



Road Safety Assessment Hooper Road

BEATRICE LANE TO PRUYNE STREET

BINGHAMTON METROPOLITAN TRANSPORTATION STUDY

OVERVIEW

Road Safety Assessments (RSA) are a generally accepted proactive, low-cost tool to identify safety issues of transportation facilities. The Federal Highway Administration (FHWA) encourages states and local municipalities to use RSA's. A Safety Assessment is simply a formal performance examination of an existing or planned transportation facility by an independent, qualified multidisciplinary team. An assessment team considers the safety of all users, qualitatively estimates and reports on safety issues, and suggests opportunities for safety improvements.

Conducting RSA's on roadways with a higher than usual crash history is included in the Binghamton Metropolitan Transportation Study (BMTS) 2020-2021 Unified Planning Work Plan. BMTS conduct a corridor study of Hooper Road in 2020. One of the recommendations of that study was to conduct an RSA of the segment of Hooper Road between Beatrice Lane to Pruyne Street given the frequency of crashes.

ROAD SAFETY ASSESSMENT PROCESS

A field assessment was conducted by BMTS staff the Fall of 2020. A follow up meeting was held on April 30, 2021 with representatives from Broome County and the town of Union. The resulting report was prepared by BMTS staff and circulated before being finalized.

BACKGROUND

In 2020, BMTS conducted a Traffic Safety and Operations Study of Hooper Road. The Study recommended that a more specific RSA be conducted along this section of the corridor. This recommendation was made in response to the following issues:

1. A significant number of crashes have occurred along this section of Hooper Road.
2. It experiences frequent congestion during peak hours.
3. It serves as a primary connector between 17C, the surrounding neighborhoods and Maine Endwell schools.

A crash analysis, for a three-year period between January 2017 through December 2019, was conducted. The data indicates there were 42 total intersection crashes. Pruyne Street, Smith Drive and Country Club Road experienced intersection collision rates that exceed typical statewide averages for similar facilities (see Map 1). Many of the accidents were rear end collisions which are typically attributed to traffic congestion. In addition, there were 15 additional crashes along the segment not attributed to an intersection. These crashes primarily involved vehicles entering and existing Hooper Road from commercial parking lots. Please see appendix A for the complete crash analysis.

MAP 1: DISTRIBUTION OF INSECTION CRASHES*



*Illustrates location of 42 intersection crashes from Jan. 2017 – Dec. 2019; does not include 15 additional crashes not attributed to an intersection. See appendix A for complete crash analysis.

ASSESSMENT FINDINGS AND SUGGESTIONS FOR IMPROVEMENTS

CORRIDOR WIDE

OBSERVATIONS

Lack of Sufficient Access Management: There are many commercial driveways along the corridor that do not conform to access management best practices or the town of Union zoning code requirements. Unregulated street access creates conflicts between turning vehicles, through traffic, pedestrians and cyclists. These conflicts result in accidents and traffic delays. Managing access by defining the location, number, spacing and design of access points from private properties to streets can reduce these conflicts.

Areas of particular concern include, but are not limited, to the following:

- 516-522 Hooper Road. These three commercial sites have approximately 330 feet of frontage on Hooper Road, with approximately 186 feet of that frontage being open to vehicular access. In fact, the entire length of 516 Hooper is open to the street with parking spaces situated so that vehicles are

potentially backing over the sidewalk and into oncoming traffic. These sites appear to informally share access.

- Hooper Road Plaza southern driveway, and Rite Aid northern driveway. These driveways are very close together and the parking lots they serve are only separated by a metal highway barrier.
- 520 and 532 Hooper Road. There are abandoned curb cuts in front of the buildings at these locations.
- 526-534 Hooper Road. There are 6 driveways (including the above-mentioned abandoned driveway) between these sites. At 526 Hooper Road (currently Best Bagels) the exit driveway comes out immediately across from Smith Drive. Although there is currently a signal at Smith and Hooper, there is not a signal head facing this exit driveway which creates traffic conflicts. Opportunities exist to share access between these businesses and to remove curb cuts as a result. It appears that access may already be shared (at least informally) between 532 and 534 Hooper.

Risk Analysis: Traffic and pedestrian safety impacts and congestion due to the volume and location of access points

516-522 Hooper Road access



526-532 Hooper Road Access

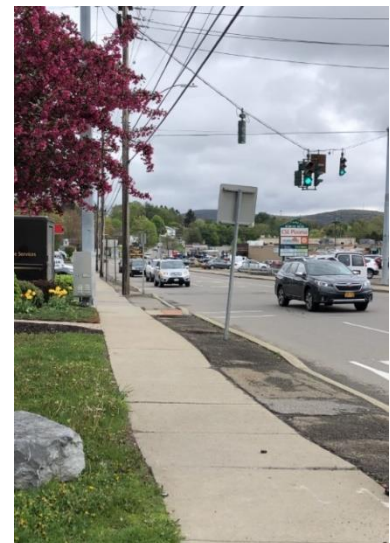


Incomplete Pedestrian Accommodations: The traffic signals at Smith Drive and Pruyn Street do not include adequate pedestrian accommodations. Most of the curb ramps and painted crosswalks are not compliant with ADA standards.

There is no sidewalk on the west side of Hooper Road between Country Club and Beatrice Lane (along 418 Hooper Road), although there is a path which indicates that people do walk there. The remainder of the corridor has concrete sidewalks that are generally in good repair. However, there are opportunities to either widen the sidewalks or create landscape buffers where utility strips have been paved with asphalt.

Risk Analysis: Pedestrian safety

Sidewalk and Curb Ramps - various conditions



Confusing Vehicular Lane Changes: The mainline of the corridor is striped for two-way traffic with a center turn lane. However, at signalized intersections the center turn lane is removed in favor of right or left turn lanes. Specifically, at Country Club and Smith the center turn lane becomes a left turn lane and at Pruyne the center turn lane becomes a straight through lane while the north bound lane becomes a right turn lane. The proximity of the Smith and Pruyne intersections requires vehicles to quickly adjust to the changing lane configurations to stay in the correct lane. The crash analysis diagrams (see appendix A) suggests crashes may have occurred because of shifting lane configurations.

Risk Analysis: Traffic safety impacts and congestion.

SUGGESTIONS

- **Implement Access Management techniques.** Managing access by defining the location, number, spacing and design of access points from private properties to streets can reduce conflicts between turning vehicles, through traffic, pedestrians and cyclists. Remove abandoned curb cuts.
- **Bring driveways and parking areas into compliance with Section 300 51.6 of the town of Union zoning code.** At a minimum, driveways should be brought into compliance with the Town's zoning code, as well as parking areas to the extent practicable.
- **ADA compliance.** Bring all curb ramps, crosswalks and pedestrian signals into ADA compliance.
- **Sidewalk improvements.** Install a concrete sidewalk along the west side of Hooper Road between Country Club and Beatrice Lane. Widen concrete sidewalks or install landscape buffers in utility strips that have been paved with asphalt.
- **Install overhead lane configuration signs at all intersections.** These signs would be attached to the same wires as the traffic lights. An analysis of the load capacity of the wires would be necessary to ensure that they can accommodate signage.

BEATRICE LANE AND ROYAL ROAD

OBSERVATIONS

Pedestrian access: Beatrice Lane and Royal Road are residential streets that provide direct access to Hooper Road. Royal Road also has a direct pedestrian connection to Homer Brink Elementary School. There are no midblock pedestrian crossings at these intersections. Pedestrians from these streets who would like to access anything on the west side of Hooper Road have to walk to the Country Club Road intersection to access the traffic light with pedestrian accommodations or cross unprotected mid-block.

Risk Analysis: Pedestrian safety is of primary concern due to lack of crosswalks and ADA compliant curb ramps.

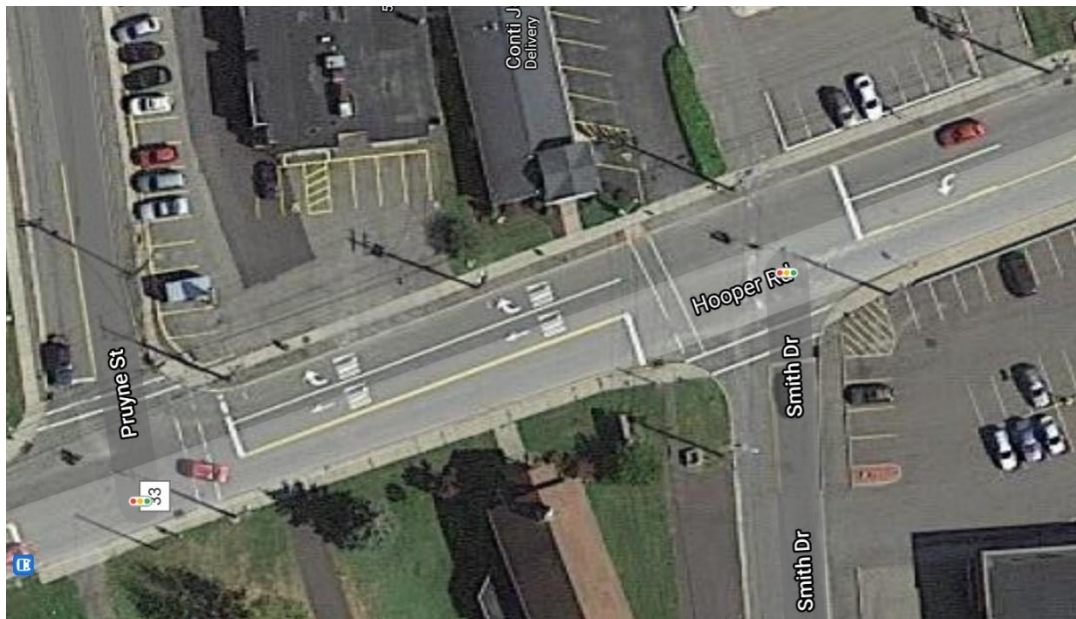
SUGGESTIONS

- Consider mid-block pedestrian crossings at Beatrice and Royal, including ladder style crosswalks, signage and Rectangular Rapid Flashing Beacons where warranted.

PRUYNE STREET AND SMITH DRIVE

OBSERVATIONS

These two signalized intersections are very close together and resulting in a short transition between the lane configurations in the northbound direction. There is a curb cut at 526 Hooper Road (currently Best Bagels) which leads directly to the Smith and Hooper intersection, however there is no signal head oriented in the direction of this driveway.



Lane Changes between Smith and Pruyne (Google Maps)

Risk Analysis: Traffic and pedestrian safety impacts and congestion due to the proximity of the traffic signals and the shifting lane configurations.

SUGGESTIONS

Remove the traffic signal at Smith Drive. An in-field go-day signal removal study would need to be completed and any resulting traffic impacts considered prior to removal. In concert with the signal removal, implement Right In/Right Out Only turning movements between Smith and Hooper with the use of signage (and channelization if necessary); remove stop bars on Hooper Road and reconfigure lane striping on Hooper Road.

A signal warrant analysis was conducted to determine the impacts of removing the signal at Smith Street in favor of right in/right out only access to and from Smith Drive. The analysis found that there would be little to no impact on the surrounding intersections and while traffic operations at Smith and Hooper would improve. Specifically, at current operating levels the Smith and Hooper intersection is currently

operating at a Level of Service (LOS) B and the Country Club intersection is also operating at a LOS B (D or better is favorable). With the removal of the signal LOS at Smith and Hooper would improve to an A and Country Club would remain at B.

It is noted that there would be inconveniences created by the signal removal to those who currently use Smith to travel northbound onto Hooper or turn left from Hooper onto Smith Road. However, the potential to reduce vehicle crash rates, that are higher than statewide averages, and to reduce congestion at the Smith and Pruyne intersections may outweigh inconveniences.

Conclusion

This roadway assessment has been prepared to assist the town of Union and Broome County in identifying opportunities to improve safety within the area studied. The Road Safety Assessment is based on information that was available at the time of the field review. The suggestions in the report are for the consideration and are not intended to serve as design or operational recommendations. The report does not preclude the identification of additional issues or the emergence of new issues over time. It is recommended that the Town and the County review the report, document their responses, and track the implementation of safety improvements prompted by this assessment.

Appendix A