

Cranston Crossings Fact Sheet

COSTCO GAS FACILITY

Section 8.08.041 of the City Code requires storage tanks to be located at least 300 feet from residential property

Proposed gasoline facility is located more than 610 feet from nearest residence, more than twice the distance required by City Code

Proposed gasoline facility utilizes equipment incorporating the latest technology/safety features

Costco is one of the few, if not only companies, to have a nationwide standard to seal control joints and other areas to prevent product spills from reaching the soil

USTs and all containment sumps, including the dispenser sumps, are all double-walled fiberglass

All tanks and dispensers are equipped with the latest Phase I Enhanced Vapor Recovery (EVR) vapor recovery air pollution control equipment technology

See attached copy of “Costco Wholesale Fueling Facility Program – 1000 New London Avenue – Cranston, Rhode Island 02920”, prepared by Barghausen Consulting Engineers, Inc., dated August 19, 2020



GENERAL INFORMATION

Costco Wholesale Fueling Facility Program

1000 New London Avenue
Cranston, Rhode Island 02920

Costco Loc. TBD / CW No. 19-0695

Prepared for:
Costco Wholesale
999 Lake Drive
Issaquah, WA 98027

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Our Job No. 20743

BARGHAUSEN CONSULTING ENGINEERS, INC.
18215 72ND AVENUE SOUTH KENT, WA 98032 P) 425-251-6222 F) 425-251-8782
BRANCH OFFICES: TUMWATER, WA KLAMATH FALLS, OR LONG BEACH, CA ROSEVILLE, CA SAN DIEGO, CA
barghausen.com

Introduction

The Costco Gasoline fueling facility component to this new Costco Wholesale development will include equipment of the latest technology, with many safety features to prevent potential environmental impacts, designed in accordance with local, state, and federal requirements, and will be installed by State Certified Installation Contractors according to specific construction guidelines and requirements. Below are some of the operational and design features that provide exceptional environmental safeguards.

Operational Features

1. The Costco Gasoline fueling facility is designed to operate as an unattended self-serve facility. However, Costco Wholesale's policy is to provide a Costco Gasoline Program trained employee and supervisor at the site during all hours of operation. The Costco Gasoline training program includes an interactive test that all gasoline employees must pass before working at a Costco Gasoline facility.
2. In addition to the above-mentioned employee, the facility is supported by senior management in the Costco Warehouse during all gasoline station operation hours. The supervisor will be equipped with a roam telephone programmed to receive calls from the Costco Gasoline fueling facility and the Costco Warehouse. Every fueling facility is equipped with a "911" telephone that automatically contacts emergency dispatch in addition to a regular telephone line and roam phones.
3. Employees are trained to identify maintenance requirements and physically inspect the fuel islands regularly during operating hours. Their training includes the proper spill cleanup and emergency response procedures. Trained employees check for leaking hoses, malfunctioning nozzles, fuel spills, and physical damage to the dispensers and controller enclosure. During non-operating hours, the power to the dispensers is turned off and each nozzle pad is locked. Should the system require attention beyond what the trained site person could handle, the local authorized and certified service contractor would be contacted and dispatched to repair the equipment.
4. Emergency shutoff switches are installed next to the controller enclosure and in locations near the dispensers, as dictated by the fire code.
5. Closed circuit television monitor cameras aimed to show all fueling positions, the tank slab, and equipment enclosure are mounted on canopy columns adjacent to the fuel islands. A split screen monitor located in the Costco Warehouse allows for full-time monitoring of the fueling operation. All images are recorded by the camera system.
6. The tank and piping monitoring system is programmed to activate visual/audible alarms in the event of an alarm condition. A visual/audible alarm is located on the outside of the controller enclosure. Further, the monitoring system is designed so that if power is lost to the monitoring console the facility is shut down and will not operate.
7. An independent security company monitors the Costco Warehouse alarm system. The alarm system acknowledges an alarm condition at the fueling facility and notifies Costco Wholesale management staff of an alarm condition should it occur after operating hours.

Design Features

1. Costco Wholesale's tank and piping system is certified to meet the Federal UST leak detection standards of 95 percent probability of detection and 5 percent probability of false alarm.
2. Costco Wholesale utilizes one of the most durable joint sealers available today to seal the concrete control joints. PTi sealer is a petroleum-resistant sealant developed by Prevention Technologies, Inc (PTi). The sealer is used to prevent petroleum products from entering the underlying soil at the concrete joints. This product is used for its superior elasticity and user-friendly application. The elasticity allows the product to maintain a tight seal even with concrete expansion. The easy application ensures a proper seal whether it is applied by a contractor or maintenance personnel. Costco Wholesale is one of the few, if not only companies, to have a nationwide standard to seal control joints and other areas to prevent product spills from reaching the soil.
3. The storm drainage system for the fueling facility area will be designed in accordance with Rhode Island Stormwater Design and Installations Standards Manual, Amended March 2015 for water quality treatment standards. Stormwater from the fueling area will be isolated and will be directed to a catch basin and processed through an oil/water separator prior to discharge to the downstream system.
4. The underground tank and piping control units are housed inside the controller enclosure. The enclosure will contain the power console, the dispenser interface unit, the submersible pump variable speed controllers, and the monitoring system console. An air conditioner mounted on the side of the enclosure will have a preset thermostat to maintain a safe operating temperature.
5. The USTs and all containment sumps, including the dispenser sumps are all double-walled fiberglass. Fiberglass is used for its corrosion resistance and plasticity. The double-walled storage tank system includes a hydrostatic interstitial space sensor that monitors the primary and secondary tank walls. If a tank wall is compromised, the interstitial sensor will immediately shut down the product delivery system and activate a visual/audible alarm.
6. The tanks are secured in place with anchoring straps (tie-downs) connected to concrete hold down deadmen. The entire tank excavation hole is backfilled with pea gravel and capped with an 8-inch-thick reinforced concrete slab (overburden). The tie-downs, together with the overburden, overcome any possible buoyancy factors and resist buckling under hydrostatic pressures.
7. All product, vapor and vent piping is non-corrosive and provides three levels of protection. First, all product piping is monitored with pressure line leak detection. Second, all piping is double wall to provide secondary containment. Third, all fiberglass piping is additionally monitored under vacuum such that if a breach is detected in the vacuum, the product delivery system will shut down and the system will sound an audible alarm.
8. All piping connections to the tanks and dispensers are flexible. Flexible connectors are used to prevent rupture from any form of ground movement.
9. All piping slopes to the sumps at the USTs. If a piping leak occurs, the gasoline will flow through the secondary pipe to the sump, where a sensor is triggered to immediately shut down the system and activate an audible/visual alarm.
10. All tanks and dispensers are equipped with latest Phase I Enhanced Vapor Recovery (EVR) vapor recovery air pollution control equipment technology per CARB regulations and associated Executive Orders. The Phase I EVR equipment controls the vapors in the return

path from the tanks back to the tanker truck during offloading filling operations. The Stage I EVR systems are 98 percent effective in controlling fugitive emissions from escaping into the environment.

11. The UST monitoring system incorporates automatic shutoffs. If gasoline is detected in the sump at the fuel dispenser, the dispenser shuts down automatically and an alarm is sounded. If a problem is detected with a tank, the tank is automatically shut down and an alarm is sounded. If the product piping system detects a failure of the 0.1 gallons per hour (GPH) test, the line is automatically shut down and the alarm is sounded. Pursuant to federal requirements, monitoring equipment must be able to detect a minimum leak of 3 GPH (equivalent to the accuracy of a mechanical leak detector). By providing monitoring to a higher standard (0.1 vs. 3), Costco maintains a higher degree of safety than required by current federal requirements.
12. Each fuel dispenser includes several safety devices. Specifically, each dispenser sump is equipped with an automatic shutoff valve to protect against vehicle impact. In addition, each fuel hose includes a poppeted breakaway device that will stop the flow of fuel at both ends of the hose in the event of an accidental drive-off. Also, each dispenser is equipped with internal fire extinguishers. Lastly, all dispensers include leak detection sensors connected to the alarm console inside the controller enclosure.

Regulatory Agencies, Regulations, and Permits

As described above, the Costco Gasoline retail fueling facility provides a significant number of features to reduce and control the potential for environmental health hazards. All systems to be installed are of the latest technology and meet or exceed all local, state, and federal regulations.

The following is a list of regulations and agencies that govern gasoline facilities and, as noted, require specific permits or approvals. This list shows the magnitude of the regulatory environment that governs this industry. Costco Wholesale has met or exceeded all the standards and requirements outlined below for the Costco Gasoline facility.

1. International Fire Code, Chapters 23 and 57
2. Rhode Island Code of Regulations, Title 250, Chapter 120, Subchapter 5, Part 11 ("Department of Environmental Management - Air Resources - Air Pollution Control - Petroleum Liquids Marketing and Storage")
3. Rhode Island Code of Regulations, Title 250, Chapter 140, Subchapter 25 ("Department of Environmental Management - Waste and Materials Management - Oil & Underground Tanks")
4. Environmental Protection Agency (EPA) Underground Storage Tank Regulations (Subpart D, 40 Code of Federal Regulations (CFR) Part 280)
5. Underwriters Laboratories, Inc. (UL)
6. National Fire Protection Agency (NFPA) Articles 30 and 30A, regarding Flammable and Combustible Liquids Code
7. American Petroleum Institute (API) Recommended Practices for Installation of Underground Storage Systems
8. California Air Resources Board (CARB) Executive Orders and Procedures and Local Air Quality Management District Regulations