



# Construction Report

## Volume 4 | March 2017

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# Welcome to our Construction Report

March 2017

The team at Engelhart Reed would like to welcome you back to the ER Construction Report. We hope you are able to walk away with a little more construction knowledge. As always, Engelhart Reed would like to encourage our network to contact us with any construction questions that you have. Make sure to check out [www.engelhart-reed.com](http://www.engelhart-reed.com) for a complete listing of all of our current projects and photos. We hope you find the information in this report helpful and beneficial to your organization.



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\* The information provided in this report is designed to provide helpful information on the subjects discussed. The information contained in this report is compiled from Engelhart Reed's consultants and resources and is correct to the best of our knowledge. Engelhart Reed is not responsible for the use/utilization of the data in this report.

# Ventilation Rates for Occupancy

All Uses within a space have general ventilation, it is the minimum required for acceptable air quality for the occupants. ASHRAE 62-2001 outlines ventilation rates for different types of occupancies, some are based on the number of people and others are based on areas. Some examples are included below:

- A. Warehouses - 0.06 cfm/sqft (minimum general ventilation requirement)
- B. Offices - 20 cfm/person
- C. Gymnasium - 20 cfm/person. If the occupant count is known than that number is used, if not ASHRAE provides an occupant density number to use based on the area, approximately 30 people for every 1,000 sq ft.
- D. Welding Shops - 2500 - 3000 cfm/welder

There is a major difference in the ventilation requirements for parking garages and auto repair garages. Parking garages require 0.75 cfm/sqft and they must be controlled by CO and/or NO2 detection system so they run only when necessary. Auto repair garages on the other hand are 1.5 cfm/sqft and are controlled by a time clock to run continuous during work hours.

For diesel vehicles the ACGIH rate is 100 cfm/hp. This is used for diesel vehicles operating no more than 50% of the working day and the volume of space must be a minimum of 150,000 cubic ft per vehicle and make 60 HP per vehicle. When conditions don't meet these requirements it, the ventilation rate would get increased to 150 – 200 cfm per hp depending on actual conditions.

Ventilation for electric battery chargers is outlined by the ACGIH (American Conference of Governmental Industrial Hygienists) Industrial Manual. The ventilation rates are determined by the electrical requirements, both voltage, phase and amperage of each charger. Some common battery charger ventilation examples are below:

Amps	Single Phase		Three Phase		
	120 Volt	208 Volt	208 Volt	420 Volt	600 Volt
15	37 CFM	74 CFM			
20	49 CFM	99 CFM	148 CFM	342 CFM	427 CFM
30	74 CFM	148 CFM	22 CFM	512 CFM	641 CFM
40	99 CFM	197 CFM	296 CFM	683 CFM	854 CFM
50	123 CFM	246 CFM	370 CFM	854 CFM	1066 CFM

# Racking Permit Applications

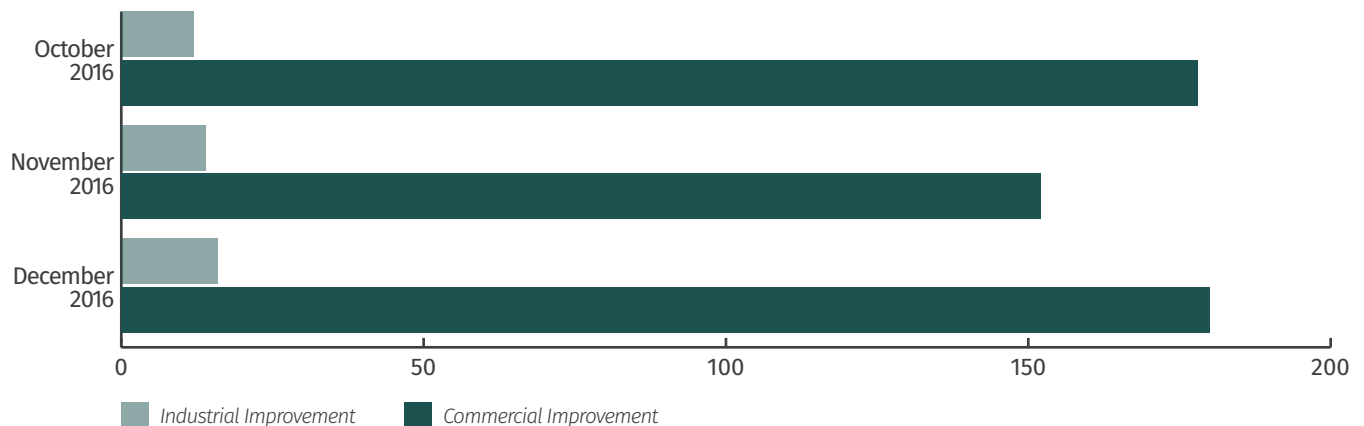
When applying for a racking permit certain information and specifics must be determined before the application process can begin:

- a. Type of commodity(s) being stored
- b. Height of storage - top of commodity
- c. Height of the building - deck height (not clear height)
- d. Encapsulation - is the commodity shrink wrapped on pallet? Is it exposed?
- e. Cartoned - is commodity in cardboard boxes? Or is it exposed?
- f. Arrangement of racking - single row, double row, multiple etc.
- g. Original sprinkler drawings - if available include these as well
- h. Proposed racking drawings including elevations
- i. Complete final address of property including unit number

# Q4 Building Permit Applications

The total value of Industrial Improvement Building Permit Applications for Q4 was \$26,615,233.00 which is a 36% decrease over Q3 applications values.

The total value of Commercial Improvement Building Permit Applications for Q4 was \$134,250,199.00 which is a 24% decrease from Q3 application values.



*\*Commercial and Industrial Improvement defined by the City of Calgary, is any construction project that does not entail a "new" building or project. This may be an addition, interior partition (alternation) or exterior renovations; All-encompassing expect for a new project build. The city defines the difference between commercial and industrial permits, based on their location on the cities Land Use Districts map\**

# Canem Systems Ltd.

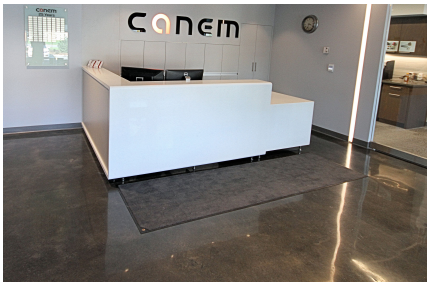
Fairmore Business Park: 1000, 7005 Fairmont Drive SE, Calgary, Alberta

Office Space	14,850 sq ft +/-
Warehouse Space	9,700 sq ft +/-
Total Area	24,550 sq ft +/-

Canem Systems Ltd. is a Canadian electrical/data/communication contractor with offices in Edmonton, Red Deer, Winnipeg, Vancouver, Vancouver Island and Calgary. The buildout of the company's newest office and distribution center was completed by Engelhart Reed in May of 2016 in the Fairmore Industrial Park.

## A brief overview of the work completed in the space:

- Design build of interior office and warehouse to accommodate Canem's requirements
- Exposed ceilings
- Polished concrete floors & stairwells
- Solid surface countertops throughout the space
- Racking & mezzanine in warehouse
- All electrical, lighting, security and controls completed by Canem



*"With a critical move in date, Engelhart Reed was tasked with keeping the construction team on a tight schedule for our new office building & warehouse in SE Calgary. The work was conducted in an efficient and timely manner, and the project was completed on schedule and within budget. Other than relatively minor exceptions which Engelhart Reed promptly addressed once we brought it to their attention, the workmen whom they utilized were professional, reliable, courteous, and respectful of the property and employees. The team emphasized getting the job done right rather than doing it fast. Their pride in their work was evident.*

*This project was very successful due to the open communication and team approach by all parties involved. It was also completed in a sensitive manner, minimizing interruptions to the daily operations of the staff. The entire team at Engelhart Reed was a pleasure to deal with and Canem Systems would recommend Engelhart Reed for future General Contractor needs."*

**Andy Carr** Regional VP of Southern Alberta, Canem Systems Ltd.



**Delivering quality projects on  
time and on budget.**

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