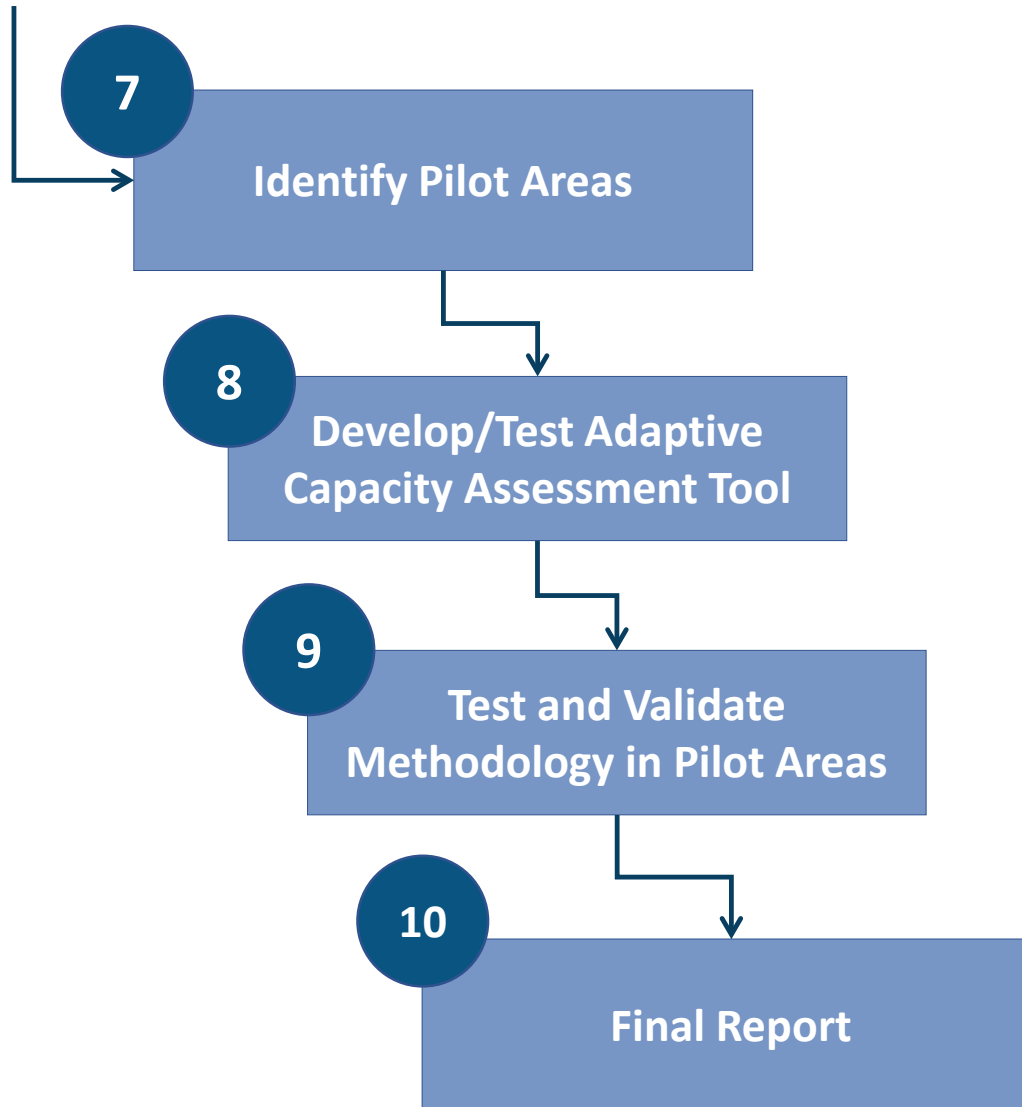
# Study Objective



Develop a methodology to **evaluate rail-road grade crossings** in Ohio and produce an adaptive capacity tool (and resulting score) that assesses at-grade crossing importance, redundancy, and overall adaptability.

# Study Overview

Phase 1 Inputs



# Adaptive Capacity Score Methodology

## Adaptive Capacity Score

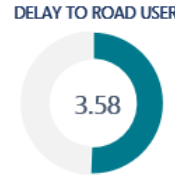
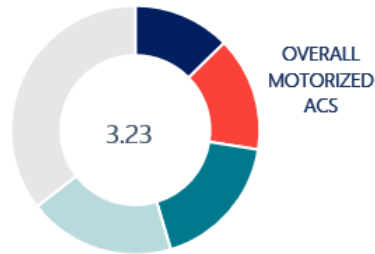
Public Importance			Redundancy	Delay to Road Users	Safety
For Motorized Road users	For EMS/Fire Services	For Community			
Road Type (Functional Class)	Facility Proximity to Crossing	Community Cohesion	Proximity to Grade-Separated Facility	Rail Traffic Volume (Day Trains)	PUCO/ODOT Grade Crossing Hazard Index
Road Demand (AADT)			Road Demand (AADT)	Proximity to Signals, Sidings and Yards	
				Road Demand (AADT)	

# Adaptive Capacity Score Output



Ohio Rail Development Commission

USDOT ID: 524056T  
 County: ERIE  
 City: HURON  
 Route: SR 13  
 Street: MAIN ST  
 Operator: NS



## Adaptive Capacity Score

SET POLICY WEIGHTS:

PUBLIC IMPORTANCE	0.25	DELAY TO ROAD USERS	0.25
REDUNDANCY	0.25	SAFETY	0.25
<input type="button" value="Check Weights"/>			



IDENTIFIERS

SCORES

CROSSING	COUNTY	CITY	ROUTE	STREET	OPERATOR	MOTORIZED ACS	PUBLIC IMPORTANCE	REDUNDANCY	DELAY TO ROAD USERS	SAFETY	NON-MOTORIZED ACS	TRUCK ACS
524056T	ERIE	HURON	SR 13	MAIN ST	NS	3.23	2.53	2.97	3.58	3.82	2.88	
524054E	ERIE	HURON	MR 77	BERLIN RD	NS	3.19	1.79	3.39	3.32	4.26	2.77	
524059N	ERIE	HURON	MR 150	RYE BEACH RD	NS	3.16	1.76	3.47	3.10	4.30	3.10	
524055L	ERIE	HURON	MR 147	RIVER RD	NS	2.94	1.79	2.92	3.40	3.63	2.74	
524061P	ERIE	HURON	TR 121	CAMP RD	NS	2.93	1.83	3.48	2.74	3.66	2.57	
524057A	ERIE	HURON	MR 180	WILLIAMS ST	NS	2.74	2.02	2.17	3.13	3.62	2.58	
473986H	ERIE	HURON	MR 147	RIVER RD	NS	1.96	1.73	2.99	0.36	2.74	1.71	
473984U	ERIE	HURON	CR 126	RIVER RD	NS	1.84	1.48	2.71	0.36	2.80	1.58	
473982F	ERIE	HURON	CR 126	RIVER RD	NS	1.79	1.43	2.24	0.36	3.12	1.53	
474062G	ERIE	HURON	TR 83	KNIGHT RD	NS	1.63	1.14	2.22	0.36	2.81	1.47	



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# | What's Next

- Final Stakeholder Workshop
- Final Report
- Final Evaluation Tool & User Manual
- Develop metrics to compare ACS outputs across a set of crossings (city/county/rail corridor/statewide)
- Incorporate ACS output into evaluation of potential projects

# | Contact Information

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# Annex: Adaptive Capacity Score Methodology

## Adaptive Capacity Score

Public Importance			Redundancy	Delay to Road Users	Safety
For Motorized Road users	For EMS/Fire Services	For Community			
Road Type (Functional Class)	Facility Proximity to Crossing	Community Cohesion	Proximity to Grade-Separated Facility	Rail Traffic Volume (Day Trains)	PUCO/ODOT Grade Crossing Hazard Index
Road Demand (AADT)			Road Demand (AADT)	Proximity to Signals, Sidings and Yards	
				Road Demand (AADT)	



# Annex: Adaptive Capacity Score Methodology

## Public Importance

For Motorized Road Users

$\times W_M +$

For EMS/Fire Services

$\times W_E +$

For Community

$\times W_C$

Road Type

Functional Class of a road

$\times$

Road Demand

Average Annual Daily Traffic (AADT)

**Motorized Road Users**

*To be included in the calculation of the Adaptive Capacity Score for Motorized Road Users only*

Facility Proximity to Crossing

Inverse of the Distance to Hospitals / Fire Stations

Community Cohesion

Percentage of population split by rail line

**Legend:**

Component

Sub-Component

Performance Category

Performance Measure

**Adaptive Capacity Score**

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				Road Demand (AADT)	

# Annex: Adaptive Capacity Score Methodology

## Redundancy

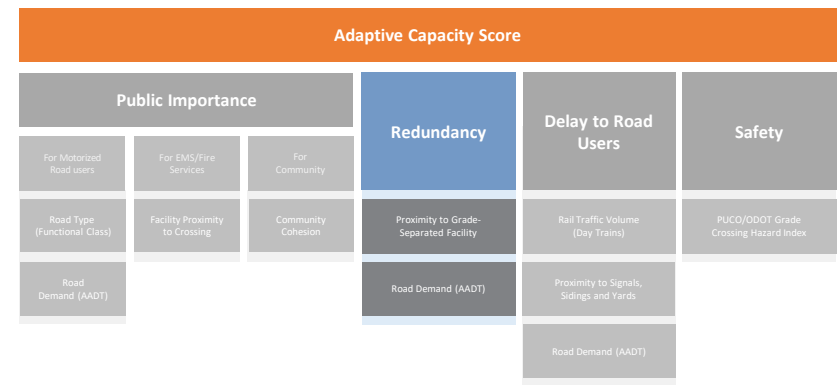
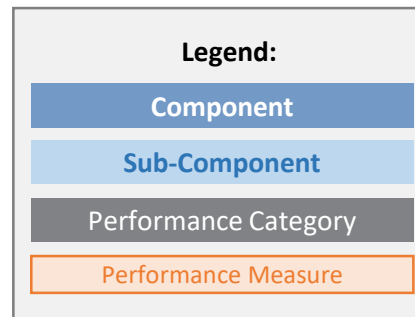
Proximity to Grade-Separated Facility

Road Demand

Distance to Closest Grade-Separated Crossing

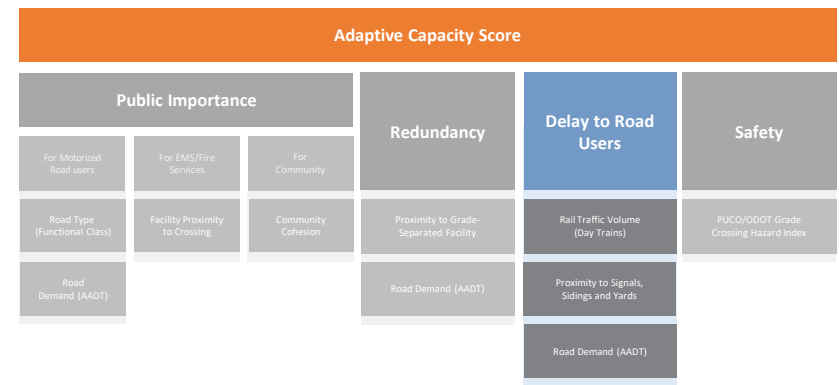
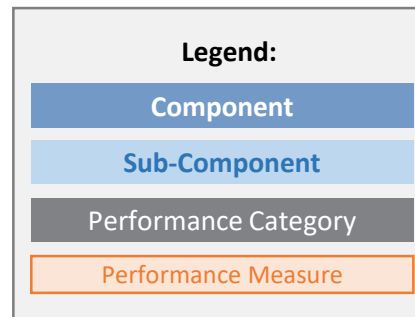
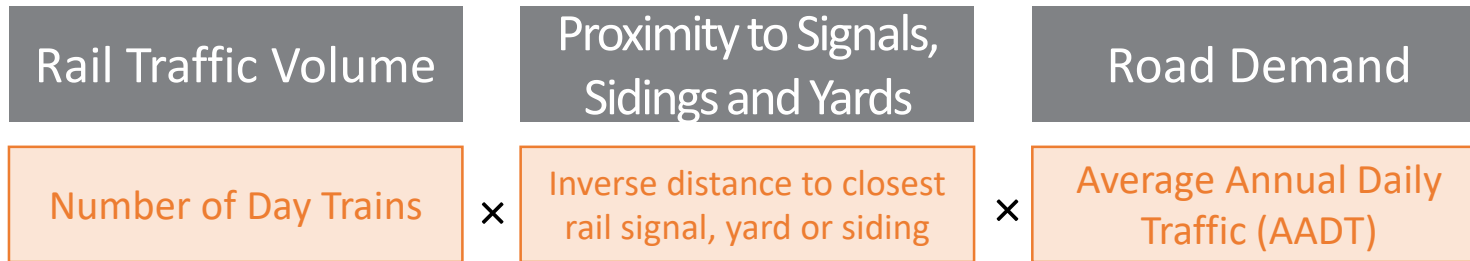
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Average Annual Daily Traffic (AADT)



# Annex: Adaptive Capacity Score Methodology

## Delay to Road Users



# Annex: Adaptive Capacity Score Methodology

## Safety

PUCO/ODOT Grade Crossing Hazard Index

PUCO/ODOT Hazard Index

### Legend:

Component

Sub-Component

Performance Category

Performance Measure

### Adaptive Capacity Score

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