**Washington State Patrol Form ERD**

Edward Galligan III

Colorado State University – Global Campus

MIS407 – Database Concepts

Dr. Kadri Brogi

January 31, 2021

**Washington State Patrol Form ERD**



Above is an ERD created based off of the Washington State Patrol Correction Notice form. The five entities I chose for my ERD were Driver, Vehicle, Violation, Officer, and Requirements; each with attributes taken from the form. Of These entities, I chose Violation and Requirements to have the unique Notice Number identifier.

One relationship that I used was between Driver and Vehicle; Driver having a minimum of 1 and a maximum of many cardinality, and Vehicle having a zero to many cardinality. I chose this because a driver could have any amount of vehicles, while a vehicle would be tied to at least one or more driver. This cardinality would be inferred from the form as the driver could be a different person and have a different address from the registered owner and registered address of the vehicle, respectively.

My next relationship is between Driver and Violation; Driver have a cardinality of one and Violation being a zero to many cardinality. I chose this because a notice number would only be tied to one driver, while one driver’s license could have any amount of violations. While it could be inferred from the form that the notice would only be attached to one driver based off of whose name is on the form, the number of violations a driver already has would not be inferred that his cardinality would need to be looked at by a system analyst because each form would only show the current violation, while the driver could have other violations already.

Another relationship is between Officer and Violation; Officer having a cardinality of one and Violation having a cardinality of none to many. This is because while an officer could write any amount of violations, a specific violation can only be written by one officer. While the officer only writing that specific violation is inferred from the form with the officer’s name and personnel number being written on the form, the number of violations written by that specific officer is not inferred by the form and would need to be looked at by a system analyst.

Lastly, there is a relationship between Violation and Requirements. Violation has a cardinality of one to many and Requirements has a cardinality of one. This is because each violation will only have one requirement, but a each required action could be on multiple violations. While it is inferred from the form that there is only one required action shown by what required action is selected by the officer, the requirement selected for other violations is not inferred by the form as the user can only see what required action has been selected on the form they are viewing and would need to be looked at by a system analyst.