

05

Policy and Legislative Environment

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Overview

Several existing State and Federal regulations must be modified or waived in order to operate the proposed autonomous transit service in Lincoln. These regulations relate to the physical operation of the vehicle on public roadways, the driver's interaction with the vehicle operations, licensing requirements, and various definitions.

Modification to Nebraska State Law

State responsibilities related to motor vehicles generally include licensing drivers, registering vehicles, and enacting and enforcing traffic laws and regulations. A complete scan of existing Nebraska legislation was done in order to identify conflicts with autonomous vehicle operations. The Nebraska State laws that will potentially need to be modified or waived in order to implement the autonomous transit vision described in this document are identified in Table 5.1.

Table 5.1 Nebraska State Law Modifications

Nebraska Law	Related Text
60-3, 100	"A license decal shall be issued with the license plate as provided in subdivision (ii) of this subdivision and shall be displayed on the driver's side of the windshield."
60-4, 122	"(1) Except as otherwise provided in subsections (2), (3), and (8) of this section, no original or renewal operator's license shall be issued to any person until such person has demonstrated his or her ability to operate a motor vehicle safely as provided in section 60-4,114."
60-462.01	"For purposes of the Motor Vehicle Operator's License Act, the following federal regulations are adopted as Nebraska law as they existed on January 1, 2017: The parts, subparts, and sections of Title 49 of the Code of Federal Regulations, as referenced in the Motor Vehicle Operator's License Act."
60-474	"Operator's or driver's license shall mean any license or permit to operate a motor vehicle issued under the laws of this state"
60-476	"Operator or driver shall mean any person who drives a motor vehicle"
60-484	"(1) Except as otherwise provided in the Motor Vehicle Operator's License Act, no resident of the State of Nebraska shall operate a motor vehicle upon the alleys or highways of this state until the person has obtained an operator's license for that purpose."
60-489	"Except for a farm permit issued under section 60-4,126, the operator's license shall at all times be carried by the licensee when operating a motor vehicle on the highways of this state and shall be presented by the licensee for examination, or he or she shall present proof of ownership of the same, upon demand by any officer, employee, or agent of the Nebraska State Patrol or police or peace officer recognized as such by the laws of this state..."
60-6, 125	"(1) When a red lens is illuminated with rapid intermittent flashes, drivers of vehicles shall stop at a clearly marked stop line or shall stop, if there is no such line, before entering the crosswalk on the near side of the intersection or, if there is no crosswalk, at the point nearest the intersecting roadway where the driver has a view of approaching traffic on the intersecting roadway"
60-6, 136	"(1)(a) He or she approaches the crest of a grade or is upon a curve in the highway where the driver's view is obstructed within such distance as to create a hazard in the event another vehicle might approach from the opposite direction"
60-6, 148	"(2) ...at the point nearest the intersecting roadway where the driver has a view of approaching traffic on the intersecting roadway before entering the intersection. (3) ... at the point nearest the intersecting roadway where the driver has a view of approaching traffic on the intersecting roadway."
60-6, 168	"No person having control or charge of a motor vehicle shall allow such vehicle to stand unattended on a highway without first: (1) Stopping the motor of such vehicle; (2) except for vehicles equipped with motor starters that may be actuated without a key, locking the ignition and removing the key from the ignition; (3) effectively setting the brakes thereon; and (4) when standing upon any roadway, turning the front wheels of such vehicle to the curb or side of such roadway."

60-6, 173	<p>"(1) ...shall stop such vehicle not more than fifty feet nor less than fifteen feet from the nearest rail or railroad and while stopped shall listen and look in both directions along the track for an approaching train. The driver shall not proceed until precaution has been taken to ascertain that the course is clear.</p> <p>(2) (b) At an abandoned or exempted grade crossing which is clearly marked as such by or with the consent of competent authority when such markings can be read from the driver's position"</p>
60-6, 179	<p>"(1) No person shall drive a motor vehicle when it is so loaded, or when there is in the front seat such a number of persons, exceeding three, as to obstruct the view of the driver to the front or sides of the vehicle or to interfere with the driver's control over the driving mechanism of such vehicle.</p> <p>(2) No passenger in a vehicle shall ride in such a position as to interfere with the driver's view ahead or to the sides or to interfere with the driver's control over the driving mechanism of such vehicle."</p>
60-6, 179.02	<p>"(2) Except as otherwise provided in subsection (3) of this section, no person shall use a handheld wireless communication device to read a written communication, manually type a written communication, or send a written communication while operating a motor vehicle which is in motion."</p>
60-6, 254	<p>"Operator; view to rear required"</p>
60-6, 255	<p>"(2) It shall be unlawful for any person to drive any vehicle upon a highway with any sign, poster, or other nontransparent material upon the front windshield, side wing vents, or side or rear windows of such motor vehicle other than a certificate or other paper required to be so displayed by law. The front windshield, side wing vents, and side or rear windows may have a visor or other shade device which is easily moved aside or removable, is normally used by a motor vehicle operator during daylight hours, and does not impair the driver's field of vision."</p>
60-6, 257	<p>"(1)(a) If the windows in such motor vehicle are tinted so that the driver's clear view through the windshield or side or rear windows is reduced or the ability to see into the motor vehicle is substantially impaired"</p>
60-6, 265	<p>"(1) Occupant protection system means a system utilizing a lap belt, a shoulder belt, or any combination of belts installed in a motor vehicle which (a) restrains drivers and passengers...</p> <p>(2) Three-point safety belt system means a system utilizing a combination of a lap belt and a shoulder belt installed in a motor vehicle which restrains drivers and passengers."</p>
60-6, 270	<p>"No driver shall operate a motor vehicle... unless the driver and each front-seat occupant in the vehicle are wearing occupant protection systems"</p>
60-6, 287	<p>"It shall be unlawful to operate upon any public highway in this state a motor vehicle which is equipped with or in which is located a television set so placed that the viewing screen is visible to the driver while operating such vehicle."</p>
60-6, 303	<p>"Any peace officer or carrier enforcement officer having reason to believe that the weight of a vehicle and load is unlawful is authorized to require the driver to stop and submit to a weighing of the vehicle and load..."</p>
60-642	<p>"Operator or driver shall mean any person who operates, drives, or is in actual physical control of a vehicle."</p>

60-683	"(4) When in uniform, to require the driver of a vehicle to stop and exhibit his or her operator's license and registration certificate issued for the vehicle"
60-696	<p>"(1) Except as provided in subsection (2) of this section, the driver of any vehicle involved in an accident upon a public highway, private road, or private drive, resulting in damage to property, shall (a) immediately stop such vehicle at the scene of such accident...</p> <p>(2) The driver of any vehicle involved in an accident upon a public highway, private road, or private drive, resulting in damage to an unattended vehicle or property"</p>
60-697	"(1) The driver of any vehicle involved in an accident upon either a public highway, private road, or private drive, resulting in injury or death to any person, shall (a) immediately stop such vehicle at the scene of such accident and ascertain the identity of all persons involved, (b) give his or her name and address and the license number of the vehicle and exhibit his or her operator's license to the person struck or the occupants of any vehicle collided"

Meeting Federal Motor Vehicle Safety Standards

Like all vehicles that operate on public roads, the microtransit vehicles are required to meet the Federal Motor Vehicle Safety Standards (FMVSS). The FMVSS are "U.S. federal regulations specifying design, construction, performance, and durability requirements for motor vehicles and regulated Automobile safety-related components, systems, and design features." The FMVSS contains a significant number of provisions that all motor vehicles must meet; particularly those involving crash-worthy and is supplemented for transit vehicles by a host of other regulations regarding persons with disabilities as identified in the American's with Disabilities Act (ADA) and codified in 49 CFR Part 38, Subpart G.

With few exceptions, all transit vehicles must comply with the FMVSS Numbers: 101-106; 108; 111; 113;116; 119-121; 124; 205; 217; 302; and 303. Additional standards regarding safety for the transit driver also must be met provided there is an on-board driver. Several small transit vehicles deployed within the U.S. operate a speeds less than 25 mph and have a gross vehicle weight less than 3,000 pounds. These vehicles fall under the FMVSS Low-Speed Vehicle definition and are generally exempted from many of the FMVSS regulations.

The 8-16 passenger autonomous microtransit vehicles currently offered in the market today operate within the speed parameters of a Low-Speed Vehicle, but have almost twice the allowable weight. Therefore, these vehicles need to meet FMVSS regulations like any other transit vehicle. Due to the relative newness of these vehicles and this technology in general, understanding the safety implications of low-speed vehicles at twice the GVW in the context of a highly autonomous system has not been sufficiently researched. In the meantime, NHTSA has been granting exceptions, on a case-by-case basis, for autonomous microtransit vehicles. Both Easymile and Navya have received such exemptions and a similar exemption would be expected for the Lincoln Pilot.