



DATE: June 28, 2019

TO: Plan for Ashuelot Rail Trail Project Advisory Committee

FROM: SWRPC Staff

RE: Existing Conditions Assessment – Bicycle/Pedestrian Collisions

Background and Data Sources

Rail trails tend to be safer than roads because trail users have limited exposure to vehicle traffic, however, most rail trails still tend to have at-grade crossings with roads. The Ashuelot Rail Trail includes 30 road crossings including intersections with higher traffic volumes routes at NH Route 10, NH Route 119, and NH Route 63. As part of the Plan for the Ashuelot Rail Trail Project, SWRPC staff compiled and mapped vehicle collisions related to the rail trail, with a focus on collisions between vehicles and people walking or biking using data obtained through the New Hampshire Department of Transportation (NHDOT) Bureau of Planning and Community Development, including the years 2002 through 2017. Sixteen years of data were analyzed due to the relative sparsity of crashes attributed to the study area. No data on crashes was available along the rail trail itself in part because crash records are based on recordings of collisions involving a motor vehicle, which are not permitted on the trail. In addition, the trail itself is not patrolled and reported on by local or State police, as is the case with public highways, but rather by New Hampshire Fish & Game.

Inventory of Trail/Road Intersections

The thirty trail crossings with a road (either public or private) are shown in Table 1, Figure 1. A variety of attributes were collected to assist with future strategic or capital improvement planning including information about each road’s ownership status and whether it is a federal aid eligible road. Intersections selected for analysis included any segment of road with the potential for public or private through traffic. Sections of road that lead up to the trail but did not cross the trail were excluded from the inventory and analysis (such as Depot Street in Winchester).

Table 1 - List of Ashuelot Rail Trail Intersections

#	Label	Municipality	FHWA Functional Classification	NHDOT Tier	Ownership	Highway Eligible for Federal Aid?
1	Emerald Street	Keene	Local	5	Local	No
2	Winchester Street	Keene	Minor Arterial	5	Local	Yes
3	NH Route 101	Keene	Principal Arterial - Other	2	State	Yes
4	Unnamed Road	Keene	No Functional System	0	Private	No

#	Label	Municipality	FHWA Functional Classification	NHDOT Tier	Ownership	Highway Eligible for Federal Aid?
5	Matthews Road (first crossing heading south)	Swanzy	Local	5	Local	No
6	Matthews Road (second crossing heading south)	Swanzy	Local	5	Local	No
7	Matthews Road (third crossing heading south)	Swanzy	Local	5	Local	No
8	Sawyers Crossing Road	Swanzy	Local	4	State	No
9	Eaton Road	Swanzy	Local	5	Local	No
10	Christian Hill Road	Swanzy	Local	5	Local	No
11	Homestead Avenue (first crossing heading south)	Swanzy	Local	5	Local	No
12	Homestead Avenue (first crossing heading south)	Swanzy	Minor Collector	4	State	No
13	Unnamed Road	Swanzy	No Functional System	0	Private	No
14	Unnamed Road	Swanzy	No Functional System	0	Private	No
15	Keene Road (NH 10)	Winchester	Minor Arterial	2	State	Yes
16	Coombs Bridge Road	Winchester	Local	5	Local	No
17	Monadnock Speedway	Winchester	No Functional System	0	Private	No
18	Old Westport Road (first crossing heading south)	Winchester	Local	5	Local	No
19	Old Spofford Road	Winchester	Local	5	Local	No
20	Old Westport Road (second crossing heading south)	Winchester	Local	5	Local	No
21	Bridge Street	Winchester	Local	5	Local	No
22	Elm Street	Winchester	Local	5	Local	No
23	Ashuelot Street	Winchester	Local	5	Local	No
24	Hinsdale Road (NH 119)	Winchester	Major Collector	3	State	Yes
25	Unnamed Road	Winchester	No Functional System	0	Private	No
26	Back Ashuelot Road (first crossing heading south)	Winchester	Local	5	Local	No
27	Back Ashuelot Road (second crossing heading south)	Winchester	Local	5	Local	No
28	Back Ashuelot Road (third crossing heading south)	Winchester	Local	5	Local	No
29	Depot Street	Hinsdale	Local	5	Local	No
30	Tower Hill Road	Hinsdale	Local	5	Local	No

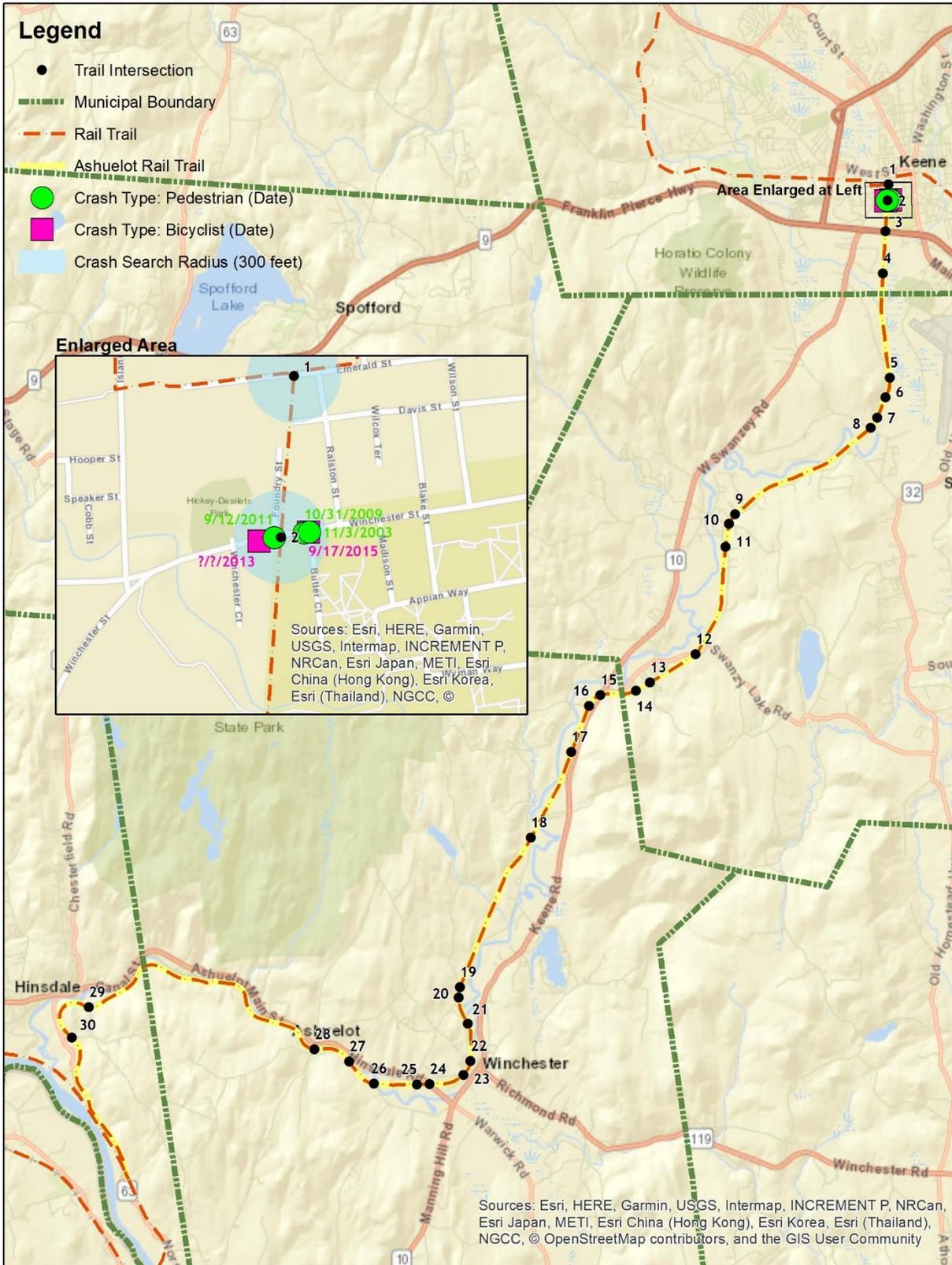
The following maps depict the locations of intersections relative to the rail trail, the location of motor vehicle crashes in the vicinity of intersections with the trail (defined as 300 feet from the geometric center of the intersection), and the total number of motor vehicle crashes reported for the period 2002 through 2017.

Figure 1 - Overview Map of Ashuelot Rail Trail Intersection Locations



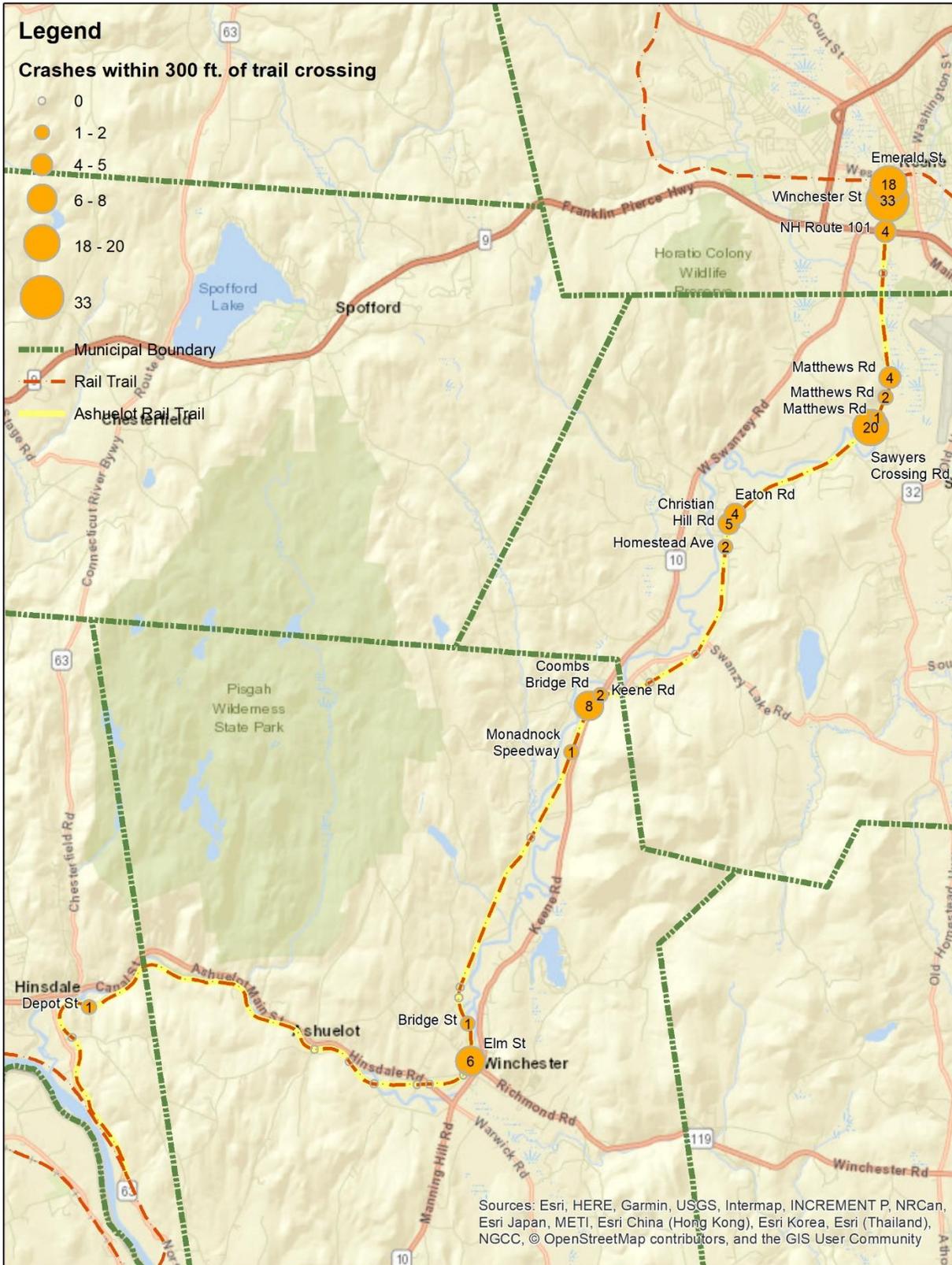
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Figure 2 - Map of Crashes Involving Someone Walking or Biking in the Vicinity of Ashuelot Rail Trail/Road Intersections



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Figure 3 - Map of Total Crashes in the Vicinity of Ashuelot Rail Trail/Road Intersections



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Findings

- For the period 2002 through 2017, the Keene intersection of the Ashuelot Rail Trail with Winchester Street was the only intersection with a history of crashes involving people biking and walking (within 300 ft.). More work may be needed to understand these five incidents, some of which may be associated with nearby Butler Court. It should also be noted that some or all of these incidents precede the installation of a rectangular rapid flashing beacon (RRFB) system dedicated to the Ashuelot Rail Trail crossing at Winchester Street.
- There are a number of areas that have a history of crashes in the vicinity of rail trail crossings. Although most of these do not involve bicycle and pedestrian crashes, the crashes provide context about the relative safety of each crossing area, which serves as useful context for each crossing area and could be used as a way to prioritize safety assessments of crossings in the future.

Recommendations

- Determine if crash trends at the Winchester Street crossing in Keene are related to a crossing design flaw, related to higher incidence of walkers and bicyclists and/or other factors.
- Perform field assessments of the crossings to determine if there are any site distance or other design issues exacerbating safety risks. During investigations consider some of the guidance used for road safety audits (ie. consider different times of day, different seasons, different user groups).
- Work to better understand the type, severity and remedies for collisions and other user conflicts not being captured by motor vehicle crash reports through consultation with New Hampshire Fish and Game, local police departments and others.
- Compile best practices related to potential safety countermeasures appropriate to State, local and private road intersections with rail trails.
- Identify ways to inform drivers and trail users of trail intersections and appropriate actions to cross these areas in a safe and comfortable manner.
- While collision information is helpful, determine if there is other safety related data associated with trail use, such as emergency response data.
- Consider investigating opportunities for the trail as a recommended detour to biking and walking within or alongside a public road as a way to reduce vehicle conflicts and their associated injuries.