

Northampton Borough Trail Plan

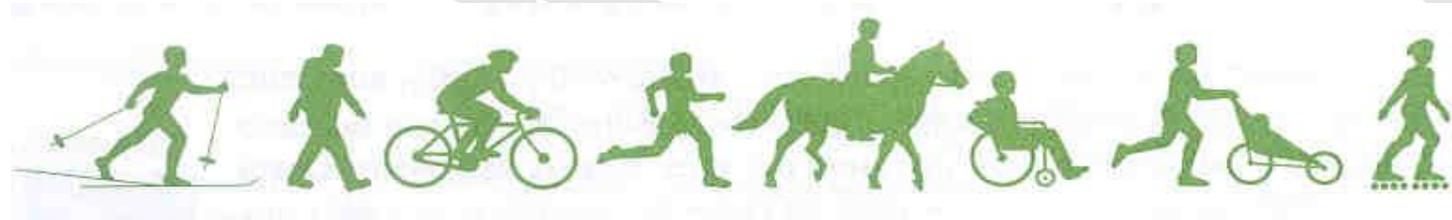


Progress Meeting
November 18, 2021



Michael Baker
INTERNATIONAL

We Make a Difference



#31

2021 ENR RANKING – TOP 500 DESIGN FIRMS

3,400+

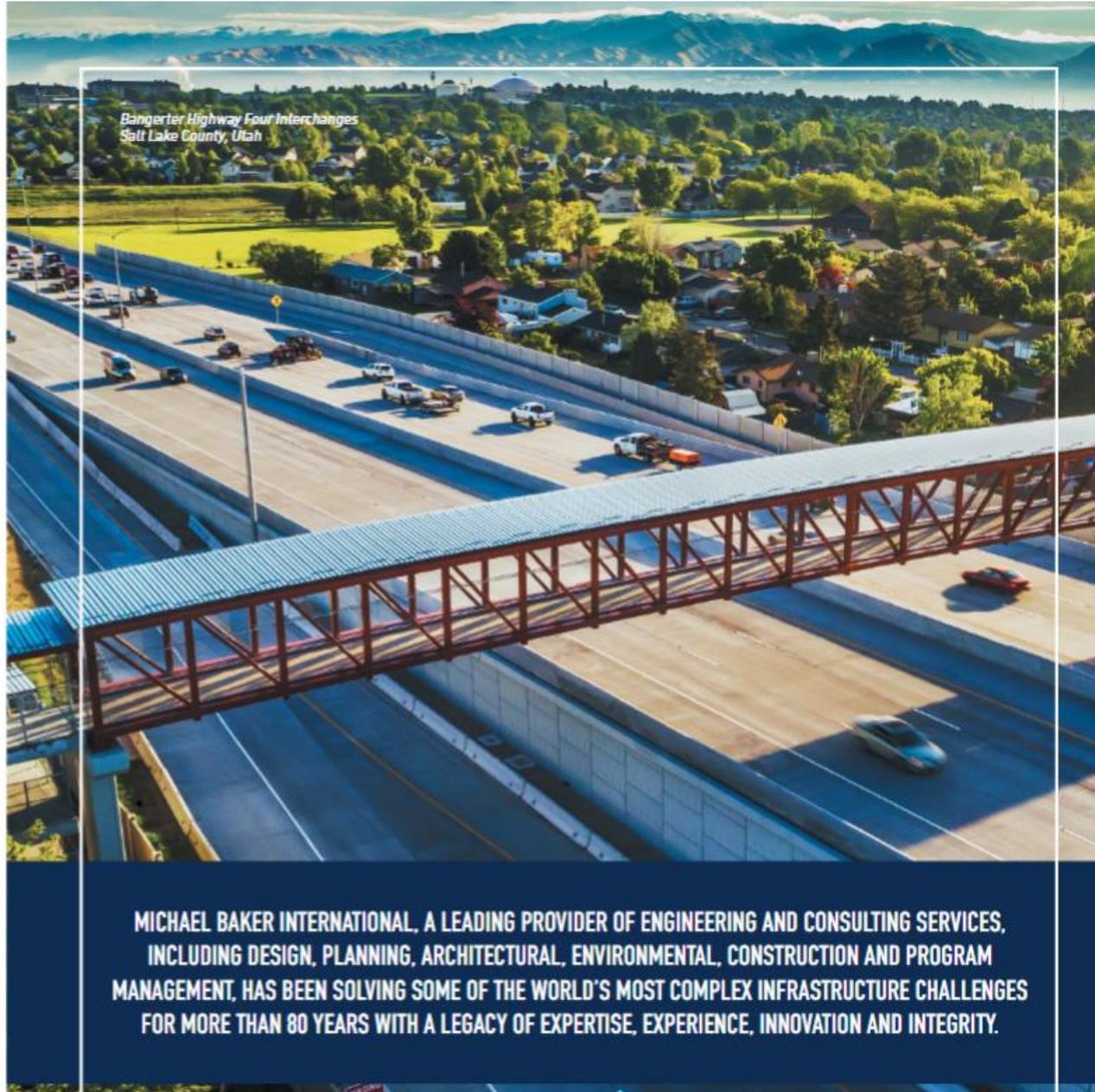
PROFESSIONALS COMPANYWIDE

100

OFFICES NATIONWIDE

80+

YEARS OF PROJECT INNOVATION



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Allentown Office

- Highway, Bridge & Traffic
- Municipal Planning
- CM/CI
- Bicycle / Pedestrian/ Trail Planning and Design

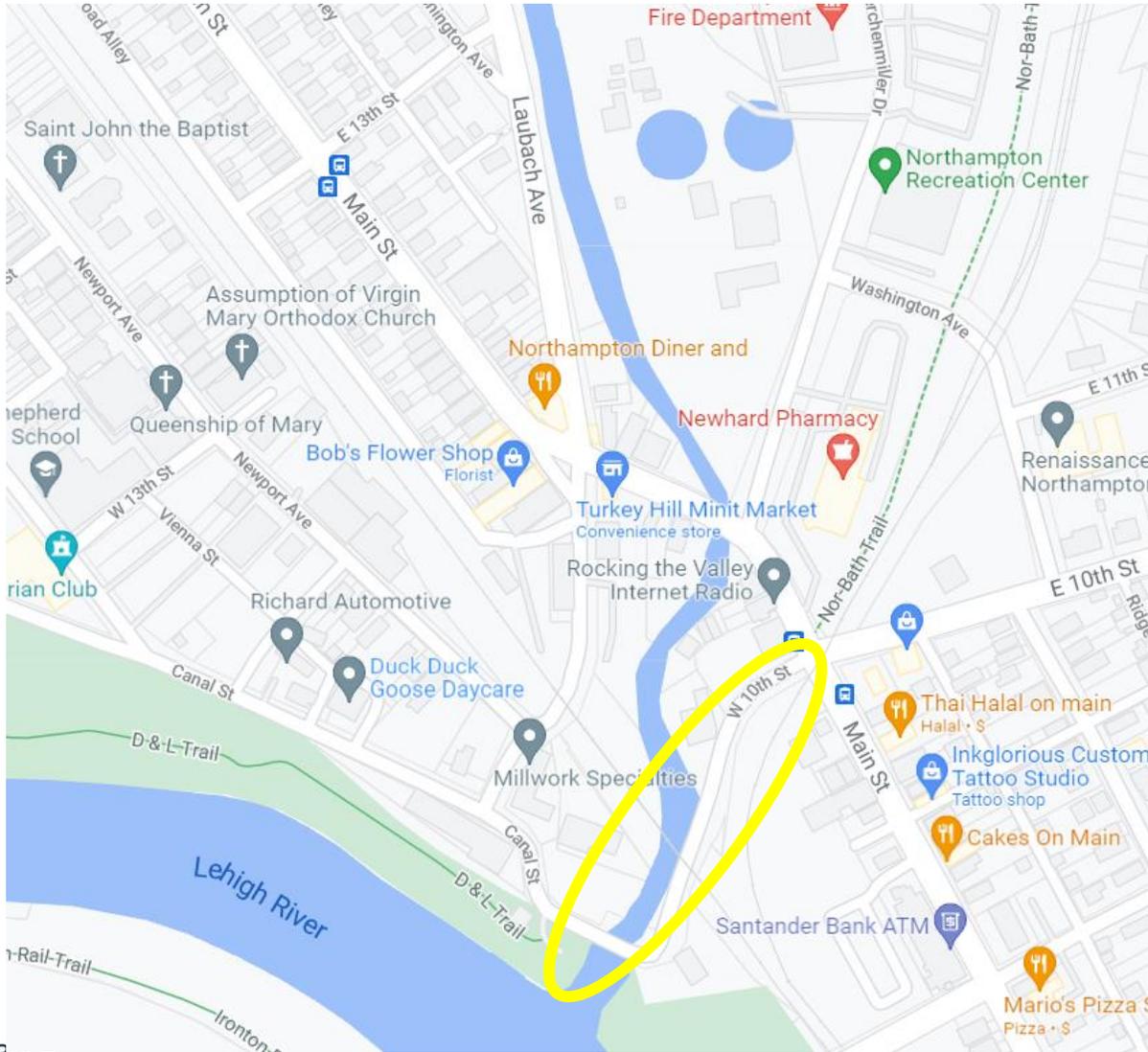


Northampton Borough Trail Plan

- Scope:
 - Task 1a – Connection of D&L/Heritage Trail to Nor-Bath Trail
 - Task 1b - Review the existing Historic Lehigh Heritage Corridor (D & L Trail)
 - Task 1c - Design a Proper Lighting System for a Section of Nor-Bath Connector Trail
 - Task 2a – Design a nearly one-mile Civic Center Trail Loop
 - Task 2b – Design a Cherryville-Held Drive Pedestrian Loop
 - Task 2c – Design a Trail Connection from Held Drive to 21st Street
 - Task 3 – Wayfinding Sign System from Parks to Trails
 - Task 4 – Planning and Concept Plan for park pavilion in Canal Street Park near the D & L Trail
 - Task 5 – Concept Plan for Trailhead Parking Area on Laubach Avenue (Behind Turkey Hill Convenience Store)



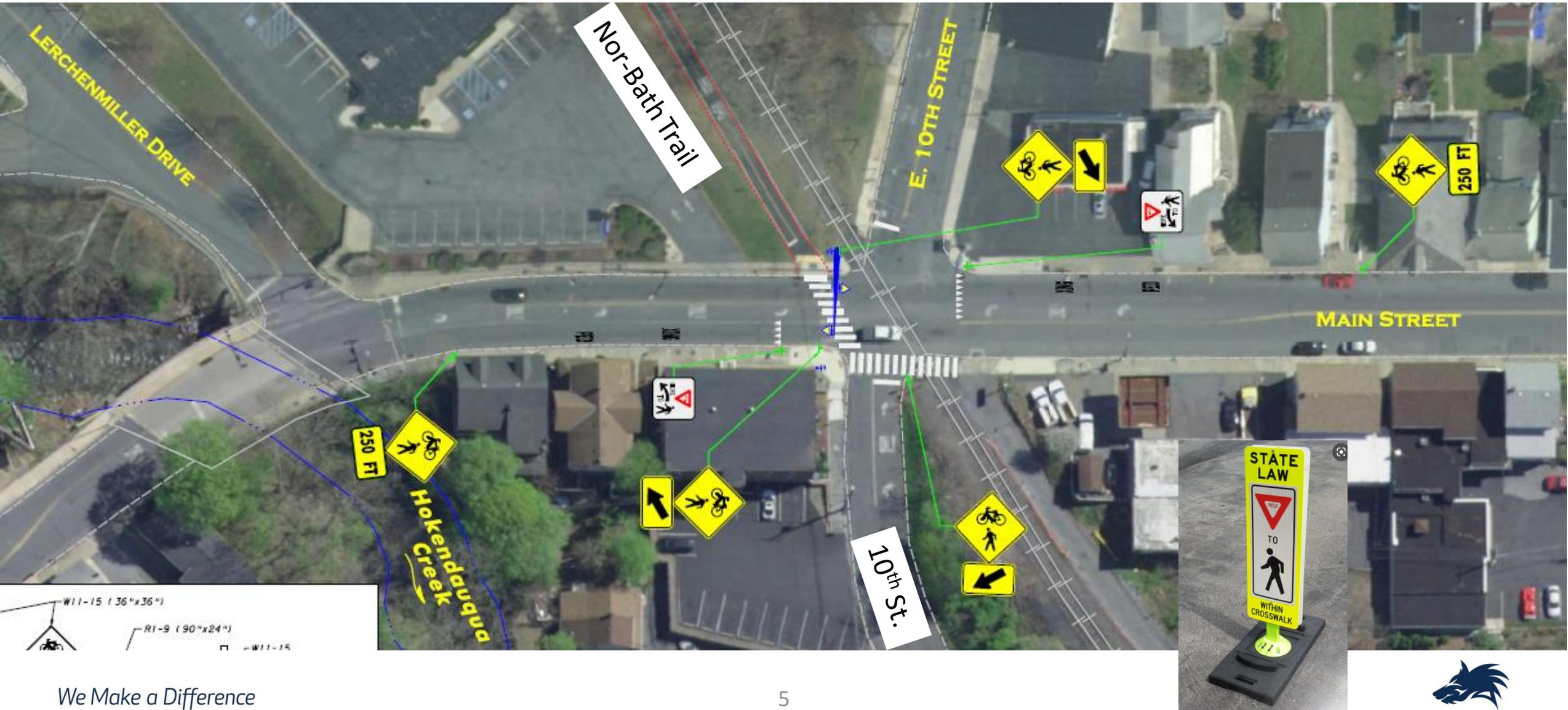
Connection of D&L/Heritage Trail to Nor-Bath Trail

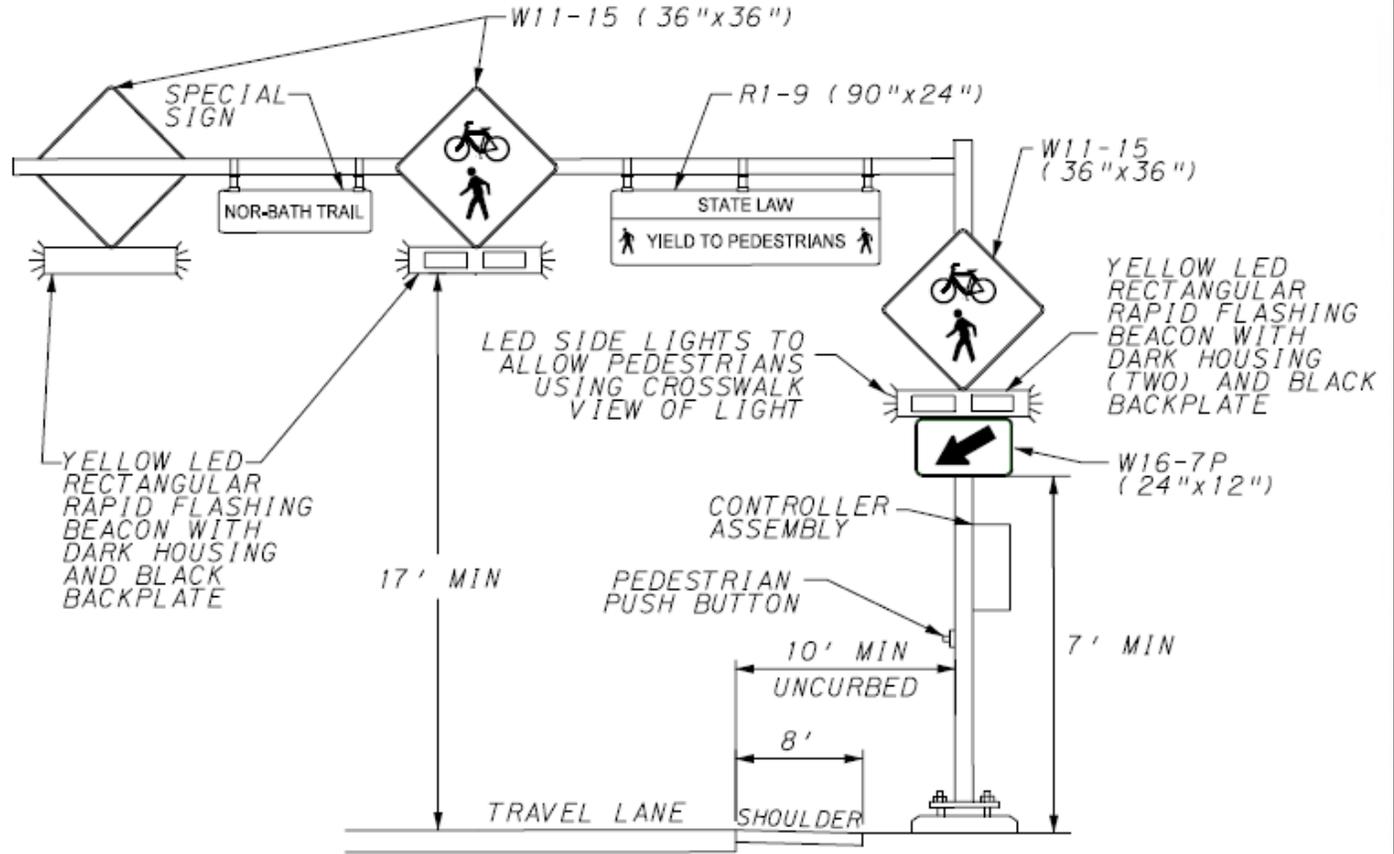


- Nor-Bath Trail 6 miles
- D&L Trail 165 miles
- Goal is to close a 1000' gap along 10th Street
- 10th st is approx. 22'-24' wide
- Traffic Data?
- Speed Limit?
- Right turn only?



Nor-Bath Trail / Main Street Crossing





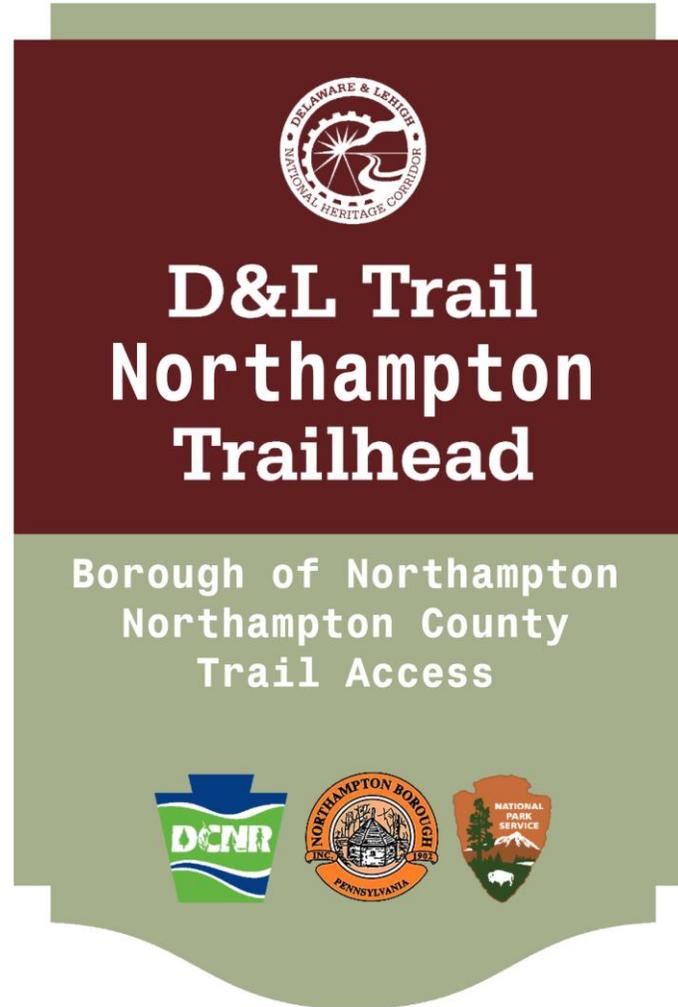
**MAST ARM MOUNTED FLASHING
WARNING DEVICE SUPPORT DETAIL**



D&L Wayfinding Signage



Trail directional sign



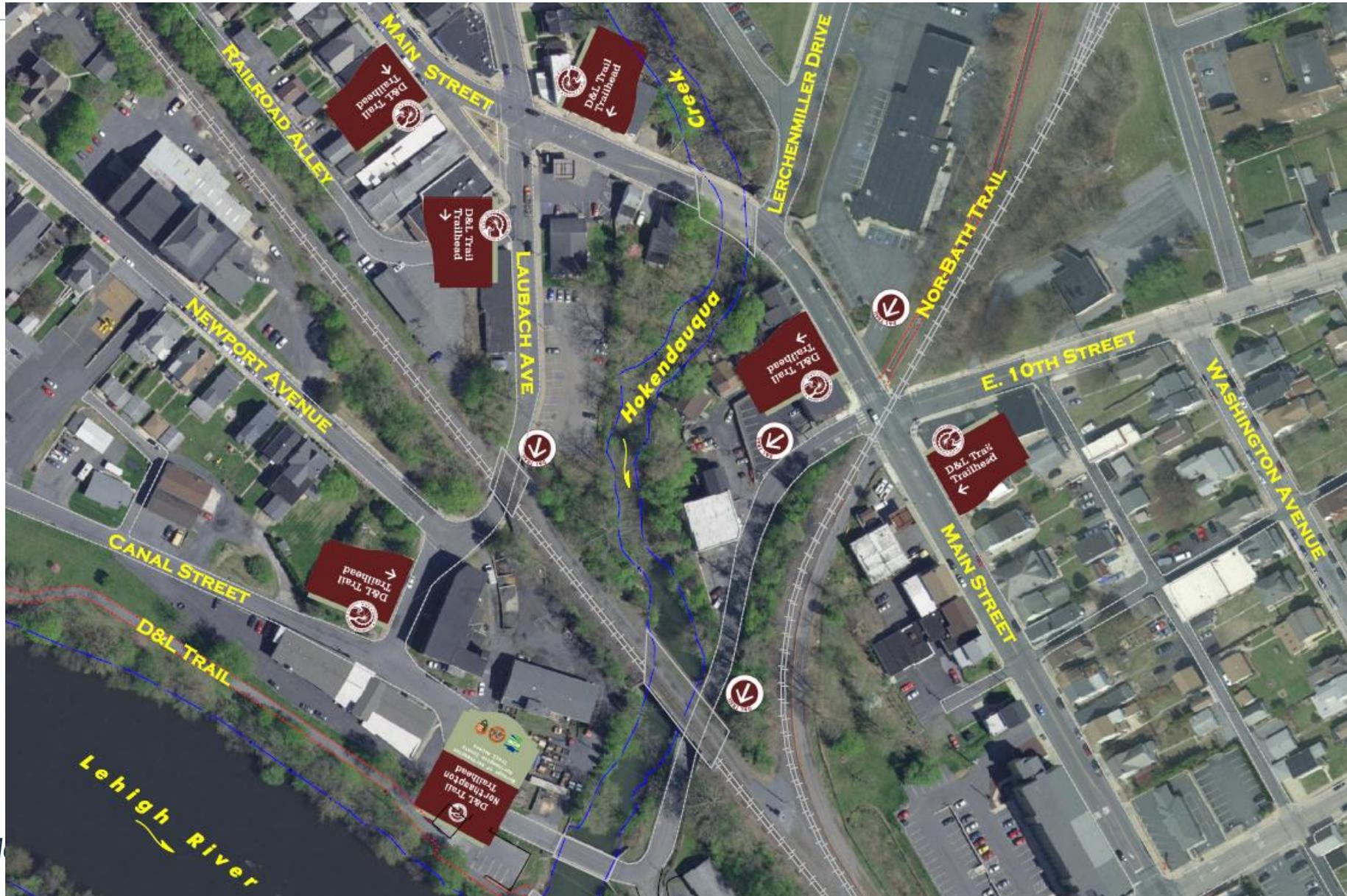
Trailhead parking area signage



Vehicle directional signage



Wayfinding Sign plan to Existing D&L Trailhead



Also Bike Route signs from D&L to Nor-Bath Trail



D11-1c

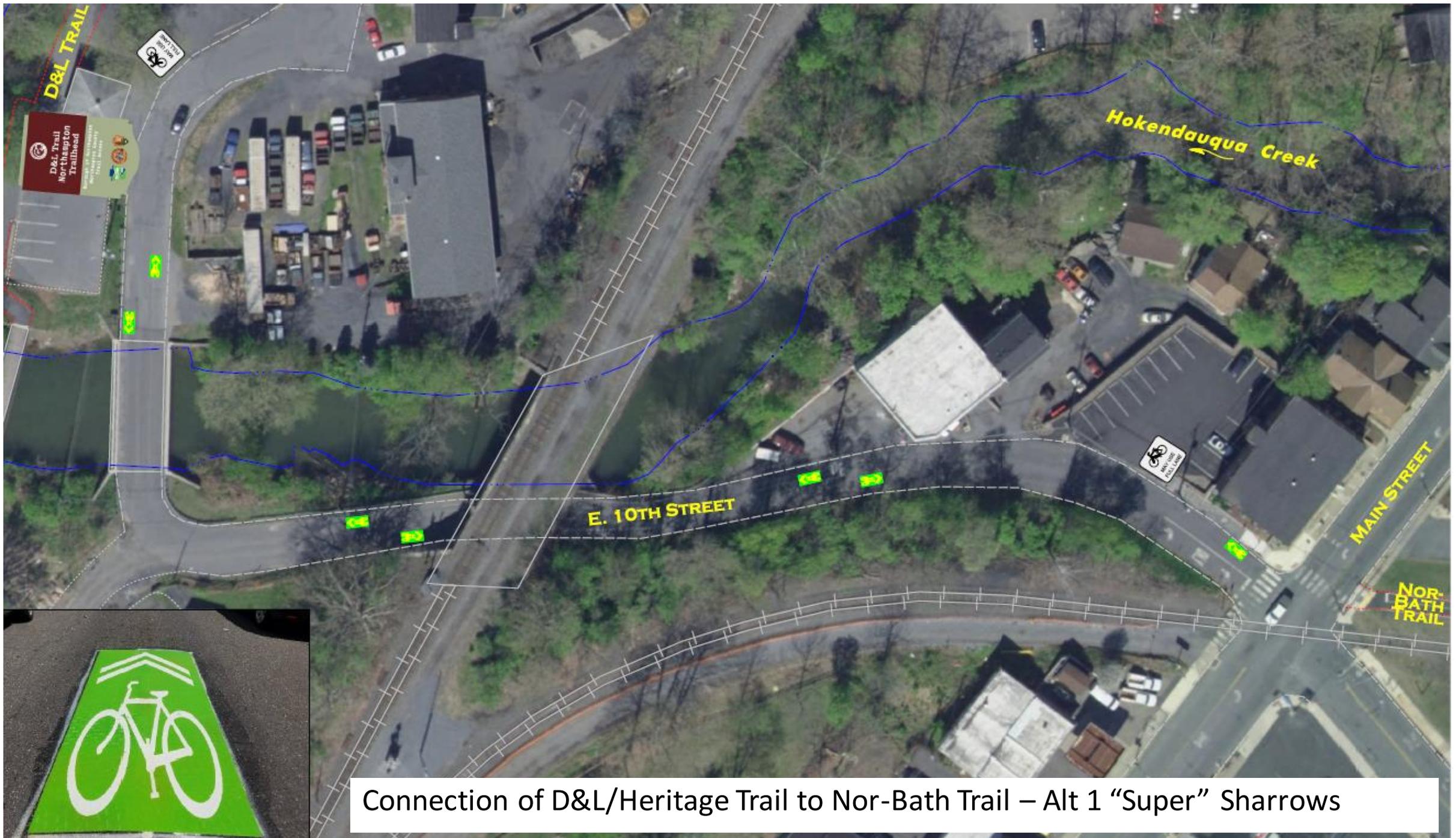


D1-1



D11-1c; D1-3a





Connection of D&L/Heritage Trail to Nor-Bath Trail – Alt 1 “Super” Sharrows



Connection of D&L/Heritage Trail to Nor-Bath Trail – Alt 1 Sharrows

10th Street- Sharrows

28' width ▾ · 3,000 people/hr · [Add location](#)



12'
Sharrows

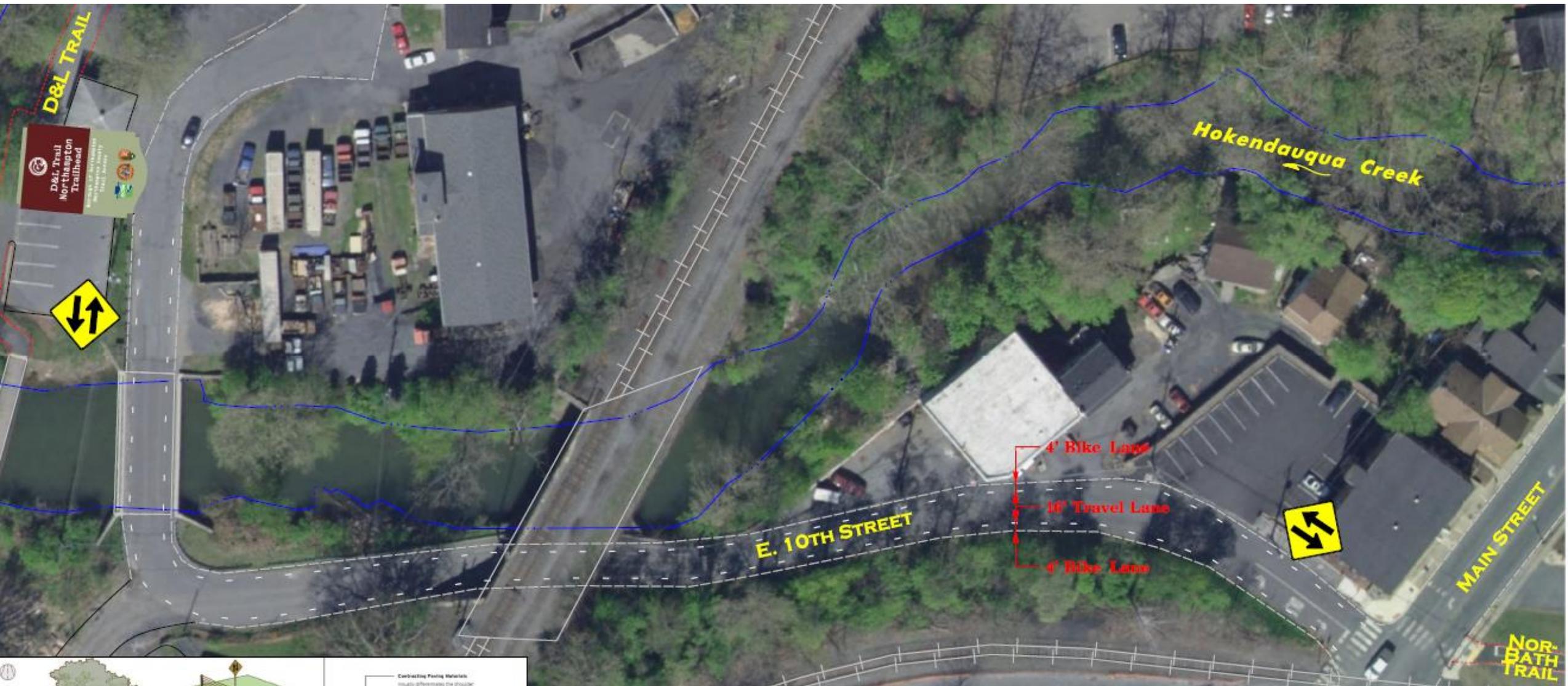
12'
Sharrows

4'
Utility ...

- Shared Lane Markings
(i.e. green backed sharrows)
- Does not accommodate pedestrians



Connection of D&L/Heritage Trail to Nor-Bath Trail – Alt 2 Advisory Shoulders (aka Dashed Bike Lanes)





DECEMBER 2016

Small Town and Rural Multimodal Networks

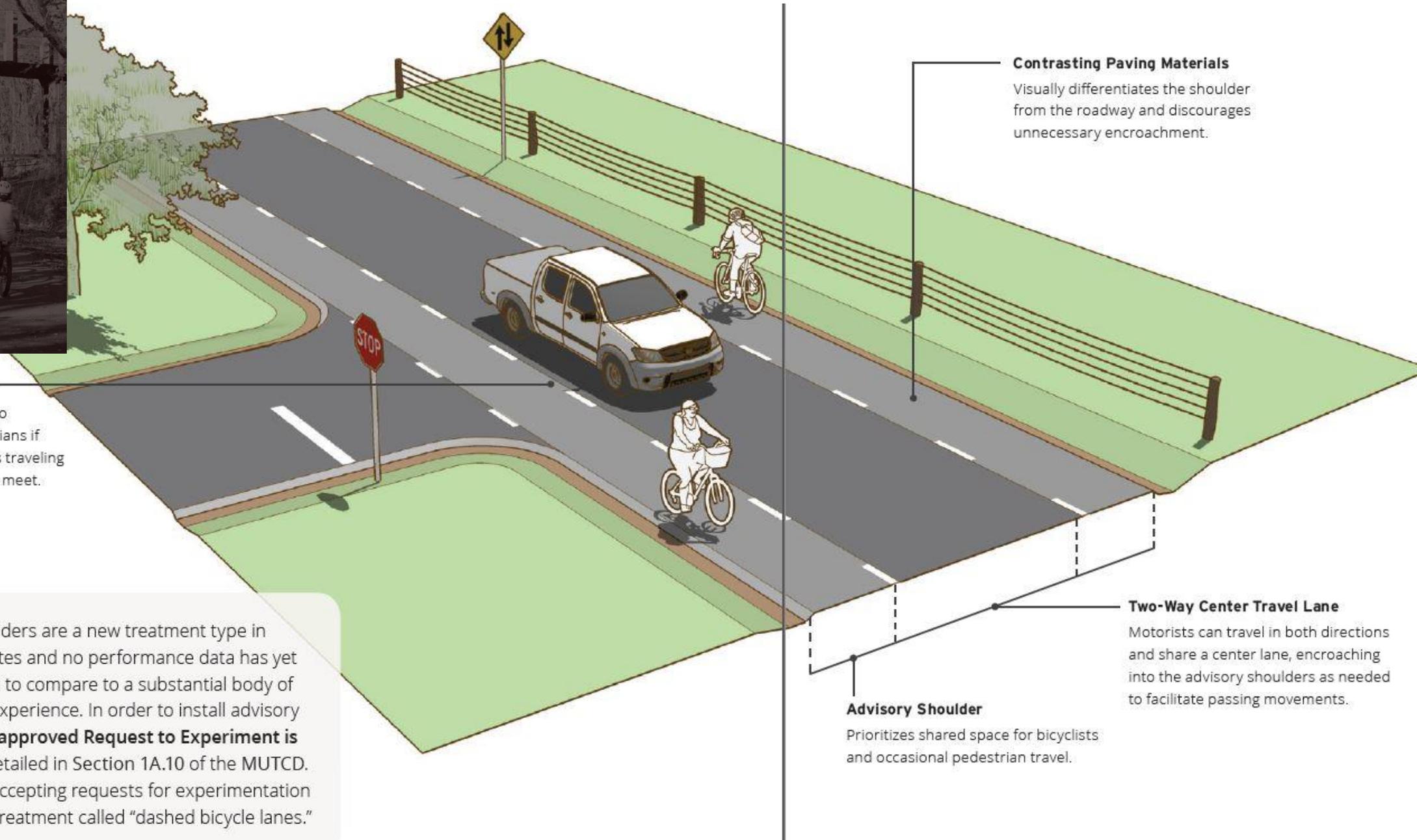
U.S. Department of Transportation
Federal Highway Administration

CHAP

Yield to Bicyclists

Motorists must yield to bicyclists and pedestrians if present when vehicles traveling in opposite directions meet.

Advisory shoulders are a new treatment type in the United States and no performance data has yet been collected to compare to a substantial body of international experience. In order to install advisory shoulders, **an approved Request to Experiment is required** as detailed in Section 1A.10 of the MUTCD. FHWA is also accepting requests for experimentation with a similar treatment called “dashed bicycle lanes.”



Contrasting Paving Materials

Visually differentiates the shoulder from the roadway and discourages unnecessary encroachment.

Two-Way Center Travel Lane

Motorists can travel in both directions and share a center lane, encroaching into the advisory shoulders as needed to facilitate passing movements.

Advisory Shoulder

Prioritizes shared space for bicyclists and occasional pedestrian travel.

An approved Request to Experiment is required to implement Advisory Shoulders, called “dashed bicycle lanes” in the FHWA experimentation process. For more information on the experimentation process, visit <http://mutcd.fhwa.dot.gov/condexper.htm>.

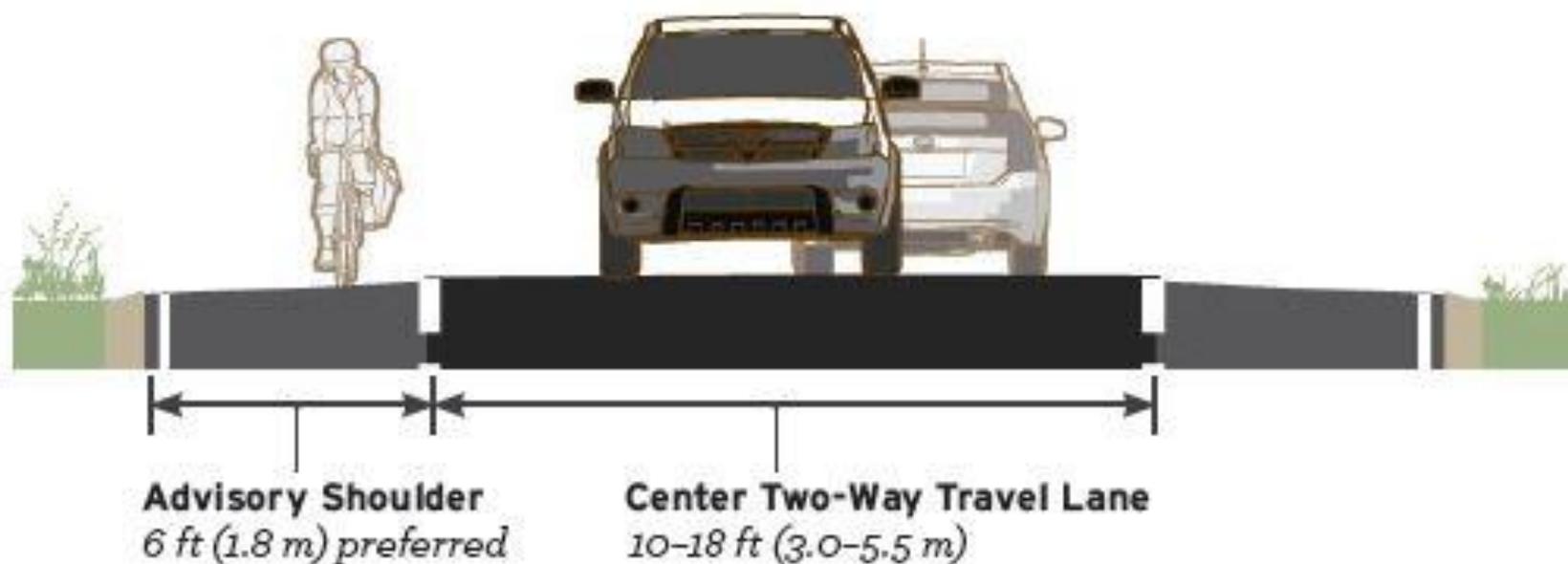


Figure 2-9. Advisory shoulders clarify positioning and yield priority on roads too narrow to provide exclusive travel space. When pedestrians or bicyclists are present, motorists may need to yield to users present in the advisory shoulder before passing.



Figure 2-10. Motorists travel in the center two-way travel lane. When passing a bicyclist, no lane change is necessary.

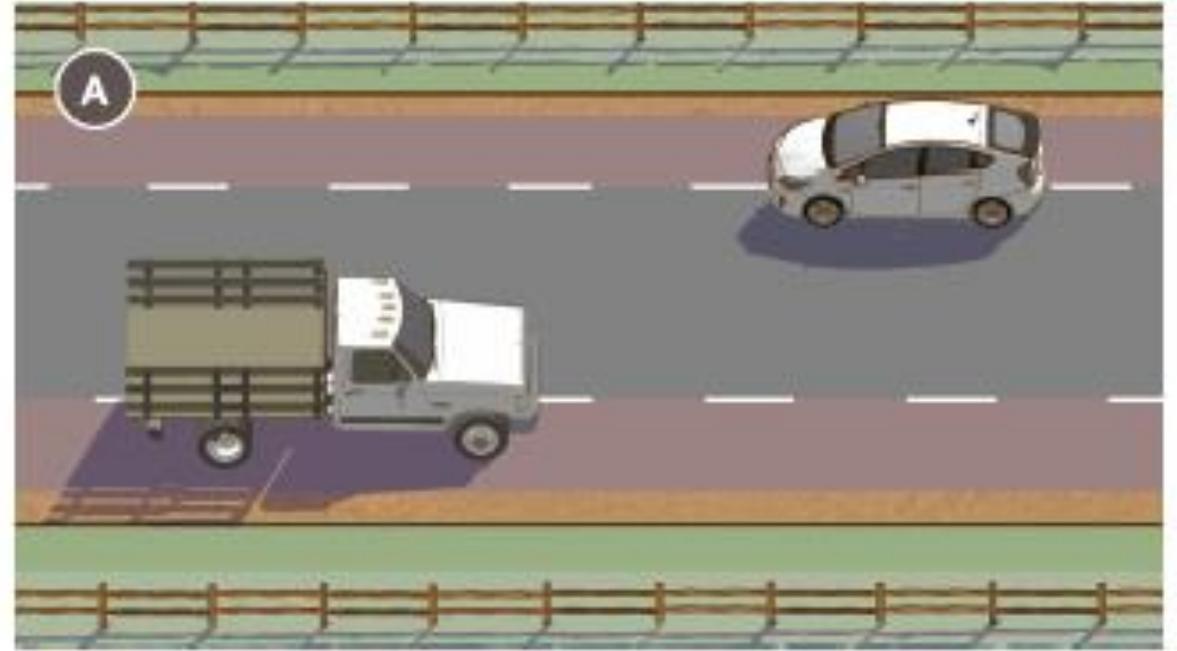


Figure 2-11. When two motor vehicles meet, motorists may need to encroach into the advisory shoulder space.

For 10th Street:

24' area = 4' bike lanes, 16' center two-way lane

22' area at railroad bridge= 4' bike lanes, 14' center two-way lane

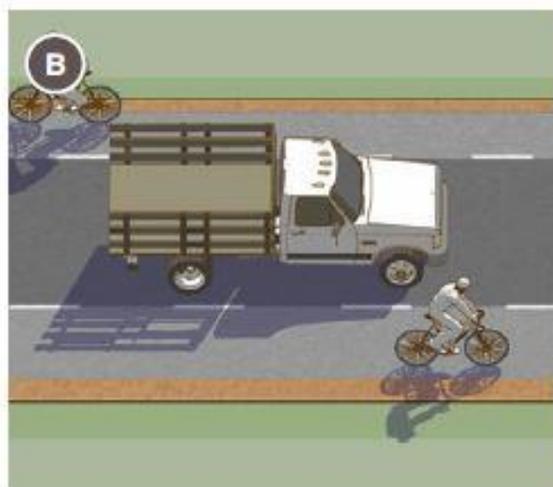
Does not formally accommodate walkers

Table 2-2. Interactions when vehicles traveling in opposite directions meet by two-way center turn lane width.

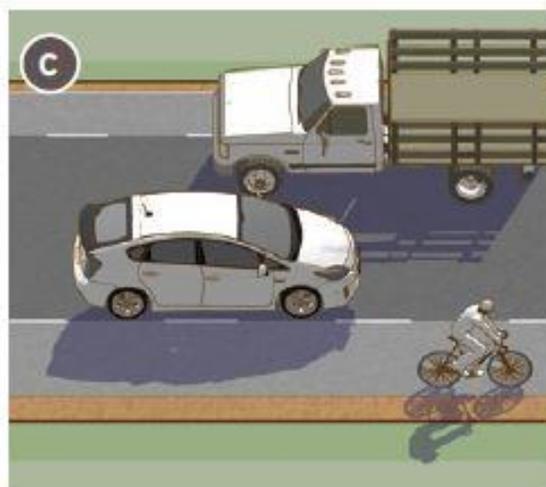
	Two-Way Center Travel Lane Width	Impact on Advisory Shoulder Encroachment When Vehicles Traveling in Opposite Directions Meet
B Practical minimum width	10 ft (3.0 m)	Requires vehicle encroachment into the advisory shoulder space when vehicles traveling in opposite directions meet.
C Preferred minimum width	13.5 ft (4.5 m)	Two passenger cars are physically able to meet each other within the center lane at very low speed. In practice, vehicles will encroach into the advisory shoulder.
Preferred maximum width	16 ft (4.9 m)	Permits two passenger cars to pass within the center lane at modest speeds without encroaching into the advisory shoulder.
D Absolute maximum width	18 ft (5.5 m)	This width is equivalent to two 9 ft (2.7 m) travel lanes and regular encroachment into the advisory shoulder space may not be necessary.

Implementing agencies should be advised that the above dimensional guidance is intended to facilitate implementation on common roadway widths in the U.S. As with most treatments, more overall width is preferable to constrained circumstances.

10 ft (3.0 m) Center Travel Lane



13.5 ft (4.5 m) Center Travel Lane



18 ft (5.5 m) Center Travel Lane

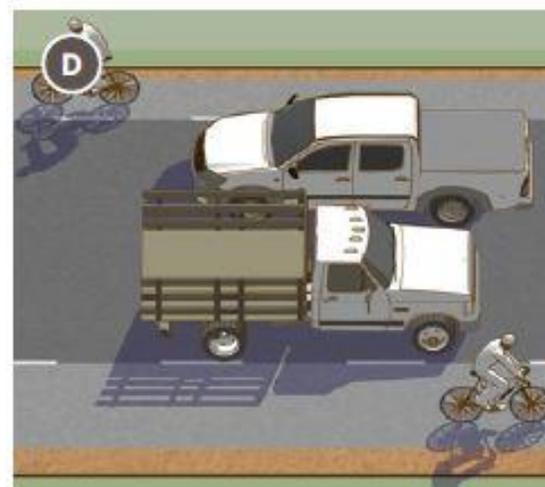
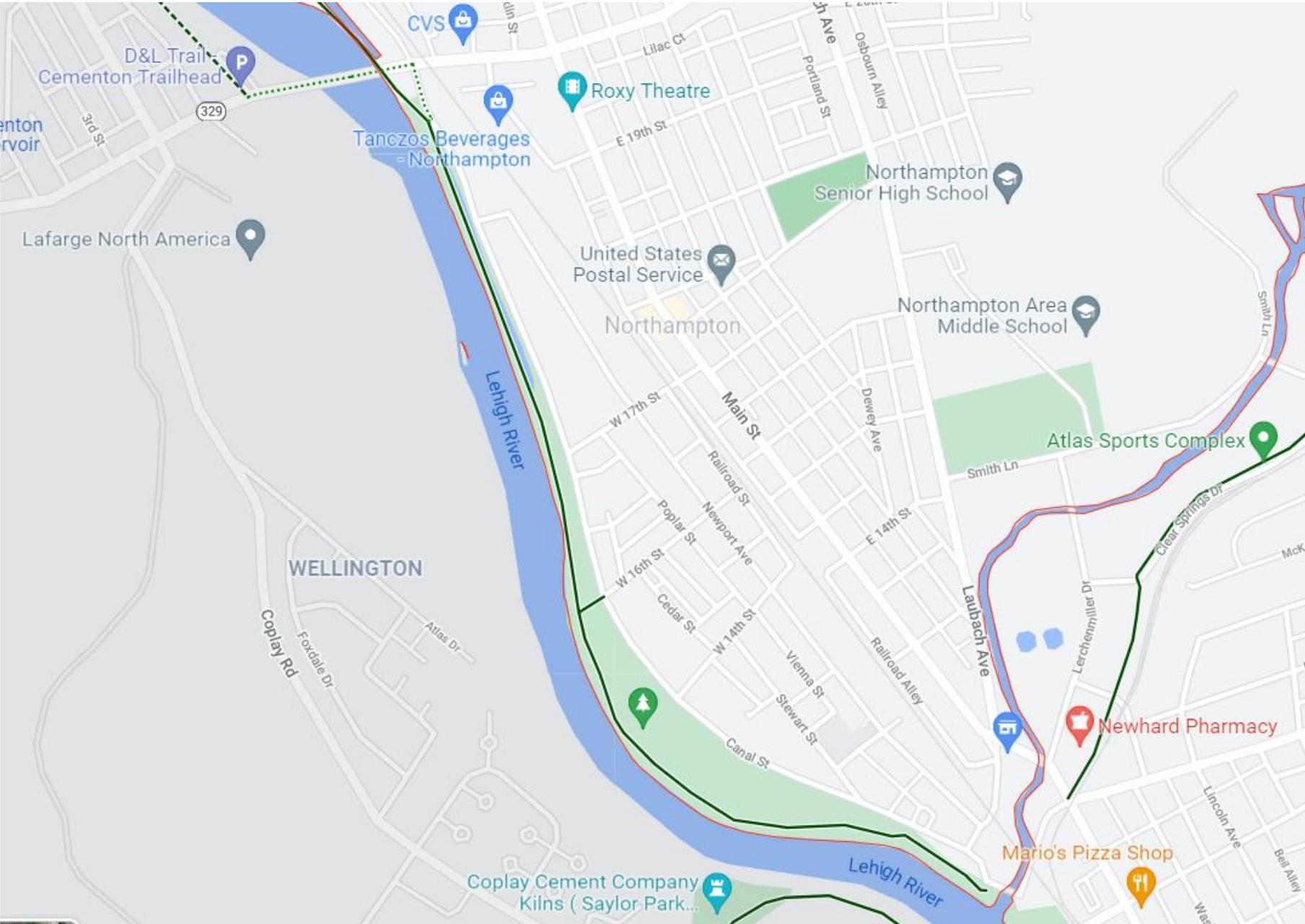
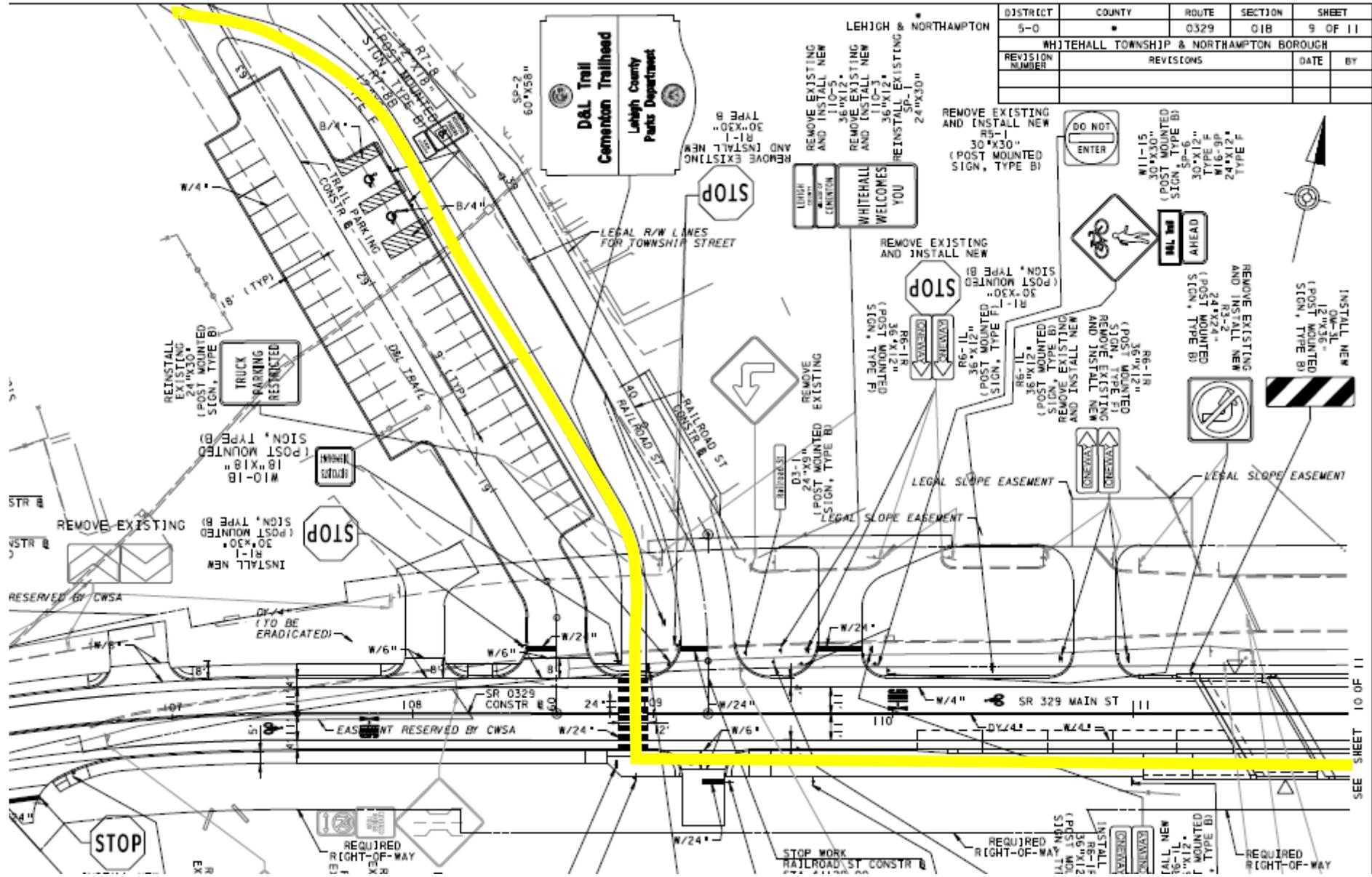


Figure 2-12. Total roadway width affects the number of road users that can meet and pass simultaneously. Wider roadways allow for more simultaneous interactions and can support higher volumes of motor vehicles.

Review the existing Historic Lehigh Heritage Corridor (D & L Trail)

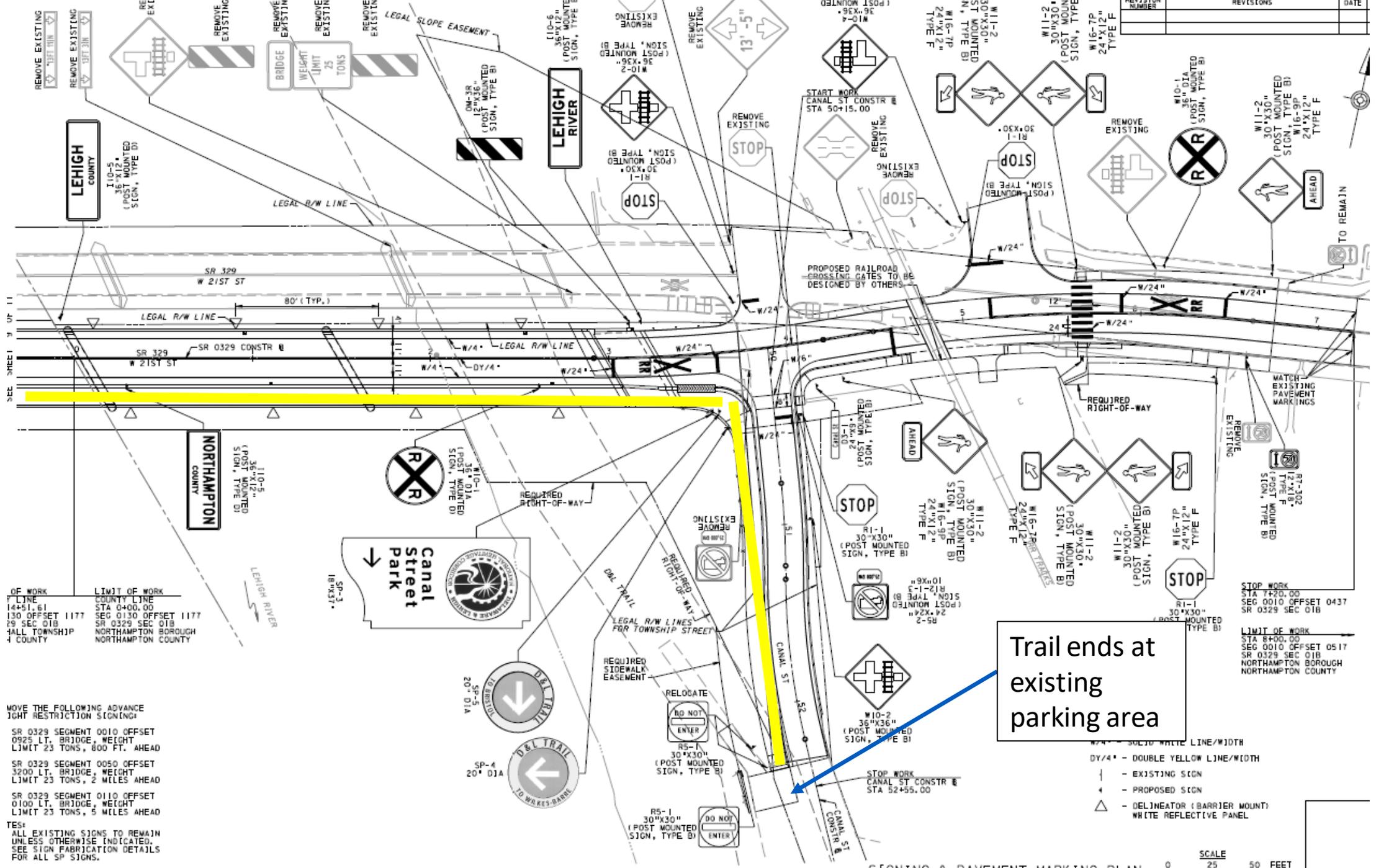


Review the existing Historic Lehigh Heritage Corridor (D & L Trail) – Cementon Bridge Plan



DISTRICT	COUNTY	ROUTE	SECTION	SHEET
5-0		0329	01B	9 OF 11
WHITEHALL TOWNSHIP & NORTHAMPTON BOROUGH				
REVISION NUMBER	REVISIONS	DATE	BY	

SEE SHEET 10 OF 11



OF WORK
LINE
14+51.61
130 OFFSET 1177
29 SEC 01B
HALL TOWNSHIP
4 COUNTY

LIMIT OF WORK
COUNTY LINE
STA 0+00.00
SEG 0130 OFFSET 1177
SR 0329 SEC 01B
NORTHAMPTON BOROUGH
NORTHAMPTON COUNTY

MOVE THE FOLLOWING ADVANCE
RIGHT RESTRICTION SIGNING:

SR 0329 SEGMENT 0010 OFFSET
0925 LT. BRIDGE, WEIGHT
LIMIT 23 TONS, 800 FT. AHEAD

SR 0329 SEGMENT 0050 OFFSET
3200 LT. BRIDGE, WEIGHT
LIMIT 23 TONS, 2 MILES AHEAD

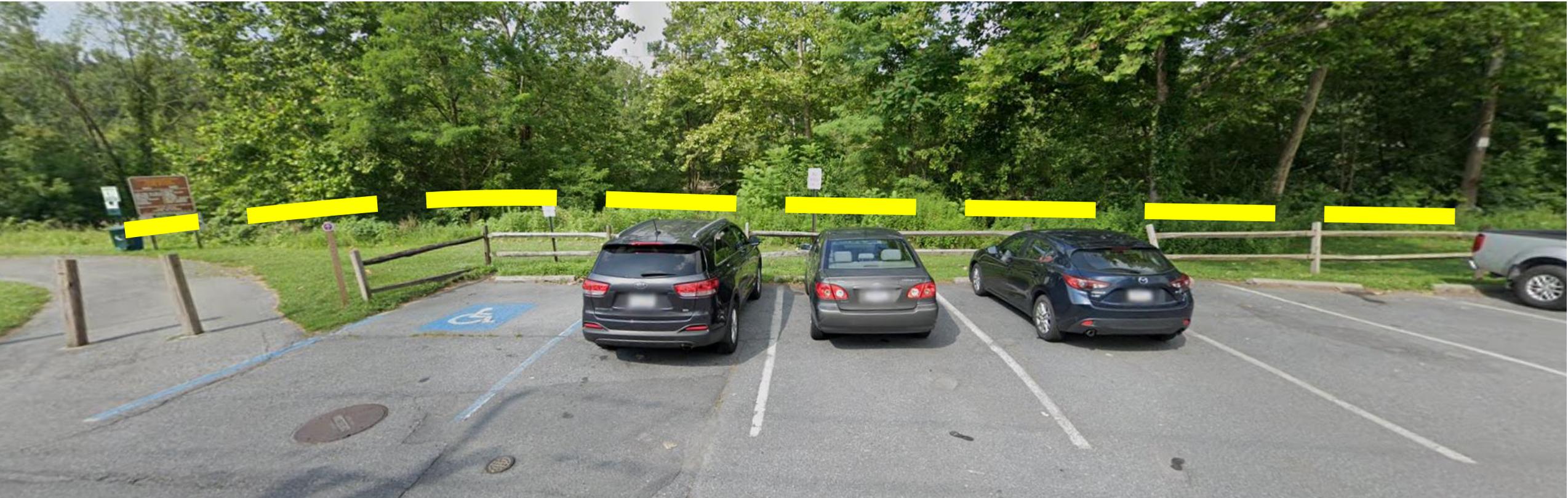
SR 0329 SEGMENT 0110 OFFSET
0100 LT. BRIDGE, WEIGHT
LIMIT 23 TONS, 5 MILES AHEAD

TES:
ALL EXISTING SIGNS TO REMAIN
UNLESS OTHERWISE INDICATED.
SEE SIGN FABRICATION DETAILS
FOR ALL SP SIGNS.

Trail ends at
existing
parking area



Trail ends at existing parking area



Recommend asking PennDOT to build this small trail connection or build it with Borough staff after bridge project is done.

Review the existing Historic Lehigh Heritage Corridor (D & L Trail)

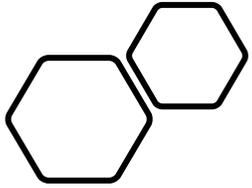


- Beautiful Trail!
- Meets criteria for a shared use path for walking & bicycling
 - 8'-12' width
 - Paved surface (ADA accessible)
 - Moderate grades
 - Lighting
 - Trailhead parking areas
 - Many amenities (small free libraries, benches, pavilions etc.)



Review the existing Historic Lehigh Heritage Corridor (D & L Trail)

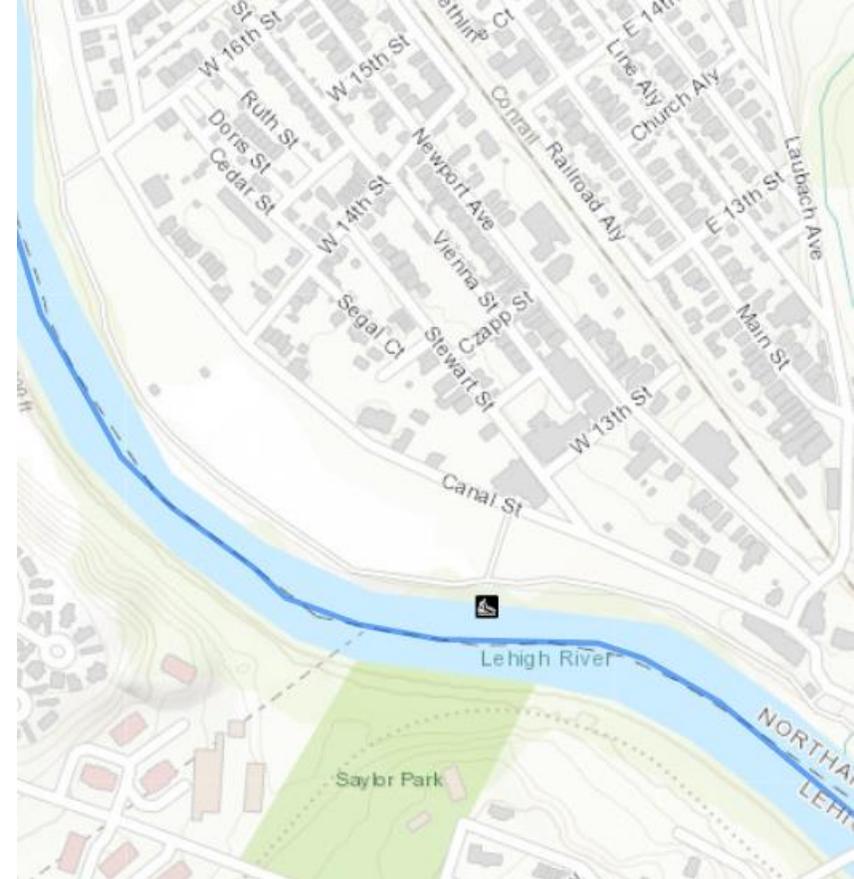
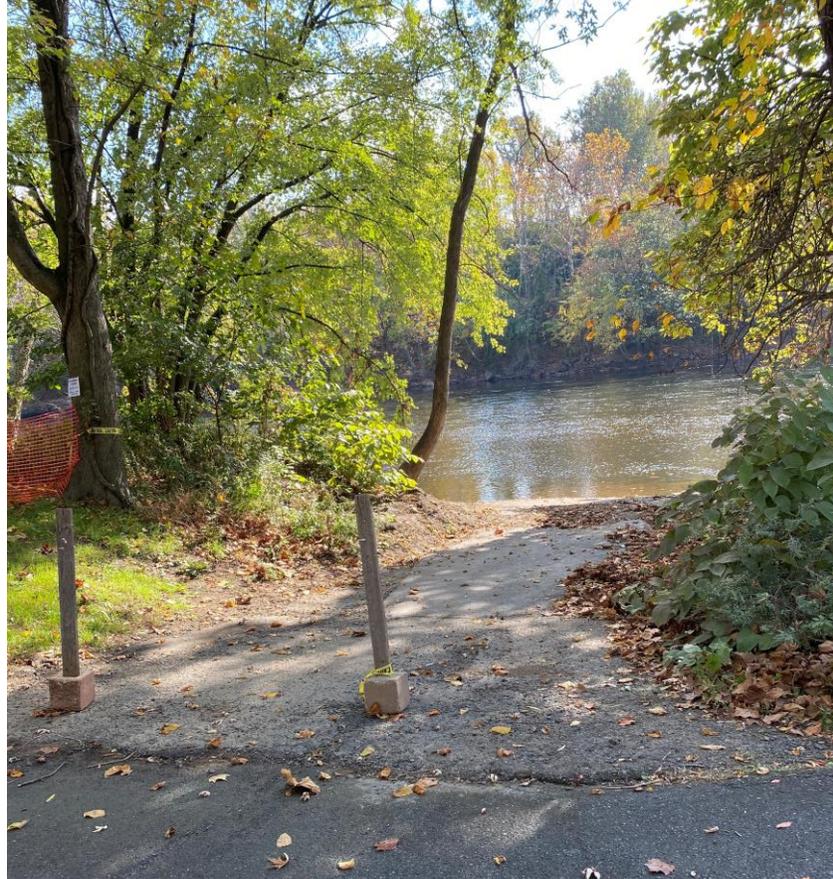
- Areas for Improvement:
 - Inconsistent signage
 - Canal St. Park Walkway (?)
 - Walkway is for walking only (?)
 - Bikes yield to Peds - Shared Sidewalk?
 - Non – standard signs (not MUTCD or D&L)
 - Ground Hornets!



Review the existing Historic Lehigh Heritage Corridor (D & L Trail)

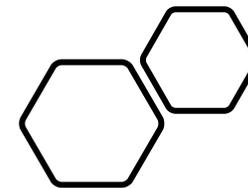
- Recommendations
 - Address objects within 3' of trail
 - Improve signage/connection to Nor-Bath Trail
 - Add signage with maps and QR codes to Borough services
 - Restaurants, bike shop, hotel, stores, attractions, etc.





Review the existing Historic Lehigh Heritage Corridor (D & L Trail)

- Recommendations
 - Enhance Lehigh River Water Trail access (13th st.) for non-motorized boats
 - Formalize access thru parking area and to river
 - Improve signage
 - Marketing / Add to website



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Thank you!

