

May 6, 2010 Nashua-Hudson-Litchfield Bicycle Field Review Report

Updated October 19, 2017

Attended by:

William Fisk, GSW Safety and Education Director, Litchfield resident and accessibility champion

Lee Newcomb, Nashua

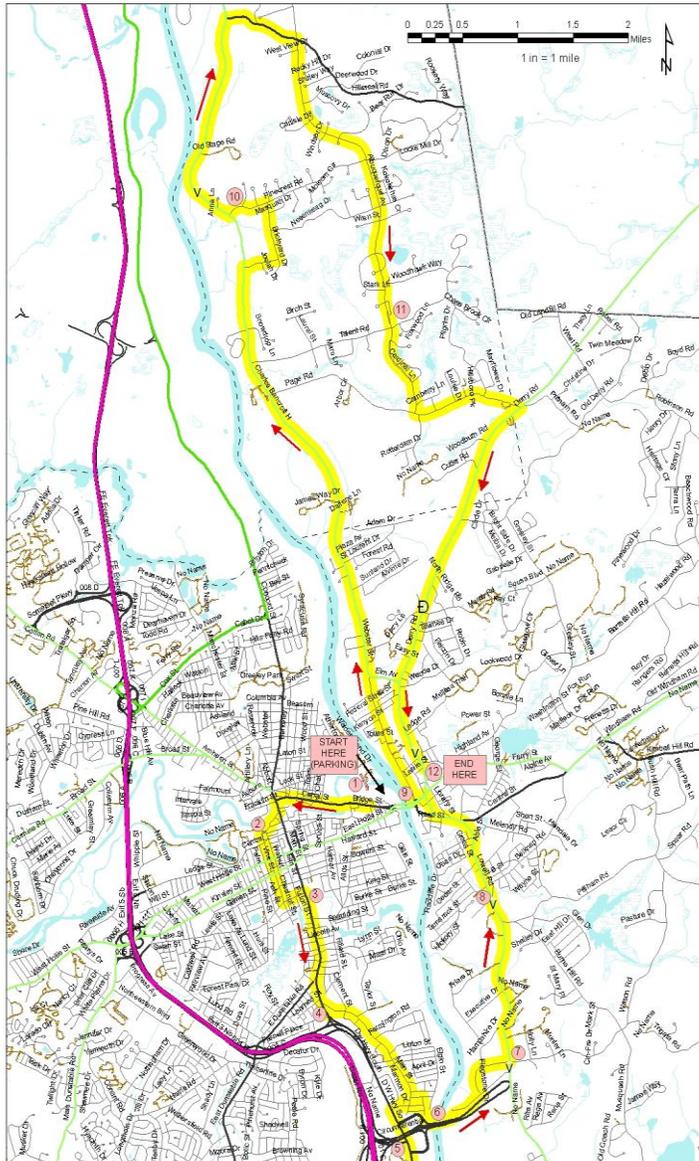
Matt Waitkins, Nashua Regional Planning Commission

Jeanne Walker, City of Nashua

Larry Keniston, New Hampshire Department of Transportation

Submitted by Larry Keniston, NHDOT Pedestrian and Bicycle Coordinator Larry.keniston@dot.nh.gov
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Participants discussed bicycle and pedestrian access and safety at twelve points of interest and concern identified in advance by Bill Fisk and shown in the map at left.



START HERE

1. (Sanders Street), Participants envisioned with Jeanne Walker possibilities for nonmotorized connectivity from the Sanders Street neighborhood across the Nashua River toward the Walden Pond Drive neighborhood.





2. (Cotton Transfer Bridge), Bill Fisk noted that the Cotton Transfer Bridge was yet to connect at the north side of the crossing and therefore the project seemed of little consequence or at least incomplete. Larry explained that Transportation Enhancement projects can sometimes move forward incrementally due to limitations on funding allocations. The Cotton Transfer Bridge in the future will be part of a series of non-motorized corridor connections that will extend the park-like greenway areas already in place in downtown Nashua. In the meantime, the project creates beautiful space with a vision toward a more vibrant, livable and interesting downtown Nashua.



3. At the Main Street/Lake Street intersection, the lane use requires bicycles and motor vehicles to share, depending on their respective destinations, 4 of the North-South approaches and all 5 East-West approach lanes at this intersection. Where exclusive right turn and/or exclusive left turn lanes exist, a lane design layout using either the Shared Lane use markings needed for the respective lanes or using the MUTCD Figure 9C-1 layout could improve bicycle safety and access to the intersection.

Figure 9C-1. Example of Intersection Pavement Markings—Designated Bicycle Lane with Left-Turn Area, Heavy Turn Volumes, Parking, One-Way Traffic, or Divided Highway

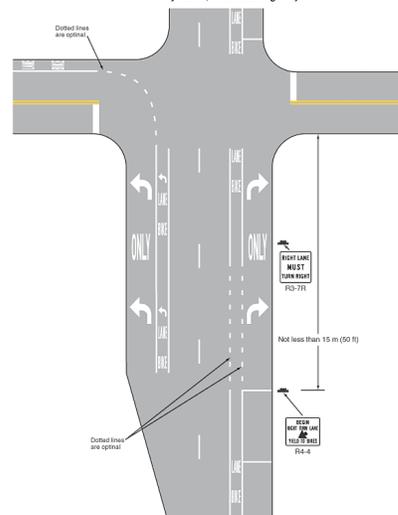
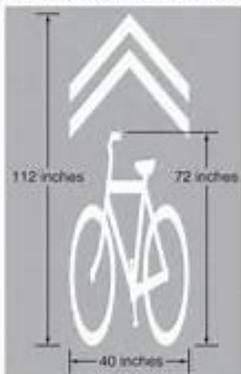
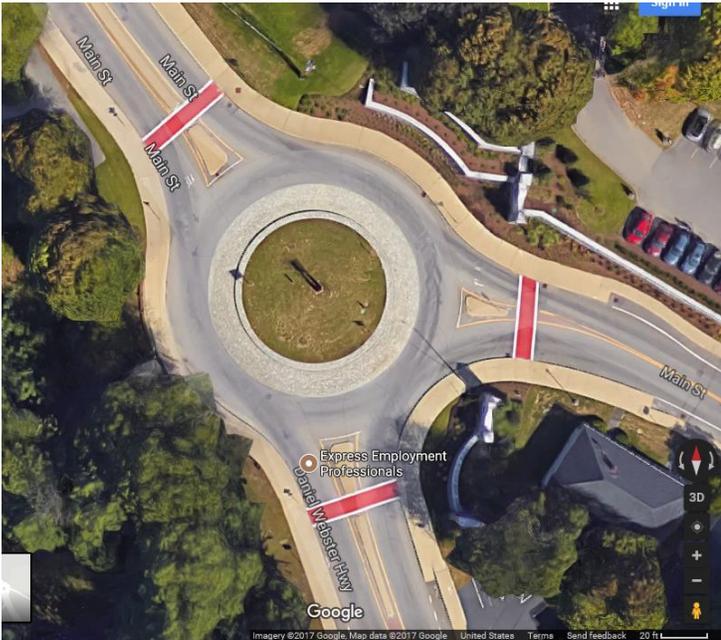


Figure 9C-9. Shared Lane Marking

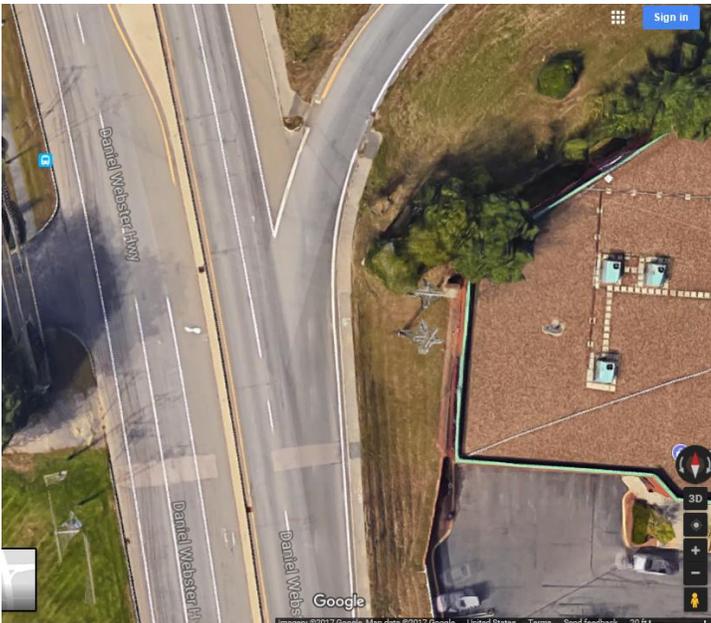




4. Properly designed roundabouts with pedestrian facilities work well to provide safety and access to transit, pedestrians, cyclists and motorists. 4 ([Main Street/DW Highway South roundabout](https://www.nh.gov/dot/org/projectdevelopment/highwaydesign/roundabouts/index.htm)), the group felt that the roundabout works safely and efficiently for motorists, bicyclists and pedestrians. The safety and efficiency of roundabouts in general should improve as New Hampshire motorized and non-motorized travelers get more experience with roundabouts. For more about roundabouts, see the web page at <https://www.nh.gov/dot/org/projectdevelopment/highwaydesign/roundabouts/index.htm>



5. At the Sagamore Multi-Use Path and Bridge, Participants discussed the need for bicycle access to the Sagamore Bridge and roadway. Although there exists a “shared use path” option for cyclists, the inadequacy of paths to provide adequate safety and access for bicycle travel is well documented. Therefore AASHTO and FHWA note that “*Shared use paths should be thought of as a complementary system of off-road transportation routes for bicyclists and others that serves as a necessary extension to the roadway network. Shared use paths should not be used to preclude on-road bicycle facilities, but rather to supplement a system of on-road bike lanes, wide outside lanes, paved shoulders and bike routes.*” See <https://safety.fhwa.dot.gov/saferjourney1/Library/countermeasures/08.htm> .

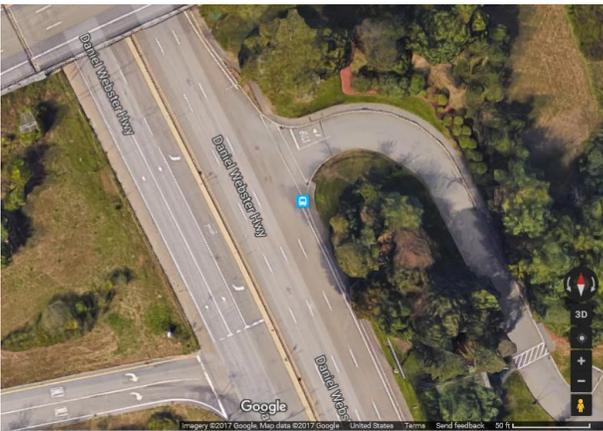


For many persons using bicycles as their transportation vehicle, access between Nashua and Hudson is both more convenient and manifestly safer using the on-road route than using the path route. A Hudson-bound bicycle commuter heading north along the Daniel Webster Highway, for example, may have a destination along Lowell Road in Hudson on the other side of the Merrimack River. Using the path route alternative, this cyclist would immediately encounter challenging conflicts with fast and unpredictable right-turn traffic movements diverging across the cyclist’s path toward the eastbound Sagamore ramp connector road. See the picture at left.

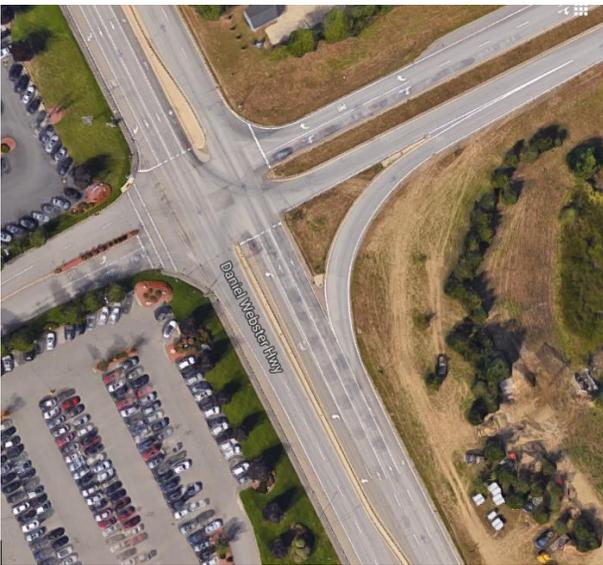
5. (continued) Cyclists using the path route bound for Hudson must then continue north through the Daniel Webster Highway intersection at the Eastbound ramps, shown in the picture at left.



Immediately after the Eastbound access ramps intersection, an exclusive right turn lane opens up Northbound along the Daniel Webster Highway, leaving cyclists with a challenging lane position option for the section of northbound highway approaching the residential development intersection. See picture left.

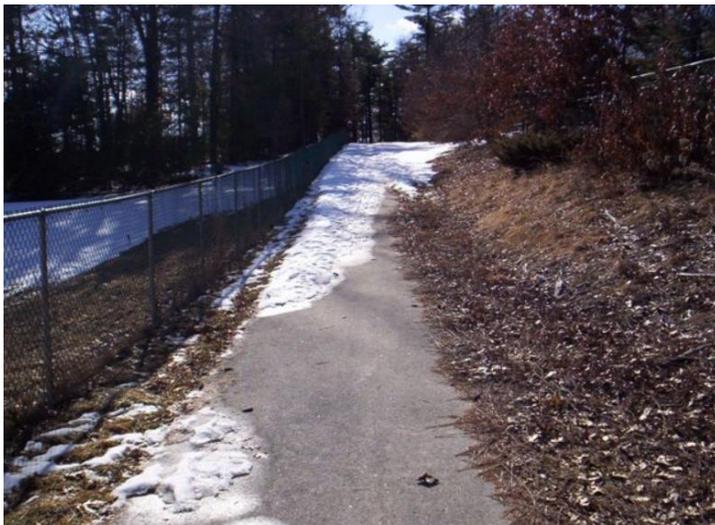


Then cyclists using the path route must drive north past a busy conflict zone that services the Westbound connector ramp access points (see picture on left). This conflict zone includes another challenging exclusive RT lane and slip ramp turn with which cyclists using the path route must contend.



Cyclists using the path route must then navigate an unintuitive route through the Veterans Drive, Beausite Drive and Appleside Drive neighborhood. The street network includes intersection conflict points plus 19 additional driveway conflict points before cyclists actually reach the path itself.





5. (continued) Upon reaching the path itself, the challenges only grow for many bicycle commuters. The path may be icy from November through April since the path is not winter-maintained with plowing, sanding or salting as demonstrated in the picture taken in April shown (on left). AASHTO recognizes that many people have security concerns with secluded paths even during the all-too-scarce long summer days.*



The path route challenges for cyclists using the path continue as cyclists emerge from the path onto Sagamore Park Road where cyclists face conflicts at a commercial highway intersection plus 11 more commercial driveways before reaching a 5-foot wide Lowell Road sidewalk located 400 feet south of the Flagstone Drive/Wason Road/Lowell Road intersection (see picture left). Bicycle operation isn't allowed on sidewalks and the Wason Road intersection is a 90-second walk away so any bicycle commuter from South Nashua is likely to illegally ride on the sidewalk at least to Wason Road, thereby placing in undue danger and fear pedestrians who are legally using the sidewalk that leads to the path back toward Nashua.



Cyclists who choose the path option in order to head north along Lowell Road must still cross Lowell Road in conflict with an exclusive RT lane emerging from Flagstone Drive, where Right-on-Red is permitted (see picture left). Had they used the Sagamore on-road route from South Nashua instead, cyclists bound for points north along Lowell Road would have faced 1 uncontrolled traffic conflict in crossing the exclusive right turn lane at the 35-mph approach to the signalized Lowell Road intersection.



Cyclists who choose the path option in order to head south along Lowell Road must still negotiate their way through the Lowell Road Southbound right turn gore area (see picture left) and face intersection conflicts at the Sagamore Bridge Road intersections with Lowell Road. Had they used the Sagamore on-road route from South Nashua instead, cyclists bound for points south along Lowell Road would face zero uncontrolled traffic conflicts. **

(Explore more from <https://goo.gl/maps/pMorKuheXM72>)

*Note additionally that the relatively non-conflicting type of motor-bicycle operation that the Sagamore Roadway offers provides at least an equivalent level of safety for bicycles as, say, the Nashua [crossing at NH 111](#) 3 miles upstream or the [NH 113 crossing in Tyngsboro](#) 3 miles downstream. When the hazards along the routes to reach these bridges and then return on the other side of the Merrimack

5. (continued)

River from these bridges are taken into account, the Sagamore Roadway clearly provides the safer 365/24/7 route alternative across the Merrimack River for virtually all commuters using bicycles.



** For full disclosure, cyclists traveling from points south along Lowell Road face a challenge at rush hour in making their way across the westbound on ramp from the northbound side of Lowell Road. Please explore the map at <https://goo.gl/maps/ss4S9AXs3Cy>. However, these challenges are no different from the challenges that cyclists routinely face elsewhere. Consider navigating EB Loudon Road in Concord where I-393 terminates (see the Google Street View at <https://goo.gl/maps/oRjJ2787Vms>) or westbound Hoit Road at the I93 Exit 17 off ramp in Concord where the off ramp merges onto its own exclusive lane (see the Google Street View at <https://goo.gl/maps/Q3iY8ai8gVw>) for examples.



6. Path Alternative at the “Sagamore Park Road” Junction. Additionally note that the sum of the turning movements required to enter the path alternative, by itself, at the “Sagamore Park Road” junction with Lowell Road is considerably more perplexing than any challenge facing cyclists at the Sagamore Roadway westbound ramp merge. Notice the westbound path entrance from the cyclists’-eye view, highlighted by the arrow at the left of the picture at left. If northbound Lowell Road cyclists can navigate to the path entrance, they would be exposed to several additional and unnecessary hazards along the circuitous route just to reach the path entrance. Explore more from <https://goo.gl/maps/uZVUn7TaGDN2>.



7. While the bicycle use of the existing shared use path is not the safest or most convenient route for many cyclists to cross the Merrimack River, participants expressed appreciation for the value of the path potential for seasonal and, generally daytime, recreation use and the path’s potential for 24/7/365 access for pedestrians. As the AASHTO Guide for the Development of Bicycle Facilities states, “Shared use paths” ... “can provide an enjoyable recreational opportunity” but shared use paths can not serve as a substitute for on-road bicycle accommodation that provides universal access to meaningful destinations.



8. Traveling North along Lowell Road, shoulder/sidewalk/curbing construction near Birch Street. (See picture, left), Mr. Fisk noted that the extended curb may calm traffic and protect pedestrians but the bump-out creates an unexpected conflict for motorists that the picture makes self-evident. Cyclists approaching the bump-out will, in accordance with [NH RSA 265:144 XI](#), require use the full travel lane in order to continue north safely past the bump-out. Northbound NH 3A motorists also are more likely to encounter conflicts with wheelchair users navigating their way along the highway in accordance with [NH RSA 265:39](#).



9. In the NH 111/Webster Street/Central Street/Campbell Avenue/Merrimack River crossing neighborhood, Mr. Fisk explained the need for improved pedestrian and bicycle access in the NH 111/Webster Street/Central Street/Campbell Avenue area. Mr. Fisk noted that he observes high pedestrian demand to cross NH 111 at this location and he feels that a NH 111 crossing opportunity should be provided. Even as Mr. Fisk was speaking, participants observed a cyclist heading from Nashua to Hudson contra-flow along the sidewalk to NH 111 contrary to both NH RSA 265:16 and [NH RSA 265:26-a](#) (see picture shown on left).



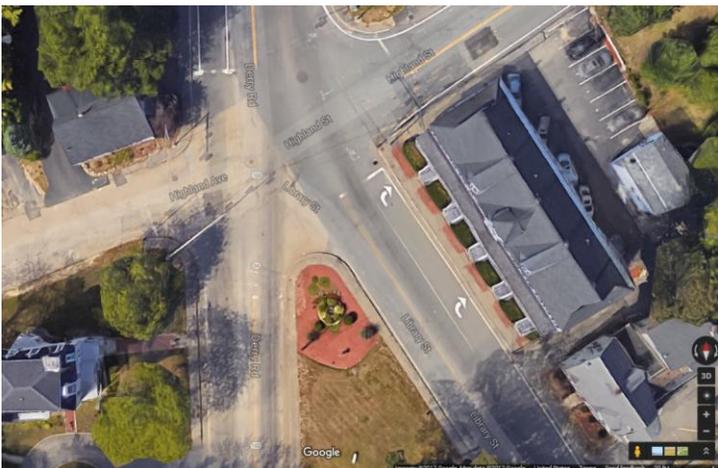
Mr. Fisk frequently observes illegal pedestrian and cyclist migration at this location. Mr. Fisk felt that dangerous and illegal cyclist activity in the NH 111/Webster Street/Central Street/Campbell Avenue area may also result from a perceived need of some cyclists to avoid traveling across the narrow eastbound and westbound narrow two-lane NH 111 bridges over the Merrimack River, just west of Webster Street. Motor vehicles travel at high speeds across the NH 111 bridge. By [NH RSA 265:26-a](#) With the current pavement space allocation, a cyclist must claim one of the two lanes in order to secure the minimum AASHTO 4 feet of operating space plus the minimum 3 feet of distance that cars must leave for cyclists by [RSA 265:143-a](#).



10. At Pinecrest Road, the street/shoulder/sidewalk space allocation does not allow an eastbound motor vehicle and bicycle to simultaneously pass safely and legally.



11. At the Bicycle - Pedestrian Path memorial to Roland Bergeron along Albuquerque Avenue, participants used the Path – “a recreational path designed for the enjoyment of all.” The Bergeron path serves children, pedestrians, leisurely cyclists and pets on leashes. Beyond a fundamental right to use the Albuquerque Avenue travel lanes, cyclists who want to make efficient transportation progress along Albuquerque Road have a duty to use Albuquerque Road. Because of the recreational activities attracted by the path, bicycle commuters looking for travel progress often must use the Albuquerque Road travel lanes since the shoulders provide inadequate space. Motorists have a legal obligation to use due care toward all cyclists who make the choice to travel on the road. Motorists must obey the 3-foot rule and delaying passes until it is safe to pass.



12. There is not adequate room marked at the Eastbound Derry Road approach to the intersection with Library Street to accommodate separate operation of safe and legal motor and bicycle travel under some conditions. The centerline is placed on the approach such that the Derry Road westbound departure pavement width is approximately 25 feet wide while the eastbound paved surface approach width is less than the 14 feet that AASHTO recommends for separate motor vehicle and bicycle operation. Mr. Fisk suggested that with little path deflection and with the wide receiving lane, traffic moves westerly through the intersection along Derry Road at a higher than necessary rate of speed.
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