

## **EXECUTIVE SUMMARY**

### **Traffic Safety and Operational Study: MD 185 (Connecticut Ave)/Jones Bridge Rd/Kensington Parkway**

At the request of the Village of North Chevy Chase, the traffic engineering firm Brudis & Associates has prepared the attached study addressing significant vehicular- and pedestrian-related safety concerns at the MD 185 (Connecticut Avenue), Jones Bridge Road, and Kensington Parkway intersection, accompanied by a number of recommendations to address these concerns. Currently, primary responsibility for intersectional traffic management is split between the State of Maryland (Connecticut Avenue) and Montgomery County (Jones Bridge Road), with the Village of North Chevy Chase's interest related to Kensington Parkway effectively serving as its municipal "main street."

This complex, five-legged skewed intersection, the physical boundaries of which extend over an extremely large area, on a daily basis faces long queues, near-misses from multiple directions, significant visibility and infrastructure impairments, and habitual unsafe driver behavior, including running red lights, illegal U-turns, and ignoring no-turn-on-red signage. The periods of greatest impact occur throughout extended morning and evening rush hours. During the evening rush hour, these impacts are further exacerbated by the intersection's proximity to the Connecticut Avenue entrance to the Capital Beltway (I-495).

The intersection recently experienced a multi-year design overhaul, ostensibly intended to address increased traffic resulting from the BRAC consolidation of Walter Reed and Bethesda Naval Medical Centers. While some marginal increases in intersection throughput may have been achieved, the primary effect has worsened rather than improved safety-related considerations at the intersection. The impact of these problems is disproportionately borne by Village residents and those in surrounding neighborhoods that use Kensington Parkway as their primary means to access the intersection.

In the attached study, Brudis & Associates has evaluated traffic safety, operational performance, and signal phasing/timing at this intersection through field observation, traffic safety analysis, and Synchro modeling, based upon which the following conclusions and recommendations were presented.

A total of 38 reported crashes occurred at this intersection (2021-2023)<sup>1</sup>, with over 40% angle crashes and 64% angle +rear-end crashes combined, indicating high conflict potential. The proportion of angle and turning-related crashes observed at this intersection is higher than what is typically reported for signalized arterial intersections within Montgomery County and statewide, indicating an increased need for operational and safety improvements. As ongoing residential development near the Purple Line just south of the intersection continues, the likelihood of collisions and risks to pedestrian safety will increase.

Severe operational deficiencies were identified. Intersection traffic operations were analyzed using Synchro models, showing excessive delays during the AM and PM peak hours. The

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<sup>1</sup> SHA 2024-present crash data limits access to intersection-specific data.

intersection's level of service (LOS) is an F – signifying the greatest delay classification and considered unacceptable per the Highway Capacity Manual - during both AM and PM peak hours. Overall delays exceed 220 seconds per vehicle, and some approaches are up to 360 seconds per vehicle. Long queues; overflow into through travel lanes and the intersection; and left-turn, angle, and rear-end crashes result.

**Recommendations:** The following measures address specific operational deficiencies and traffic conflicts, drawing upon the Maryland Manual on Uniform Traffic Control Devices, the State Highway Administration Context Driven Guide, and the Pedestrian Safety Treatments Best Practices Guidelines. As indicated below, while each of these four measures can contribute to certain aspects of improved intersection safety and traffic flow, the optimum result can only be achieved through adoption of all four measures.

**Improvement 1 - Traffic Signal Re-timing/Phasing:** Adjust signal timing to improve the flow of all roadway users and minimize wait times and congestion using software (e.g. Synchro) to model and develop new timing plans. Optimizing signal timing will improve the intersection operation, particularly for left-turning vehicles arriving in red to complete the turn during one signal cycle.

**Improvement 2 – Repurpose Shared Lanes:** Modify or reconfigure turn lanes to maximize road capacity and separate conflicting movements; specifically, reconfigure westbound Jones Bridge Rd to one right-turn only and two through lanes from one right-turn, one shared through/right-turn, and one through lane. Repurposing of the shared lane into a right-turn only lane on northbound Connecticut Avenue onto Jones Bridge Road or Kensington Parkway could produce similar effects.

**Improvement 3 – Improve Visibility and Pedestrian Accessibility:** Construct curb extensions at both the northwest and southwest corners of the Jones Bridge Road and Connecticut Avenue intersection to reduce the pedestrian crossing distance across Connecticut Avenue and better control right-turn movements, substantially improving pedestrian although not necessarily vehicular safety. Improved sight line visibility, particularly critical to driver and pedestrian safety, would also be enhanced by removal or relocation of recently planted trees at the Jones Bridge Road and Kensington Parkway intersection.

**Improvement 4 – Red-Light Camera Enforcement:** Red-light camera enforcement, particularly for vehicles turning right onto Connecticut Avenue from westbound Jones Bridge Road or turning left onto Connecticut Avenue from eastbound Jones Bridge Road should significantly improve driver compliance with signal indications and reduce severe crash risk as well as provide consistent, around-the-clock compliance.<sup>2</sup>

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<sup>2</sup> These four measures focus primarily on near-term improvements that would have the most immediate remedial effect. Additionally, Brudi & Associates has identified certain other measures of a more medium- to long-term nature that might warrant consideration as well, including curb radius adjustment on all curbs bordering the intersection and conversion of the intersection into a three-lane roundabout. These measures would require more significant time for implementation and additional costs but could be considered further if the four more immediate measures do not result in significant improvements.