Traffic Analysis an Intersection Redesign at South Amherst Highway and Old Town Connector (Technical Report)

The Controversy over the Beginning Time of the School Day in the United States (Sociotechnical Research Paper)

An Undergraduate Thesis Portfolio Presented to the Faculty of the School of Engineering and Applied Science In Partial Fulfillment of the Requirements for the Degree Bachelor of Science in Civil Engineering

by

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How can Americans' health and safety be better protected?

A senior living community has been proposed in Amherst, Virginia. The developers of the community plan to use land located northwest of the intersection of Amherst Highway (VA-163) and Old Town Connector (VA-210). The primary entry point to the community will be at the intersection. Because the new community will generate traffic, a study assessing level of service, delay time, and queue length will be conducted at that intersection. The results from the analysis will determine how much negative impact the site will have on the intersection. If there is any, a site redesign will show how the negative impact can be mitigated.

The starting time of the school day has been a matter of controversy in the United States. Social groups have competed to open schools later in the morning or to retain the current starting time. Some school districts have begun the school day later to better serve students' needs, but others have been more responsive to competing pressures, including but not limited to parents, school bus shortages, and the students themselves. Students, their parents and teachers, school boards and administrators, and bus drivers are engaged in the struggle. As school districts' agendas prevail, all other stakeholders struggle to see the changes they want.