

# LAKE-TO-LAKES TRAIL

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**Public Meeting #2**

**August 27, 2014**

WELCOME

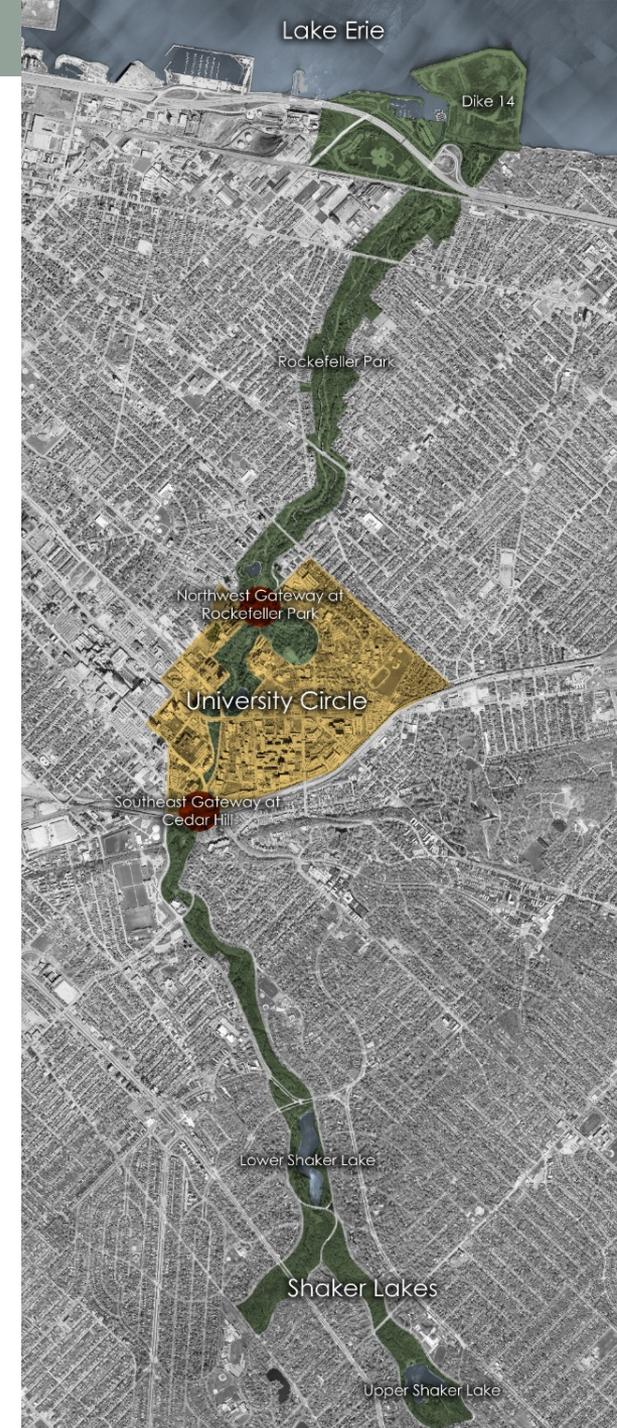
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# PRELIMINARY ENGINEERING PLANS

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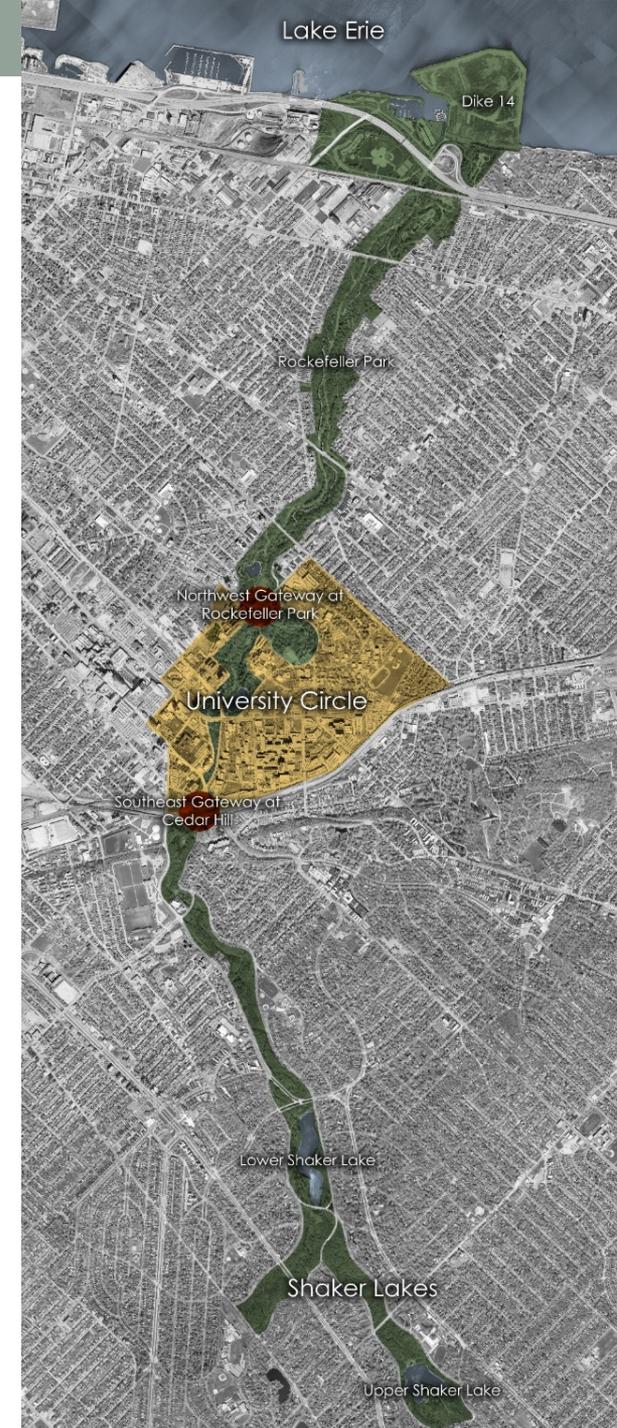
# Project Overview

- Proposed in Shaker Heights Recreation & Leisure Plan (2005)
- Worked with many partners to develop Master Plan (2008)
- Entire trail extends from Upper Shaker Lake to Lake Erie
- Cleveland section constructed in 2012
- Current section under design:
  - East 127/Fairhill (Shaker Heights) to
  - North Park/Coventry (Cleveland Heights)

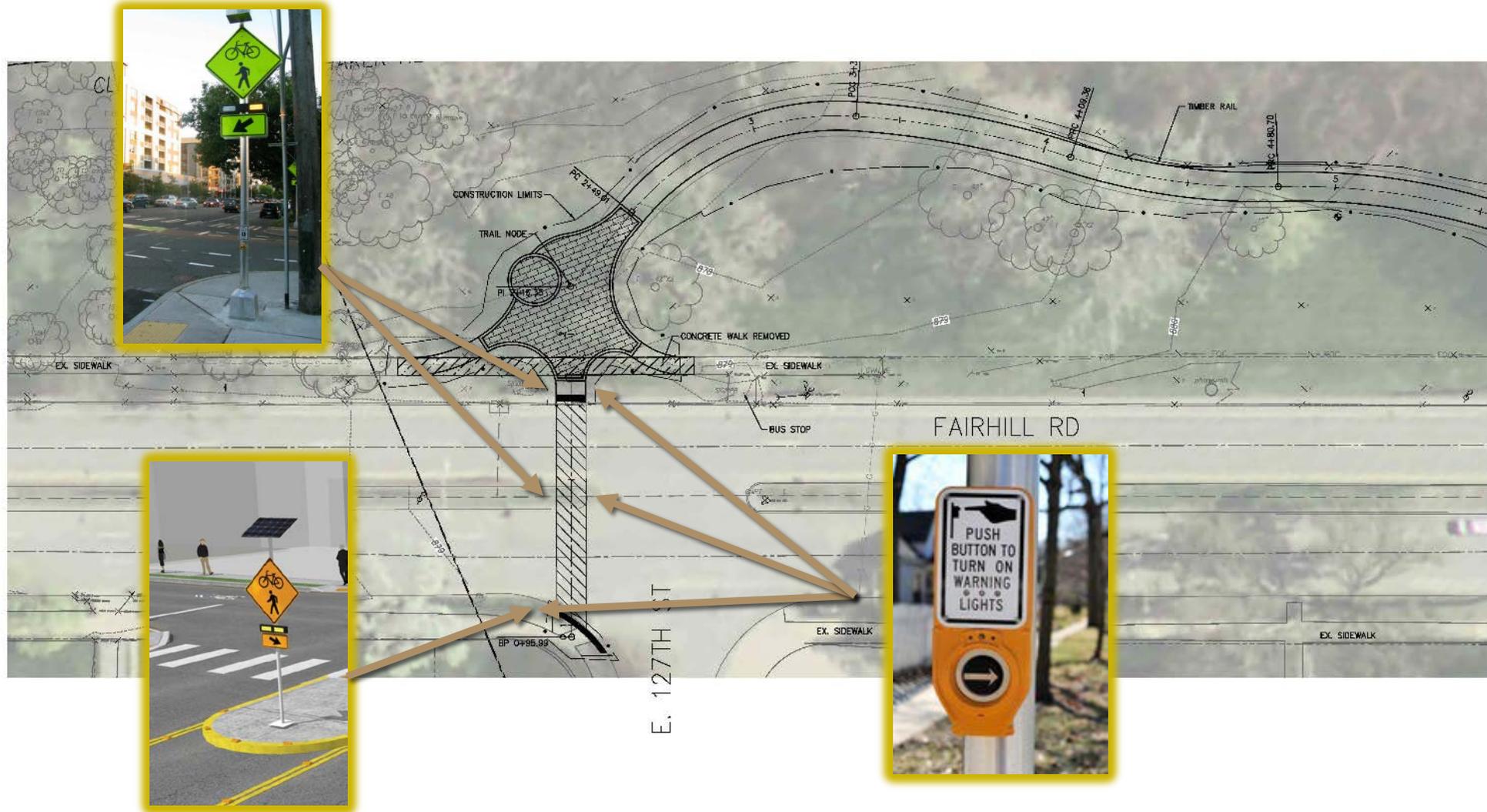


# Proposed Elements

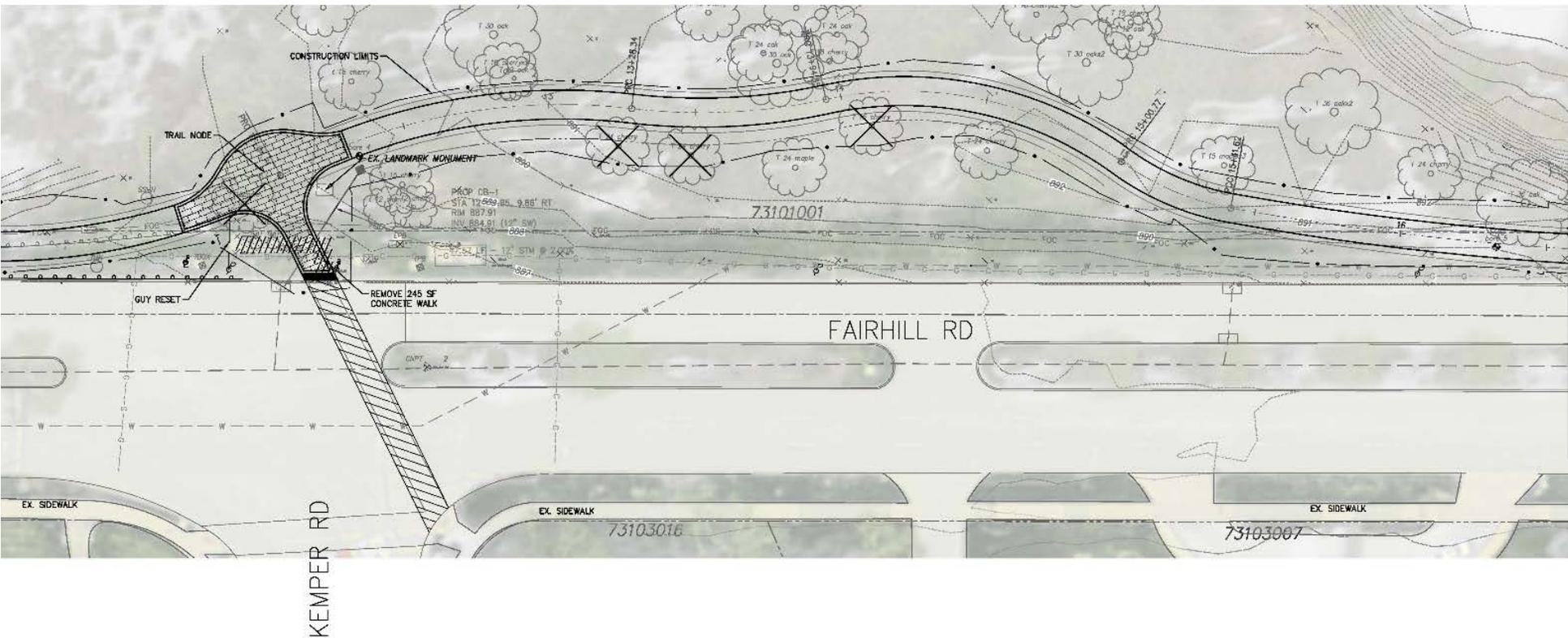
- Approximately  $\frac{3}{4}$  mile in length
- 10' wide asphalt multi-purpose path
- 10' wide striped crosswalks & ped signals at signalized intersections
  - Coventry (Cleveland Heights)
  - North Moreland/South Park
  - Kemper
- 10' wide crosswalk & RRFB flasher beacons at East 127 unsignalized intersection
- Nodes (4) with seating and other amenities at each intersection



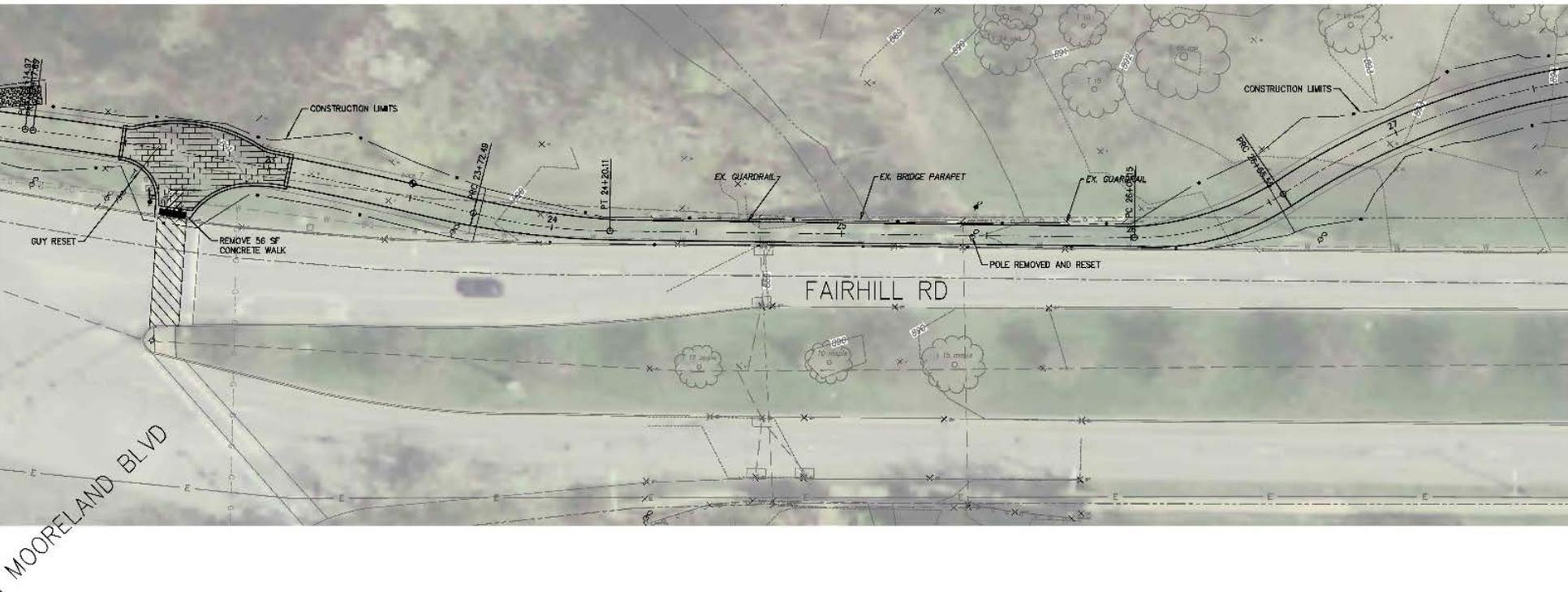
# Preliminary Alignment (@ East 127)



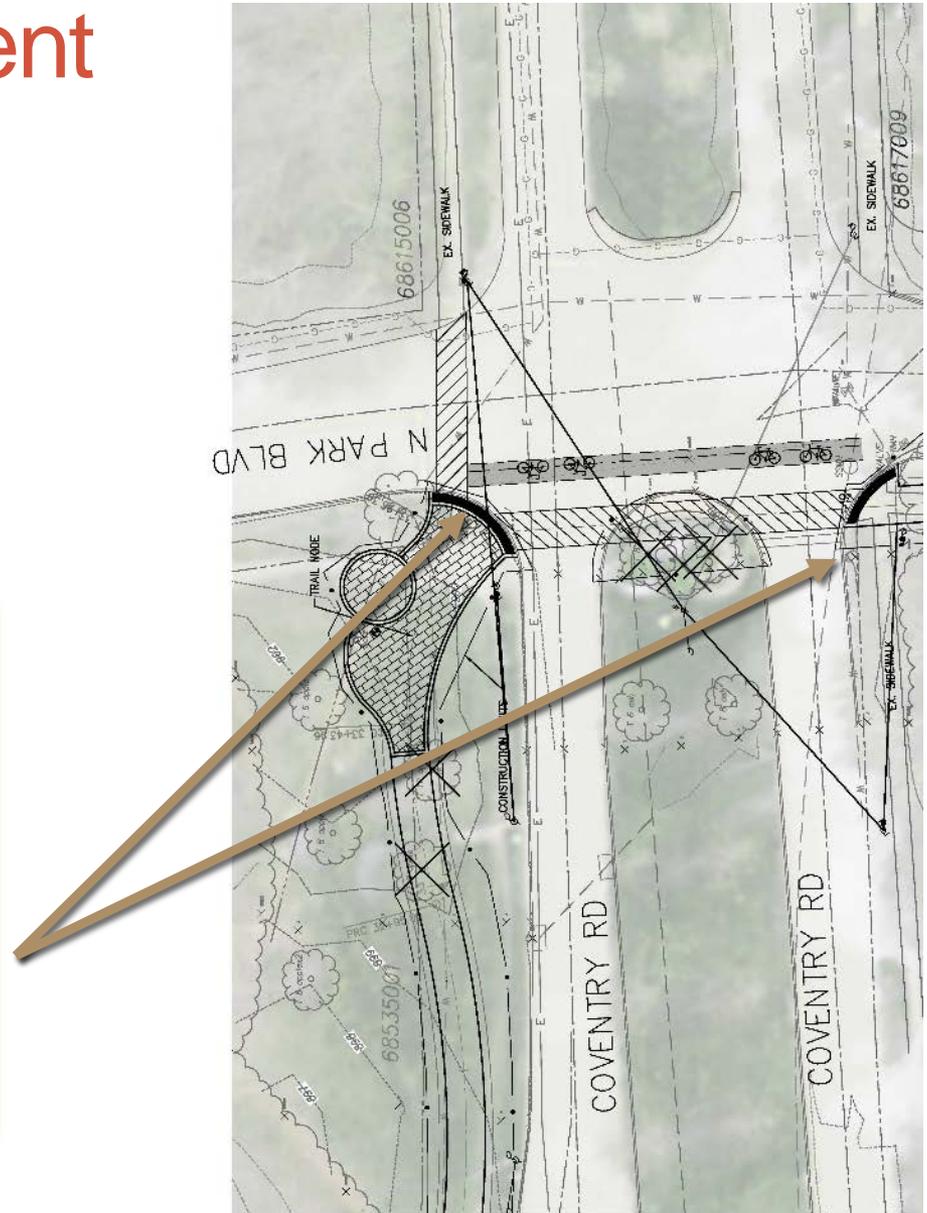
# Preliminary Alignment (@ Kemper)



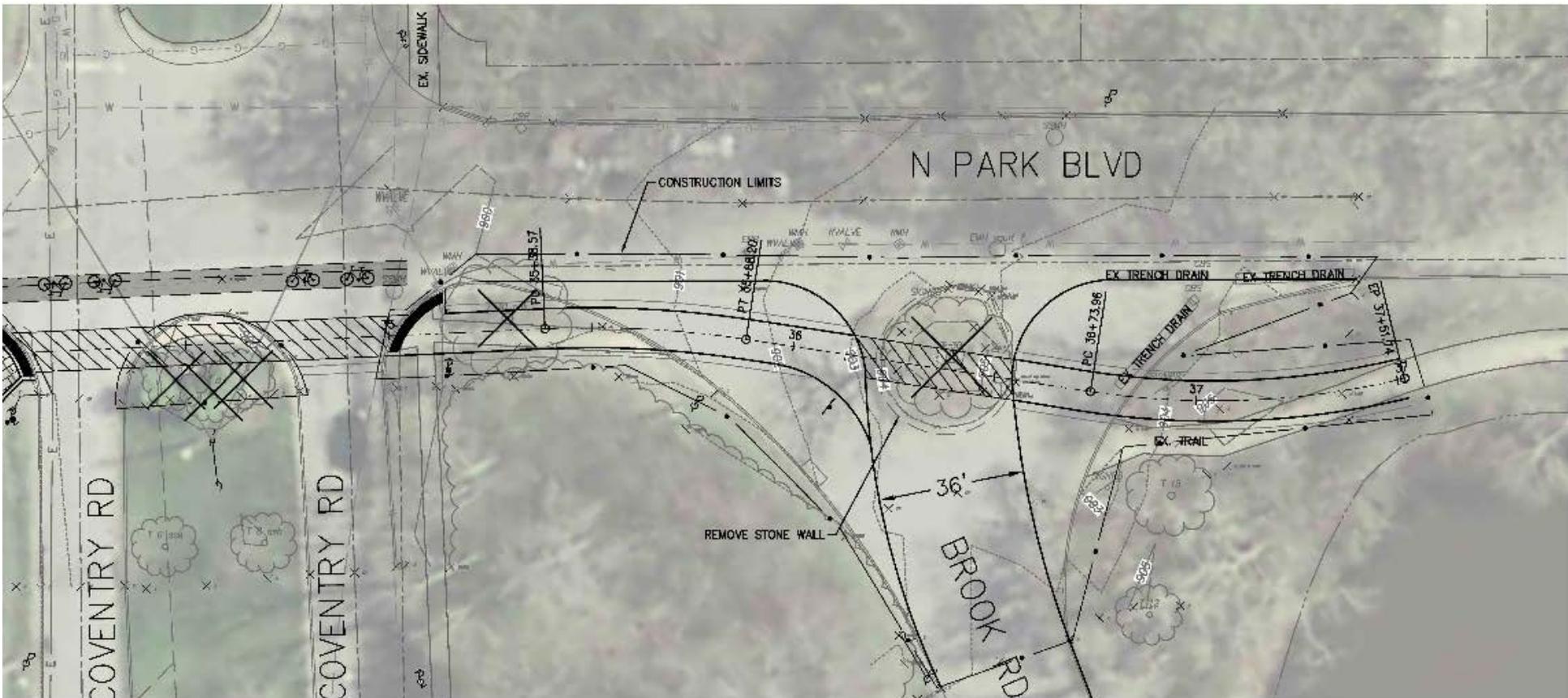
# Preliminary Alignment (@ N. Moreland)



# Preliminary Alignment (@ Coventry)



# Preliminary Alignment (@ Park Entry)



# PROCESS, BUDGET & REVIEW OF COMMENTS

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# Funding/Process

- Funding available for project = \$680,000
  - \$480,000 Federal grant funds
  - \$120,000 State grant funds
  - \$ 80,000 Local funds (Shaker Heights & Cleveland Heights)
- Federal funding = Federal rules
- Must follow ODOT process for design and construction
- Many comments from previous meeting address items that will be included in next stage of drawings
- Unknown big budget impact – potential requirement for new bridge over Doan Brook

# Preliminary Cost Estimate

Project Element	Estimated Cost
Design/engineering services	\$ 80,000
Trail construction	\$347,000
Nodes (seatwalls, pergola, signage, etc.)	\$128,000
Landscaping	\$ 31,000
RRFB flashing beacons	\$ 27,000
Crosswalks and ped signals	\$ 12,000
Construction inspection/post-bid design services	\$ 20,000
<b>TOTAL</b>	<b>\$645,000</b>
Funds available	\$680,000

# Public Comments: Key Issues

- Fairhill crosswalk beacon/signal @ East 127
- Fairhill crosswalk @ North Moreland/South Park
- Narrowing of trail at bridge

# RRFB Flasher Beacon

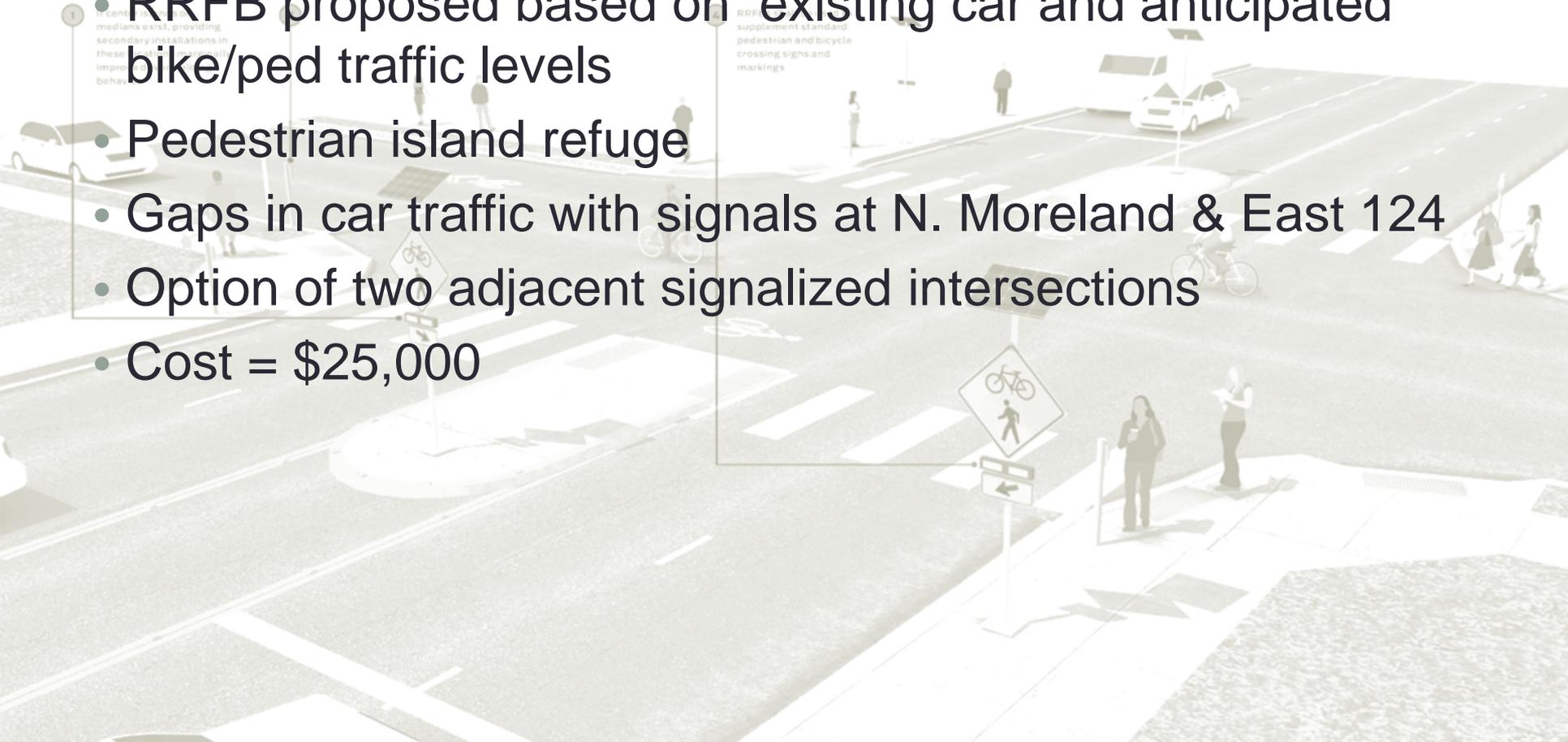
1 If center islands or medians exist, providing secondary installations in these locations marginally improve driver yielding behavior

4 RRFBs shall be used to supplement standard pedestrian and bicycle crossing signs and markings



# RRFB Flasher Beacon

- RRFB proposed based on existing car and anticipated bike/ped traffic levels
- Pedestrian island refuge
- Gaps in car traffic with signals at N. Moreland & East 124
- Option of two adjacent signalized intersections
- Cost = \$25,000



# HAWK Signal

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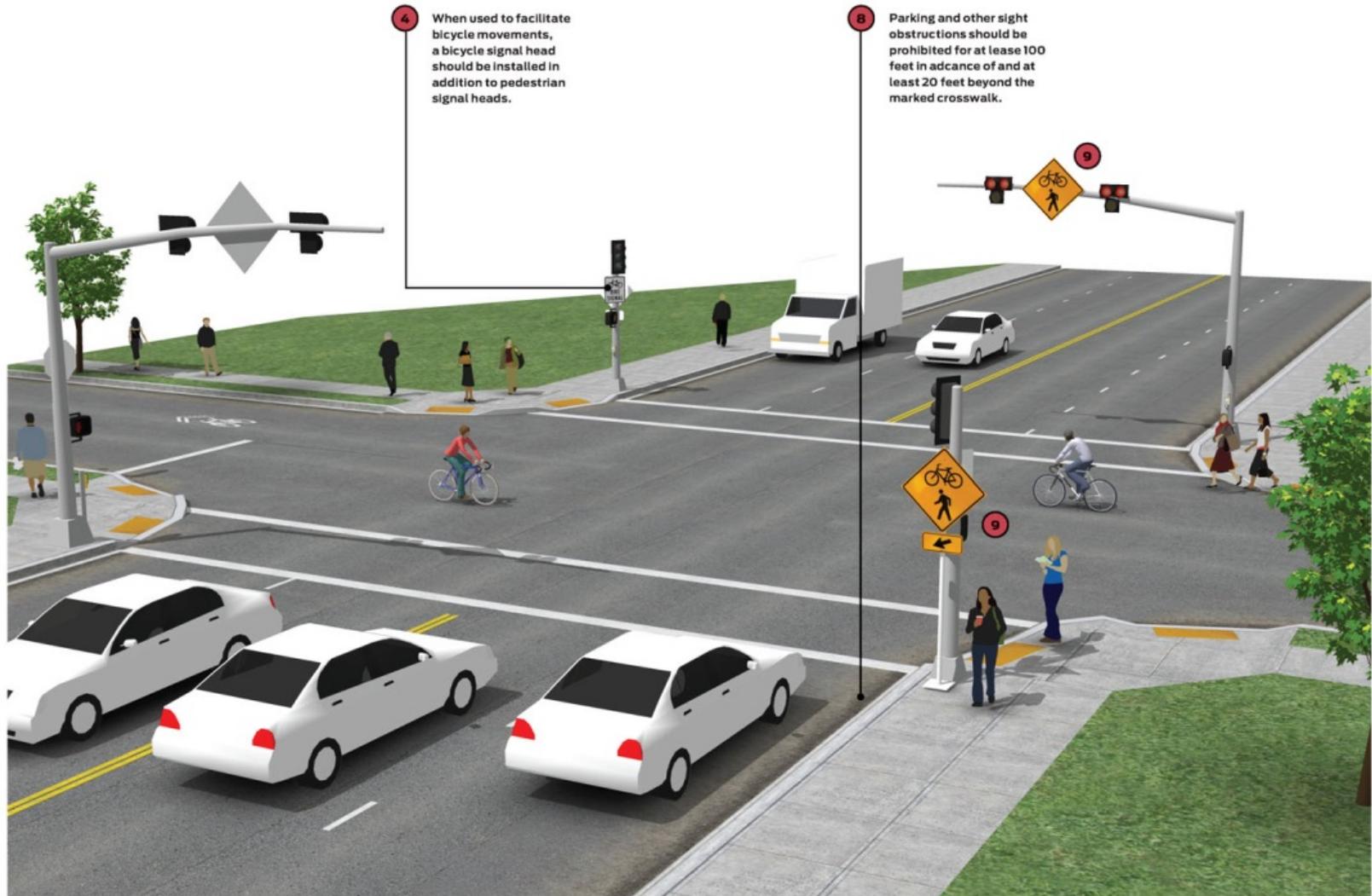
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**4** When used to facilitate bicycle movements, a bicycle signal head should be installed in addition to pedestrian signal heads.

**8** Parking and other sight obstructions should be prohibited for at least 100 feet in advance of and at least 20 feet beyond the marked crosswalk.



using a shorter min  
interval during off-  
during peak period

**8** Parking and other sight obstructions should be prohibited for at least 100 feet in advance of and at least 20 feet beyond the marked crosswalk. The site should be designed to accommodate the installation of the HAWK signal through curbs or other techniques to provide adequate sight distance.

**9** The installation of the HAWK signal should be evaluated against suitable starting and ending pavement markings.

**10** If installed with a hybrid beacon system, signal operators should evaluate the hybrid beacon to be used in conjunction with other signals.

## Operations

Hybrid beacon operations are significantly different from standard operations of standard traffic signals. The figure on the right side illustrates the sequence of phases for a hybrid HAWK signal applied for pedestrian and bicycle crossing. The primary difference between a hybrid HAWK beacon displays normal red (solid red) when it is in the normal actuation (by a pedestrian or cyclist) on the minor street. The beacon begins flashing yellow (flashing yellow) with the red indication with the pedestrian or cyclist. During the solid red phase, the pedestrian or cyclist must stop and remain stationary with a standard traffic signal.

# HAWK Signal

- Over-designed car/ped/bike traffic levels
- HAWK signal will be considered if budget allows and ODOT approves
- Signalized intersections adjacent
- Cost = \$120,000



using a shorter minimum interval during off-peak periods during peak periods.

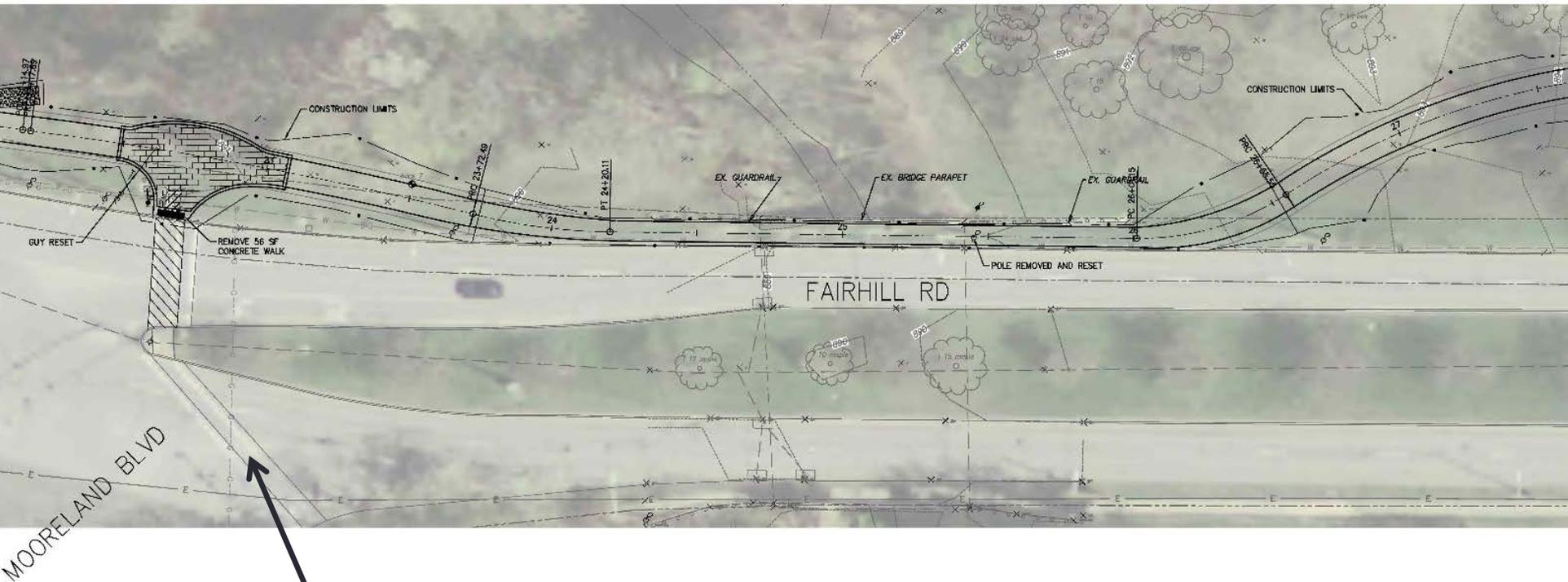
8. Parking and other obstructions are prohibited for at least 100 feet in advance of and at least 20 feet beyond the marked crosswalk. Site accommodations made through curbs or other techniques must provide adequate sight distances.

9. The installation of a suitable start-up pavement marking should be evaluated when a hybrid beacon system is installed. The beacon should evaluate the hybrid beacon to be used in conjunction with other signals.

## Operations

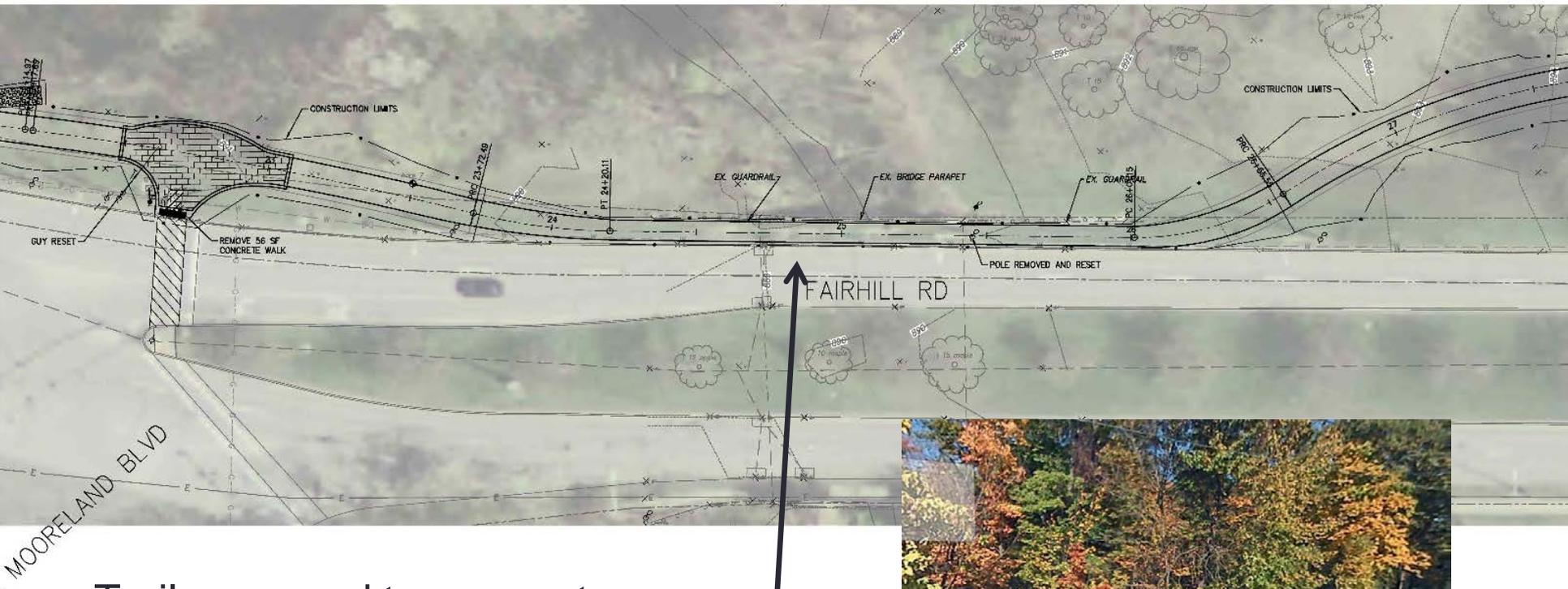
Hybrid beacon operations differ significantly from standard operations of standard signals. The figure on the right side illustrates the sequence of phases for a hybrid beacon applied to pedestrian and bicycle traffic. The primary difference between a hybrid beacon and a standard signal is that the beacon displays red when it is in the actuation (by a pedestrian or cyclist) on the minor street. The beacon begins flashing yellow when the actuation ends, the red indication with the flashing yellow. During the solid red phase, the beacon must stop and remain red with a standard traffic signal.

# Crosswalk @ North Moreland



Crosswalk will be extended across all lanes of Fairhill; also extended across South Park if ODOT allows

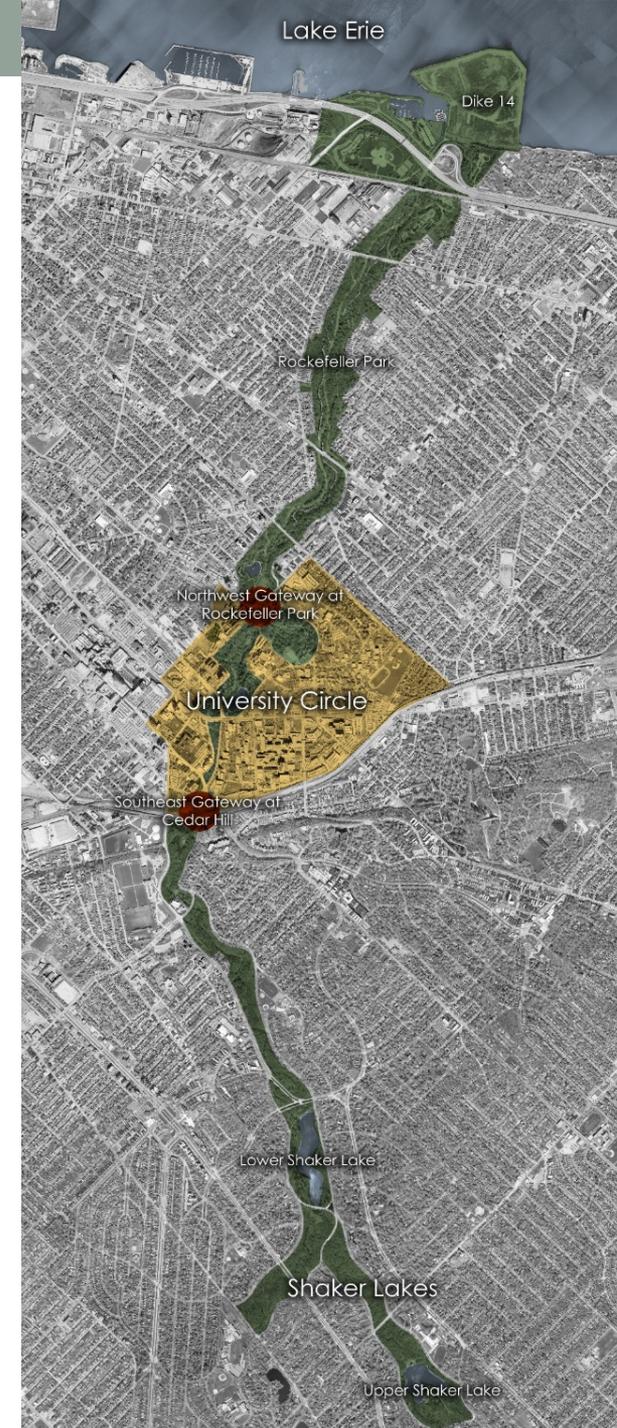
# Narrow Trail @ Bridge Crossing



Trail proposed to narrow to approximately 8' over bridge; will investigate options for cautionary signage, separation, etc. in Stage 3 drawings

# Next Steps

Date	Action
October 7	Public input meeting #3 (CPC)
Mid-October	Stage 3 plan submission to ODOT
Nov or Dec	Public input meeting #4 (Council)
Jan 2015	Final plan submission to ODOT
Mar 2015	Project bidding
Summer 2015	Project construction



# PUBLIC COMMENT & DISCUSSION

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