



RIVERDALE CITY FIRE DEPARTMENT

CARBON DIOXIDE ALARM AND MONITORING SYSTEMS SUBMITTAL

- Carbon dioxide (CO₂) systems with more than 100 pounds of carbon dioxide used for beverage dispensing shall comply with 2021 IFC 5307 & 916, 2016 NFPA 55.
- Plan Submittal: Provide a floor plan showing the location of the CO₂ tank, piping, exterior fill location, CO₂ sensors, notification devices, system control unit, and required signage. The plan review documents must be approved prior to the final inspection and building occupancy.
- Permit: A permit for the initial and annual inspection is required for CO₂ detection systems with a cost of \$60.00.
- Leak Detection/Notification: Rooms or areas containing carbon dioxide storage tanks, cylinders, piping and fittings, and other areas where a leak of carbon dioxide can collect must have an emergency alarm system installed.
- Emergency Alarm System: An emergency alarm system shall comply with all the following:
 - Continuous gas detection shall be provided to monitor areas where carbon dioxide can accommodate.
 - Activates an audible & visual “supervisory” alarm upon detection of a CO₂ level of 5,000ppm in a normally occupied location.
 - Activates an audible and visual emergency alarm within the room of the immediate area in which the system is installed upon detection of CO₂ of 30,000ppm.
- Acceptance Testing and Annual Certification: Inspection and testing of gas detection systems shall be conducted following the initial installation and then on an annual basis. Sensor calibration shall be confirmed at the time of installation. Further system calibration shall be performed at the frequency specified by the sensor manufacturer. CO₂ emergency alarms are required to be certified and tagged annually.
- System Installation & Certification: A company that is certified to install, maintain, and conduct annual inspections and certification must be used.