

Intersection Level of Service Analysis

To further assess detail signal operations including phasing, storage lane lengths and detailed lane assignments associated with the corridor, Kimley-Horn conducted level-of-service (LOS) analysis for the following five signalized intersections:

- I-464 Northbound off-ramp
- I-464 Southbound off-ramp
- Canal Drive
- George Washington Highway
- Cavalier Boulevard

The traffic signal located at the Atlantic Energy entrance was not included in the detailed analysis since it only serves a single user and has a low side street volume

There are plans for the construction of a traffic signal at the I-64 Off-Ramp at Military Highway west of Cavalier Boulevard. Therefore this proposed signalized intersection was assessed under 2026 traffic volume projections.



I-464 Northbound Off-Ramp

By the nature of its location, this intersection experiences highly directional variations in delay based on arrival and departure of commuters. Located at the eastern edge of the study area, the I-464 northbound off-ramp signalized intersection currently operates at LOS F during the AM peak hour and LOS D during the PM peak

hour. In minimizing the potential of I-464 vehicles from queuing on the northbound off-ramp, this movement receives a significant amount of green time. Therefore, South Military Highway experiences a significant delay during the AM peak. However, during the PM peak hour, the South Military Highway mainline is the primary focus and operates at a higher LOS.



I-464 Southbound Off-Ramp

The I-464 southbound off-ramp at South Military Highway operates at LOS B during the AM peak and LOS C during the PM peak hour. Because the southbound exit ramp volumes are lower than the northbound ramp, more green time can be allocated to South Military Highway, resulting in better level-of-service.



Canal Drive

Traffic operations at this intersection are significantly influenced by employment at the Norfolk Naval Shipyard to the north and residential neighborhoods to the east. This intersection operates at LOS E

during both the AM and PM peak hours. Canal Drive itself is a local connector between South Military Highway and George Washington Highway that allows motorists destined toward the east of the corridor to bypass the intersection of Military Highway and George Washington Highway. Since Canal Drive functions as a natural bypass, southbound left-turn movement equals those along the mainline of South Military Highway. This traffic pattern is consistent throughout the day. The heavy Canal Drive side-street volume restricts the progression opportunities along South Military Highway.



George Washington Highway

The intersection of George Washington Highway at South Military Highway currently operates at LOS D during the AM and PM peak hours. Despite actual volumes through the intersection being relatively balanced, the physical appearance of this intersection suggests a failing condition. Pavement conditions at the intersection are heavily deteriorating, the pavement shows signs of rutting from increased truck traffic, and tire marks traverse the grass median where volumes are exceeding turning lane capacity. Because stops at this intersection are frequent and common, the poor LOS can easily be improved with interconnect and coordination between the signals along the corridor.



I-64 Off-Ramp\Cavalier Boulevard

Cavalier Industrial Park is one of many economic development success stories in the City. To ensure the success of this development, easy ingress\egress of truck traffic were a key component. The I-64 Off-ramp\Cavalier Boulevard intersection currently operates at LOS D during the AM and PM peak hours. The existing timings for the intersection accommodate the I-64 exit ramp traffic and the east-bound South Military Highway left-turn traffic oriented into the Cavalier Industrial Park. Volumes oriented into the industrial park are of such magnitude, that they often queue to lengths that impede South Military Highway operations.