



# BOA

Building Operators Association of

# Canada

Official Publication of the Building Operators Association (Calgary)

March 2024



# NEED POWER?

GENTECH FIELD SERVICES IS A TURNKEY POWER GENERATOR COMPANY SERVING CALGARY AND SURROUNDING AREAS. THE GENTECH FIELD SERVICES TEAM SPECIALIZES IN LIFE SAFETY EQUIPMENT FOR COMMERCIAL BUILDINGS AND ON CONSTRUCTION SITES. WE PROVIDE SCHEDULED AND EMERGENCY SERVICE FOR ALL COMMERCIAL DIESEL GENERATORS AND FIRE PUMPS. CONTACT US TODAY TO SCHEDULE A SERVICE OR FOR AN ESTIMATE ON A NEW OR USED GENERATOR.

## OUR TURNKEY INSTALL SOLUTIONS INCLUDE:

RENTALS

PRODUCTS

ENGINEERING

SERVICE



240023 Frontier Crescent  
Rocky View County T1X 0W5  
587 349 3500  
service@gentechfieldservices.com  
www.gentechfieldservices.com

Authorized dealer for & WACKER



# REGENCY CLEANING SERVICES

- Janitorial Services
- Window Cleaning
- Pressure Washing
- Specialty Services
- Carpet & Upholstery
- Move In / Out Cleaning
- Floor Care & Maintenance
- Post Construction Cleaning

PH: 403-520-7788 | FAX: 403-663-9911

info@regencycleaning.ca  
www.regencycleaning.ca



**Alberta's Authorized Representative for HVAC Heat Exchangers**  
- Plate & Frame, and Brazed Plate available  
- New Installation & Retrofit applications

Wes Maxwell  
wmaxwell@hatchcompany.ca  
403-970-5663  
www.hatchcompany.ca

HATCH Company  
6715 - 8 Street NE, Unit 120  
Deerfoot Atrium South  
Calgary, AB T2E 7H7

# What's Inside?

Executive & Committees	3
Important Phone Numbers	3
Presidents Message	4
Test Your Operator IQ	6
Plant Safety-Employers and Young Workers	7
Benefits of Power Quality Assessments	9
Improve Your Lawn	11
KenKen Puzzle	13
Graffiti Management Program	15
Finding the Value of Roofing Warranties	17
BOMA Course	22
Kenken Puzzle & Operator IQ Answers	23
March 2024 Guest Speaker	24
Advertising Rates & BOA Calgary Sponsors	25
Advertisers Directory	26

## Executive & Committees

President	president@boacalgary.com
Les Anderson	C: 403 921 0648
Vice President	chairman@boacalgary.com
Mark Arton	(c) 403-305-7029
Associate VP	associate.vice.president@boacalgary.com
Vacant	
Chairman	chairman@boacalgary.com
Mark Arton	(c) 403-305-7029
Treasurer	treasurer@boacalgary.com
Carrissa Speager	(c) 403-969-0329
Secretary	secretary@boacalgary.com
Monika Bhandari	(c) 403-470-4169
Education Committee	education@boacalgary.com
Vacant	
Membership Committee	membership@boacalgary.com
VACANT	
Promotions Committee	promotions@boacalgary.com
VACANT	
Activities Committee	403-874-0850
Samson Isowode	
Technical Concerns	chairman@boacalgary.com
Kyle D’Agostino	
Webmaster	webmaster@boacalgary.com
Les Anderson	

## Important Phone Numbers

Emergency	911
Alberta Boiler Association	403 291 7070
Alberta Labour (Emergency)	403 297 2222
Buried Utility Locations	1 800 242 3447
City Of Calgary (All Departments)	311
Dangerous Goods Incidents	1 800 272 9600
Environmental Emergency	1 800 222 6514
Poison Centre	403 670 1414
Weather Information (24hr)	403 299 7878



# President's Message

**I hope this message  
finds you & yours  
well and in good  
health**

## ***Motivation, Action, and the Power of Choice***

When it comes to achieving results, motivation and ability play crucial roles. Let's explore how these factors intersect: Motivation Drives Action, Motivation is the force that propels us into action. Without the will to act, progress remains elusive.

To enhance personal effectiveness, master your motivation and discover your inner drive.

The Secret of Action preceding Motivation, sometimes, action comes before motivation.



Start an activity, and often, motivation follows suit. Remember Nike's iconic slogan: "Just do it." For instance, I may not eagerly anticipate my workout, but once I begin, I find my rhythm.

The language of choice be mindful of your words. Instead of saying you "have to" or "must" do something, reframe it as a choice. The simple act of saying "I choose to" empowers you. Harness motivation, take action, and consciously choose your words—they can be your greatest allies on the path to success.

Smiles))

With kind regards,  
Les Anderson PE, RPA





## Clean Air Matters

We spend about 90% of our time indoors, and it has never been more important to ensure we have clean, healthy indoor environments.

For over 50 years, BGE's approach has focused on people, as we strive to provide optimal air quality through proactive, integrative advisory services and quality products you can trust.

[BGECleanAir.com](http://BGECleanAir.com)

Edmonton Calgary Vancouver Fort McMurray Prince George Regina Saskatoon Winnipeg



**DCS AGENCY LTD.**

### Manufacturer's Representatives for:

- Xylem / Bell & Gossett
- Watts Water Technologies / Watts Radiant
- Watts / Powers Mixing & Electronics
- Tekmar Control Systems
- American Standard Brands
- Clemmer Technologies
- Laars Boilers
- De Dietrich Boilers
- Gastite Flexible Gas Piping
- Sisco P/T Plugs
- WGI Western Gauge & Instrument
- Griswold Flow Control Valves
- Metraflex Pipe Connectors
- Rinnai

Alan Proctor Shawn Oakley Greg Smith  
 #7, 6130 – 4 Street S.E., Calgary, AB. T2H 2B6  
 Tel: (403) 253-6808 Fax: (403) 259-8331  
[www.dcsalesitd.com](http://www.dcsalesitd.com)



**CANADA'S LARGEST  
 BLUE STAR  
 POWER SYSTEMS DISTRIBUTOR**

Western Canada's Premier Supplier of Stand-by, Prime & CHP systems

24/7 Parts and Service Support

Emergency Generator Repair

Planned Generator Maintenance Programs

On Site Fuel Testing & Polishing

100% CANADIAN OWNED AND OPERATED!



Authorized Sales Distributor & Service Provider  
**CALGARY - EDMONTON - VANCOUVER**  
 24HR: 855-948-8810 / [CUSTOMPOWER.CA](http://CUSTOMPOWER.CA)

# SURE

PRINT & COPY CENTRE AVENIDA

**WE PRINT EVERYTHING!**

**SIGNS**  
 RETRACTABLE BANNERS  
 X-BANNERS  
 SANDWICH BOARDS

**& MUCH MORE!**

**DESIGN**  
 NCR FORMS  
 MAGAZINES  
 BUSINESS CARDS  
 POSTCARDS  
 CALENDARS  
 LARGE FORMAT PRINT  
 LARGE FORMAT SCANS  
 BLUEPRINTS

501 - 12445 Lake Fraser Drive SE, Calgary, AB T2J 7A4  
 Phone: 403.254.6922 Email: [sure20@surecopy.com](mailto:sure20@surecopy.com)  
[www.sureprintavenida.ca](http://www.sureprintavenida.ca)

## TEST YOUR OPERATOR IQ!



Are you equally adept at troubleshooting problems in the boardroom and the boiler room? As the resident facility guru, there's a lot riding on whether or not you know the difference between sounds control and a sound investment.

Try our monthly Operator IQ challenge...answers on page 23

1. A hot water boiler of the same output is:

- a. larger than a steam boiler
- b. smaller than a steam boiler
- c. the same size as a steam boiler
- d. taller than a steam boiler
- e. shorter than a steam boiler



2. A hot water system which circulates water through the pipes with a pump is known as a:

- a. circulating system
- b. forced system
- c. pumped system
- d. gravity system
- e. return system

3. Advantages of the forced circulation hot water heating systems are:

- a. reduction in pipe size and greater heat storage capacity
- b. high pressure piping and controls
- c. high vacuum in the return lines and pumps
- d. higher make-up and better chemical control
- e. low water make-up and better temperature control

4. In a hot water heating system compared to a steam heating system, if there is a leak, damage will:

- a. be greater in the steam system
- b. be greater in the hot water system
- c. be about the same in either system
- d. depend on where the boiler is located in the system
- e. be minimal due to the automatic drain system

5. In a one pipe hot water system, the fitting that directs the water to each converter is called the:

- a. diverter
- b. trap
- c. vent valve
- d. separator
- e. difficult to make



## Plant safety - Employers must protect their young workers



Injury statistics for young workers are startling. StatsCan reports that every day 189 young workers between the ages of 15 and 24 are injured on the job. That grim toll adds up to 69,000 injuries each year.

Some studies found 80 percent of young workers don't receive training in occupational health and safety.

These numbers are brought to life when you consider a real-life tragedy. Sean Kells was only 19 years old when on the third day of his part-time job. The chemical fluid that he was pouring ignited, and Sean was engulfed in a burst of flames. He received third-degree burns to 95 percent of his body and died the following day. With proper safety and emergency training, Sean's death could have been prevented.

The Industrial Accident Prevention Association (IAPA), Canada's largest health and safety organization, strongly believes workplace injuries and deaths, such as the death of Sean Kells, can be prevented. We worked closely with the Workers Health and Safety

Centre (WHSC) to develop the Young Worker Awareness Program (YWAP).

Volunteers and staff of both organizations delivered the program to more than 50,000 Ontario students. YWAP provides young workers with basic knowledge of workplace health and safety hazards, their rights and their responsibilities.

The program is available at no cost to Ontario schools and combines a general assembly with classroom instruction to provide basic health and safety information.

Also available are educational health and safety materials, including videos, brochures, take-home resource books and posters. As part of the "Know Your Risks, Know Your Rights" campaign, the IAPA set up a toll-free hotline (1-888-406-YWAP (9927)) to handle calls from young workers, parents, and employers.

The responsibility for health and safety in the workplace must be shared by the employer and the worker. This summer, the IAPA and the WHSC launched a joint media campaign aimed at reaching young people during the



for their jobs are all reasons why young workers may not ask questions about safety.

As an employer or supervisor of young workers, you should be prepared to cover a wide range of health and safety topics as components of your orientation training program. Young workers need to be made aware of job hazards, including training and protective equipment, and the rights and responsibilities of both workers and

peak summer employment period.

The goal of the campaign was to try to raise awareness of their rights and responsibilities under the Occupational Health and Safety Act. Studies show that 35 percent of those asked feel they regularly encounter harmful situations at work, and 24 percent say they have felt obligated to do dangerous work.

As president and chief executive officer of IAPA, I personally understand the message. My son was injured on the job three years ago in a workplace incident that almost claimed his life.

It is important that we use this program as a vehicle to reach young workers to reduce the number of needless injuries, illnesses and deaths. In the manufacturing sector alone, the injury rate for young workers is 35 percent higher than for other workers.

### **What should I review with my employees?**

Young workers need answers to basic health and safety questions. Lack of practical experience, a carefree "it won't happen to me" attitude, and fear

employers.

If you are a supervisor, it's up to you to make sure workers follow the OH&S Act and your company's policies and rules, to work safely, and use protective equipment. Inform workers about known hazards and demonstrate to workers how to work safely. What can you do?

There are a number of precautions you can take to ensure a safe workplace for young workers, including:

- Develop an effective health and safety training program for all new employees;
- Provide and maintain a safe workplace, including equipment and protective devices;
- Provide training so workers can work safely with materials used in your workplace, including equipment and protective devices;

Inform new workers of any known hazards in your workplace, and provide training to work safely with the hazard.

*Article reprinted with permission*





# Benefits of Power Quality Assessment for Commercial and Industrial Environments

[Mohsen Abedi P.Eng, PSM.Eng](#)

Power quality assessment is crucial for commercial and industrial environments due to the following reasons:



## 1. Equipment Sensitivity:

Commercial and industrial facilities often use sensitive electronic equipment and machinery. Power quality issues, such as voltage fluctuations, harmonic distortions, and interruptions, can adversely affect the performance and reliability of these devices.

## 2. Production Efficiency:

In industrial settings, even minor disruptions in power quality can lead to production inefficiencies and downtime. Power quality assessments help identify and rectify issues that could impact the smooth operation of manufacturing processes.

## 3. Equipment Longevity:

Industrial equipment is often expensive and designed for a specific operational environment. Poor power quality can lead to premature aging and failure of equipment, resulting in costly replacements. Regular assessments help extend the lifespan of machinery and reduce the overall cost of ownership.

## 4. Data Integrity:

Many commercial and industrial processes rely on computer systems for data collection, monitoring, and control. Power quality issues can lead to data corruption, loss, or system failures. Assessments ensure the reliability and integrity of data, which is crucial for decision-making and quality control.

## 5. Compliance with Standards:

Commercial and industrial facilities are subject to various standards and regulations related to power quality. Compliance with these standards is essential to avoid penalties, legal issues, and to maintain a



safe working environment.

#### 6. Energy Efficiency:

Poor power quality can result in energy wastage and increased operational costs. By identifying and rectifying power quality issues, commercial and industrial facilities can improve energy efficiency, leading to cost savings over time.

#### 7. Financial Impact:

Downtime and equipment failures in commercial and industrial environments can have significant financial implications. Power quality assessments help prevent such issues, ensuring continuous and reliable operation.

#### 8. Improved Equipment Performance:

Power quality assessments can identify and address issues that might degrade the performance of sensitive equipment. This leads to consistent and reliable performance, ensuring that equipment operates at its designed capacity.

#### 9. Diagnostic Capability:

Power quality monitoring provides valuable data for diagnosing the root causes of issues. This information is essential for implementing targeted solutions and preventing recurring problems.

#### 10. Insurance and Liability:

Insurance providers may require proof of power quality measures to mitigate risks associated with equipment damage or business interruption. Assessments help in providing evidence of proactive measures, potentially reducing insurance premiums.

#### 11. Proactive Problem Identification:

Regular assessments provide a proactive approach to identify potential power quality issues before they escalate. This allows for timely corrective measures, preventing more extensive problems and minimizing the need for emergency repairs.

#### 12. Cost Savings:

By preventing equipment failures, reducing downtime, and improving energy efficiency, power quality assessments contribute to overall cost savings for businesses. This includes savings on repair and maintenance costs and potential insurance premium reductions.

In summary, power quality assessment is essential for commercial and industrial environments to ensure the reliable and efficient operation of equipment, maintain compliance with standards, and mitigate financial and operational risks. It is a proactive approach that contributes to the overall success and sustainability of businesses in these sectors.

[Mohsen Abedi P.Eng, PSM.](#)

*Technical Consultant | Senior UPS Systems Specialist | Electrical engineering design | Power electronic systems design | Power quality systems & Harmonic filters | BESS Renewables Technical Consultant | Senior UPS Systems Specialist | Electrical engineering design | Power electronic systems design | Power quality systems & Harmonic filters | BESS Renewables*

*Article reprinted with permission*



# Improve your lawn

These tips should ensure the best of health for your lawn, whether you're starting a new one or maintaining an existing one.

## **New lawn**

Spring is a good time to start a new lawn as it will quickly establish in the warm, moist soil. Sowing is the cheapest way to do this, but the grass will

take several weeks to establish. Laying turf is much quicker but also much more expensive.

Whichever method is used, the site will need to be prepared well beforehand. Any existing plants should be removed, either by hand-weeding thoroughly or applying a systemic weedkiller containing glyphosate.

Once these plants are dead, dig over the ground, removing any large stones or debris. Sprinkle on a general fertiliser and rake the area until level. Finally, tread over the site to consolidate the soil.

## **Feeding and edging**

*Feeding and weeding* - feeding the grass with a lawn fertiliser will make it greener and thicker, which in turn helps it to resist



weeds and moss. It's possible to tackle weeds and moss while feeding by using a combined feed and weed product or a moss treatment. Late spring is the best time for feeding. If your lawn receives heavy wear it's advisable to feed every six weeks until mid-summer.

*Edge trimming* - tidying lawn edges keeps the grass looking neat and stops it spreading into borders. Re-cut the edges each spring using a half-moon edging tool. For a straight edge, cut against a plank of wood; for a curve, trim along a rope laid on the ground. Pull away the excess soil to leave a vertical edge measuring 5cm to 7.5cm (2in to 3in) deep. After mowing, trim any grass that overhangs the edges with long-handled edging shears or a rotary trimmer.

*Edge repair* - the following technique will completely restore deteriorating edges: Use a garden spade to slice through the turf, cutting out a small rectangular section from around the damaged area.



Carefully undercut the turf with the spade and turn it around so that the damaged area now faces into the lawn.

Fill in the damaged patch with a handful of compost so the surface is level with the surrounding turf.

Sow grass seed over the damaged area and water well. In a few months it will be as good as new.

### **Tips**

*Mowing* - little and often is the secret. Regular cutting keeps it tidy, thickens the turf and deters weeds. In the summer, mow at least once a week. The lawnmower blades should be set to cut the grass about 2.5cm (1in) high to help protect the lawn against damage. For a traditional striped finish, use a mower fitted with a roller.

*Moss prevention* - moss occurs if the lawn is shady, badly compacted, damp or too

short. Spiking compacted or damp areas with a garden fork will help prevent these problems in future. Then treat the moss with a chemical moss killer. Once the moss has died, it can be raked out with a spring-tined rake. For larger lawns, an electric scarifier saves time.

*Surviving dry spells* - during long dry spells, mow less frequently and leave grass to grow longer. It may turn brown, but it will grow green again when the rain comes. In the meantime, don't feed the grass as this can scorch it. Don't water either, as this encourages the grass to root closer to the surface, making it vulnerable to drought.



*Banishing weeds* - small patches can be pulled up by hand or spot-treated with weedkiller. Larger areas can be treated with a selective lawn weedkiller.

*Paths* - if part of the lawn is used regularly as a path, it's worth laying a proper pathway for protection. Stepping stones are an attractive choice. Lay them with their surface just below the level of the lawn so the mower's blades can pass over them safely.

*Article reprinted with permission*

# KenKen Puzzle

How to solve the KenKen puzzle:

*(Answers on page 23)*

- Fill in the numbers from 1 –6
- Do not repeat the number in any row or column
- The numbers in each heavily outlined set of squares, called cages, must combine (in any order) to produce the target number in the top corner using the mathematical operation indicated
- Cages with just one square should be filled in with the target number in the top corner
- A number can be repeated within a cage as long as it is in the same row or column

7		1	8		2	6		5
								2
2	5		9	1			3	
	3			9				4
1	2	5	3		7		6	9
4		9			6	2		
	6	3	4	8	1			
		2		7	3	9		6
	7					3	8	



# New pipes inside your old pipes.



**Cost Effective, Less Disruptive.  
Simple as that.**

*Whether you're replacing a  
drain stack in a skyscraper or  
a piece of cracked cast under  
the floor in a shopping centre,  
we have it handled!*

- Vertical drain stacks behind walls
- Horizontal drains under floors
- HVAC and chiller pipes
- Pipes with multiple bends and offsets
- Pipes with branch connections
- 1 1/2 - 10 Inch diameter (custom sizes available)
- Inside any type of pipe (including cast iron, steel, asbestos concrete, PVC, ABS)
- 50+ year life expectancy

**REVIVE**  
Pipe Restoration Inc.

**Inside Building Specialists**  
403-903-4445  
[www.revivepipes.com](http://www.revivepipes.com)

# Graffiti Management Program

*by Rick Haddow*

Calgarians are dedicated to the care and upkeep of their communities. We all share in the responsibility of keeping our city clean, safe and free of graffiti.

Graffiti is vandalism, and therefore a crime. Graffiti is the defacing of public or private property without consent from the property owner.



The effects of graffiti are felt by everyone:

- \* Property owners are faced with the cost and task of cleaning up graffiti.
- \* Individuals and identifiable groups are hurt by discriminatory or hateful messages.
- \* Graffiti ruins the natural and architectural beauty of a city.
- \* Acts of vandalism decrease the city's attractiveness as a place to visit, conduct business and invest in.
- \* Graffiti is often profane, obscene and offensive.
- \* Chemicals used to create and remove graffiti are detrimental to the environment.

As a citizen, you can help manage graffiti where you live by recording, reporting and removing the graffiti. Together we can reduce graffiti.

## **Recording, Reporting and Removing Graffiti**

Help keep our communities safe and clean. Your

actions can help reduce the spread of graffiti in Calgary.

### **Step 1 - Recording Graffiti**

When you see graffiti in your community, record the following information so it can be reported:

- \* If it's public or private property
- \* The exact or closest address

### **Step 2 - Reporting Graffiti**

If you see graffiti in progress, call 9-1-1. To report existing graffiti, call 3-1-1.

### **Step 3 - Removing Graffiti**

If the graffiti is on your property, it should be removed within 72 hours. The longer the graffiti is up, the more likely additional graffiti will occur. If the graffiti re-appears, continue to remove it. Reinforce the message that graffiti is not welcome.

If you are unable to remove the graffiti yourself, contact a professional. See "Graffiti Removal" in the Yellow Pages.

Discounted products are available at Cloverdale Paints or ICI Paints. For the addresses of these stores, as well as information about additional graffiti services offered by Animal & Bylaw Services, see Our Services.

### **Our Services**

Animal & Bylaw Services offers the following services to keep our city clean, safe and free of graffiti:





#### **Educational Website**

\* a fun, interactive website is available to help students, teachers and families understand the importance of making responsible safety decisions. See [thinkresponsibly.ca](http://thinkresponsibly.ca)

#### **Graffiti Awareness Workshop**

\* one-hour workshop provided to community groups  
\* provides community residents with an overview of graffiti and its impacts  
\* is most useful for groups seeking information and appropriate direction for combatting graffiti

#### **Graffiti Awareness and Removal Workshop**

\* 90-minute workshop provided to community groups  
\* provides an overview of graffiti and its impacts, followed by a graffiti removal demonstration and recommendations on hosting a graffiti removal event  
\* is most useful for community groups who have assessed their situation and are ready to take action

#### **Graffiti Awareness Toolkit**

\* includes a booklet about the impact of graffiti,

removal tips and steps for organizing a removal event.

#### **Newsletter Articles**

\* articles about the impact of graffiti can be sent out to community groups for use in their newsletters

#### **Discounted Color Match Paint and Graffiti Removal Supplies**

Call your local Cloverdale Paints, or ICI Paint store for details.

#### **ICI Locations**

- \* 10320 Macleod Tr. S.E. 403-271-1291
- \* 3916 17 Ave. S.W. 403-249-9196
- \* 700 9650 Harvest Hills Blvd. N.W. 403-241-1500
- \* 4404 14 St. N.W. 403-289-5544
- \* Bay B, 3440 12 St. N.E. 403-735-6270

#### **Cloverdale Paint Locations:**

- \* Bay 1, 6325 11 St. S.E. 403-287-0014
- \* 4919 61 Ave. S.E. 403-236-4777
- \* 21A - 240 Midpark Way S.E. 403-254-9019
- \* 10 - 1935 37 St. S.W. 403-242-7700
- \* 3003 21 St. N.E. 403-280-1606
- \* 116 450 Country Hills Blvd. N.E. 403-567-9394
- \* 30, 7700 110 Ave. N.W. 403-284-5353

*Article reprinted with permission*



# Finding the Value of Roofing Warranties

by Karen Warseck

Contributing Editor, "Building Operation Management"

A warranty can help assure a leak-free roof, but only if the building owner understands what it does — and doesn't — do.

When low-slope roofs (less than 2:12) were first introduced, there were few choices — built-up roofing or built-up roofing. Bonds were issued by roofing manufacturers assuring that, should problems occur, the building owner could be compensated for a loss. With the rise of alternate roofing systems, the emphasis on warranties increased as new systems came to market. Regardless of the actual merits of the materials, a long-term warranty made it easier to sell a new and untried system. Warranties became a marketing tool — and have remained so.



Warranties vary tremendously but generally fall into two categories: implied and express. Implied warranties relate to the performance that can reasonably be expected from a material marketed for a specific purpose. Nothing needs to be stated in writing for an implied warranty to exist. For instance, if a material is marketed as insulation, there is an implied warranty that the material will reduce heat loss from a building because that is what insulation is supposed to do. There are no specifics attached to an implied warranty. With insulation, nothing in an implied warranty says that the R-value will be sufficient for the owner's purposes.

There is also an implied warranty that the material will continue to perform if properly installed and maintained. If the material is acted upon by an outside force, however, the implied warranty generally becomes

void; thus, water that leaks into insulation can void the warranty on the insulation.

Implied warranties can also be negated if manufacturers properly warn the consumer ahead of time of effects that may occur. For instance, some insulation manufacturers state in their literature that the R-value of their material will drop over time, so there is no implied warranty that the R-value will be constant.

One implied warranty that benefits the building owner is that the material conforms to the Uniform Commercial Code (UCC). This code gives the consumer the right to expect that when a product is sold, it will perform for its intended use. All products are covered under the UCC unless this implied warranty is contractually waived elsewhere, such as by clause in an express warranty.



In the case of roof systems, express warranties are written documents issued by the materials' manufacturer or the contractor. An express warranty is a legal contract between the roofing materials' manufacturer or contractor and the building owner that defines the limits of liability that the manufacturer or contractor will assume if there are problems with the roof system. The contract also defines the specific requirements that the building owner must fulfill to keep the warranty in force. Both of these items — liability limits and building owner responsibilities — have a significant impact on the remedies available to

an owner under the terms of a warranty. The warranty is not a bond or an insurance policy that will demand payment by a third party in case of a loss.

Manufacturer warranties can cover materials only or materials and installation. Lengths of manufacturer warranties range from five to 25 years. Contractor warranties generally range from one to five years. Longer terms can be negotiated but are very rare.

### Warranty Benefits

When a manufacturer commits to a long-term warranty, the manufacturer generally requires that the installing contractor conform to the recommended installation techniques for a materials and installation warranty to be issued. Because the manufacturer's recommendations are intended to provide a sound installation, this can be a real benefit.



Sometimes, issuing a long-term warranty makes the manufacturer more observant of the installation. Most often, this is limited to an inspection at the close of the project by a representative of the manufacturer. Sometimes the manufacturer will attend preconstruction meetings upon request and occasionally provide on-site, in-progress inspections.

In most cases, long-term labor and materials warranties require that the system be installed by a roofing contractor approved by the manufacturer. That's another benefit to the owner: In many cases, the approved applicator list weeds out the worst of the roofing contractors. This requirement protects the manufacturer as well as the owner. Contractors that have applied several poor roofs cost the manufacturer money from warranty claims. Enough warranty claims and the roofer gets dropped from the list. This doesn't mean that mediocre roofers are not on the list — especially if they install large amounts of the

manufacturer's products — but it does help keep the numbers down.

If the owner adheres to the terms of the warranty, the warranty can provide remedies for leaks. Depending on the terms of the warranty, the remedies can range from simply fixing the leak or providing new materials all the way to removal and replacement of the entire roof. The manufacturer may pay for the entire cost of the roof replacement, a prorated amount depending on how long the roof has been on or nothing at all.

Finally, if the warranty is transferable, it can be used as a selling point in marketing the building. If the roof is still under warranty, the implication is that it is in good condition and not likely to need replacing in the near future.

Too often, the only thing about a warranty that a building owner considers is length. This is probably the least important part. When considering whether to obtain a warranty, building owners must understand that warranties are written by the attorneys for the issuer for the benefit of the issuer. The warranty, like any other legal contract, must be carefully analyzed to see exactly what one is getting for the money; there is a premium paid for materials and labor warranties based on the square footage of the roof.

If at all possible, the building owner's attorney should carefully scrutinize the terms of the warranty to see what the owner will be getting, what the owner will not be getting and whether the warranty is even needed.

Almost every warranty has a clause that reads, "This warranty is in lieu of all other warranties, express or implied." By signing a contract with that clause in it, the building owner gives up recourse under the UCC if a product turns out to be unsuitable for a roofing material. This is an especially important consideration when using a new product.

As an example, when PVC roofing first went on the market, a manufacturer whose product line

included shower curtains decided to expand into roofing. Its material, although quite good for shower curtains, was unsuited for use as a roofing membrane and many failures occurred. These failures fell under the implied fitness-for-use provisions of the UCC. But anyone who signed a contract accepting the manufacturer's express warranty, which specifically excluded any implied warranties, was not able to get recompense from the manufacturer when the product itself failed. The building owner should also check to see if the warranty is materials only or materials and installation. If it is a materials only warranty and contains the exclusion clause, consider foregoing it. The building owner's rights under the UCC may be much better.

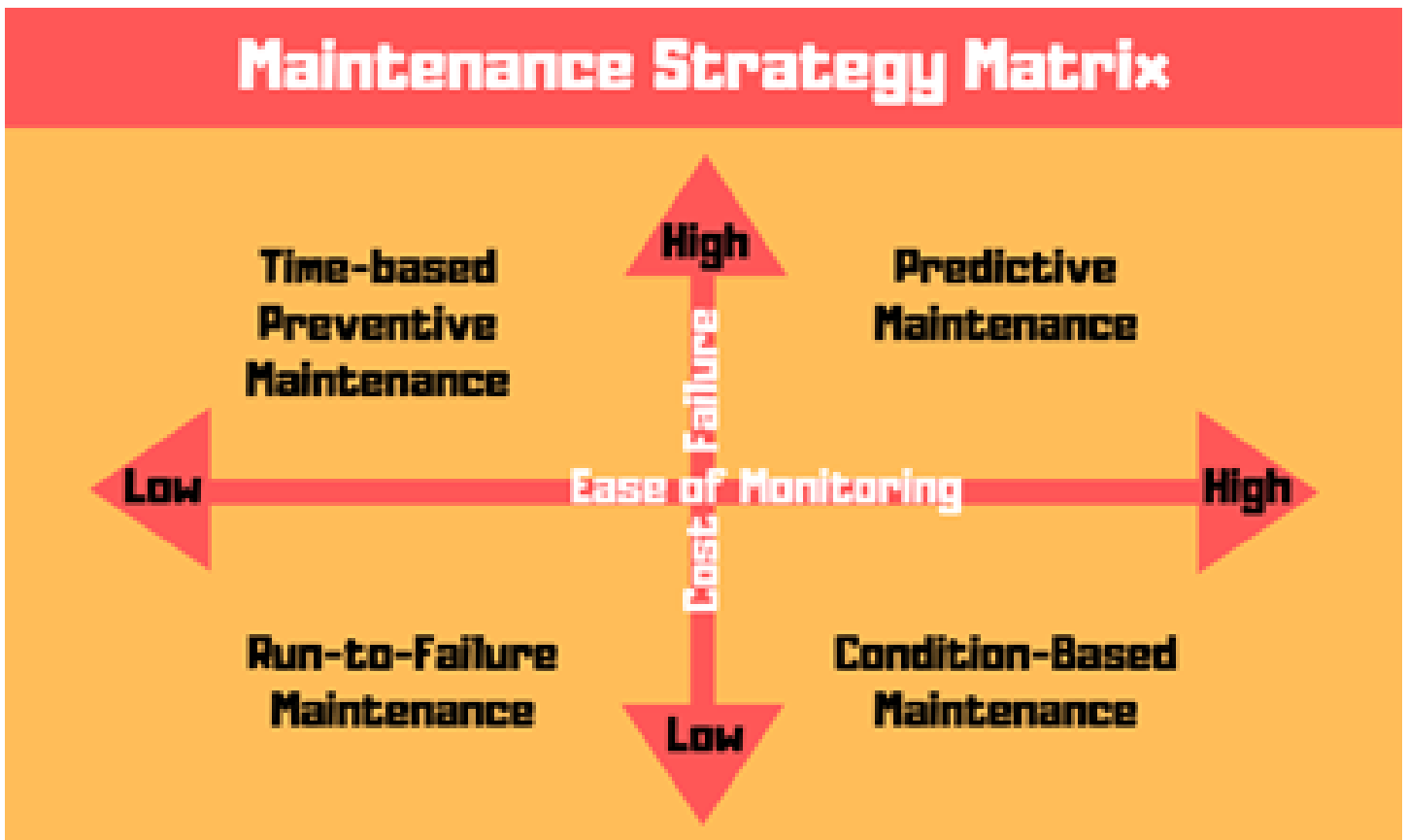
**Ask an attorney.**

Another critical issue is who decides what the remedy will be. In most cases, the manufacturer is the sole judge of what action will be taken. This means that if a manufacturer really doesn't want to provide any remedy, it can usually find a way out. Fortunately, most manufacturers are reputable and realize that, if they don't honor their warranties, their products will no longer be used. That said, it's important to take

note of any provision that states, "The warranty will be null and void if the owner fails to..."

Another area to pay attention to is maintenance requirements. Most manufacturers require that the owner conduct twice-yearly inspections of the roof and document the findings. Failure to carry out these inspections and to repair small defects promptly can be taken quite rightly to mean that the owner is not maintaining the roof and that the warranty is null and void. In reality, these maintenance requirements can be a benefit to the owner. Regular roof maintenance is not only needed to keep the warranty intact, but it is, along with proper initial design and installation, one of the three legs supporting roof longevity. Studies have shown that a roof properly maintained would last roughly double the time of a roof that is not maintained. Maintenance is a win-win situation.

Failure to meet notification requirements can also cause a warranty to be null and void. Most warranties require notification in writing to the manufacturer within 30 days of discovering a leak. The reality is that most leaks go unreported for



months until a serious problem occurs. Many tenants will not report a leak until it gets to the point where wallpaper is peeling or ceiling tiles are falling. Then, the owner often fails to report it to the manufacturer as required in the warranty. When this happens, the manufacturer is legally able to get out of major repairs. Their position is quite understandable. What could have been an inexpensive small annoyance may well become a costly tear off and replacement after six months of delay. Leaks don't get better on their own.

Another very important item to examine is the type and extent of the remedy included in the terms of the warranty. Is the manufacturer committing itself to fixing leaks without fixing damage to insulation, deck, etc.? Does the warranty exclude "consequential damages"? Consider what this means. Think of a call center on the top floor. If the roof fails and all of the computer equipment is ruined and the facility is shut down for two weeks, will a warranty that excludes consequential damages prevent the owner from recovering these costs? Or suppose that roof leaks lead to mold and mildew growth by providing moisture that the fungi need to grow. Who will pay for the costs associated with mold and mildew? Consequential damages can be far more costly than the damage to the roof.

Getting a contractor to do warranty repairs can sometimes be difficult, especially if the roof is an unusual type with few or no local approved applicators or if the facility is in an out-of-the-way location. This can be even worse if the warranty has been issued by a roofing contractor and the contractor no longer maintains an office nearby. Some manufacturers will not respond quickly to recurring leaks or will send the same contractor who did not fix the leak the first time. Because the contractor who fixes the leak under the warranty generally has to be an approved applicator, the leaks may continue if the selection of contractors is limited.

Transfer issues should also be scrutinized. Because a warranty is not an insurance policy or a bond, it is completely dependent upon the strength of the issuer. What happens if the company goes out of business, declares bankruptcy, gets bought out or pulls out of the United States? This is an especially important consideration when the warranty is issued by a roofing contractor. With a contractor warranty, be sure that the company has sufficient assets to cover the warranty. Check to see how long it has been in business under the same name. Corporation name changes are a sign that the company lacks stability and may disappear when a warranty claim is made.



Check the company's reputation carefully to be sure that the company honors its commitments.

Whether it's a manufacturer or contractor warranty, consider whether the warranty is transferable to a new owner and the requirements for a transfer. In some cases, the manufacturer requires that the roof be brought up to the original standards for the warranty to be transferable. The costs to do this on an older building may be more than the warranty is worth.

Finally, look at the list of exclusions. Most warranties exclude ponding water, acts of God and metal work not supplied by the manufacturer. These are not unreasonable exclusions. One cannot reasonably hold the manufacturer liable for items not within its control. Some warranties exclude blistering. Some exclude hurricanes; others exclude damage caused by much lesser windstorms — gale force winds and even high wind gusts.

Most warranties exclude additions or alterations to the roof unless the manufacturer is notified in advance and approves the alteration or addition in writing. Traffic across the roof is excluded in many warranties. The reality of roofing is that it is difficult to make people stay on walk pads, even if pads are installed in direct routes to the equipment and roof hatches. That may affect the remedies available for a roof. Look at the exclusions and see how they will affect a given particular situation.

### **Beyond the Warranty**

The goal of a warranty is to assure a quality roof. But a warranty never kept a building dry. The best way to keep a roof functional is to be sure it is designed and installed correctly in the first place and then maintained. What does this mean?

First, don't rely on just the manufacturer's recommendations to assure that the roof is designed well. Manufacturer specifications and details are generic and may not be applicable to a particular situation. A well-designed set of construction documents will not only be specific to a building but will also help to assure that all of the contractors are bidding on the same work. There are architecture and

engineering firms that specialize in roof consulting that can provide design documents that anticipate problems and solve them before they occur.

Second, be sure to contract with a reputable, stable and competent roofer. The manufacturer's approved applicator list is a starting point for choosing a contractor, but it's still important to check references, licenses and business contacts.

Third, have someone watching while the roof is installed. Even the best contractor has an off day; what's more, a situation may arise that requires a change to the work, or other problems might occur that will affect the long-term durability of the roof. According to the National Roofing Contractors Association, third-party inspection is the best quality assurance available.

Fourth, keep the roof maintained. Have someone inspect the roof twice a year — whether it is a roofer, architect, engineer or in-house staff, the main criterion is that the person be capable of looking at the condition of the roof and determining if there is a problem or not. Then the owner must assure that the small repairs noted in the inspection report are completed.

Remember, a warranty is a contract, not an insurance policy, and like any other contract can be negotiated. It can add value to a roof installation but is not a substitute for proper roof design, competent installation and long term maintenance in assuring a leak-free roof. In the attempt to assure the quality of the roof, a warranty is just another tool that can help or hinder building owners — which one depends on whether owners have done their homework.

*Contributing editor Karen Warseck, AIA, is president of Building Diagnostics Associates, a Hollywood, Fla., architecture firm that specializes in building repair consulting. She is a long-time contributing editor to Building Operating Management on roofing and exterior wall issues.*

*Article reprinted with permission*

# Kickstart your career as a Building Operator



## Learn Anywhere.

The BOMA Building Operator Program 5th Class Course is now online! For more info, visit [boma.ca](http://boma.ca)

**BOMA**  
CALGARY

BOMA Calgary's Building Operator Training Course is designed for those wanting to gain more knowledge on commercial building operations and taught by industry veterans.

If you are looking to begin your career in building operations or are currently employed in the industry but want to further your own professional development, this course is for you.

It teaches to the 5th Class Power Engineering standard, allowing you to take the ABSA exam when the course is complete.

[Click Here to Register](#)

*The 5th Class power Engineering Course will begin on Thursday February 23, 2023 and will take place every Tuesday and Thursday evenings from 5-8pm*

*The course will be held online only using Zoom.*

*The fee for enrollment will cover the cost of the 150 hour course, textbooks, and BOMA certificate upon completion*

*\*please note this does not include the ABSA exam\**

*The total cost including GST is \$2,199.75*

*Questions? Email Lloyd Suchet at [lloyd.suchet@boma.ca](mailto:lloyd.suchet@boma.ca) for more details.*

BOMA Calgary | Suite 225, 550 11th Ave SW, Calgary, AB T2R 1M7 | [info@boma.ca](mailto:info@boma.ca) | [www.boma.ca](http://www.boma.ca)

Healthy Buildings  
on a Sustainable Planet



Bay 8, 823 - 41 Avenue N.E.  
Calgary, Alberta T2E 6Y3

Phone: (403) 276-2201  
Website: www.gasonic.com



**WADE WEATHERBEE**  
High Rise Division Manager

5442 56 Avenue SE  
Calgary, Alberta  
T2C 4M6

Telephone: 403-532-3205  
Fax: 403-532-0185  
Cellular: 403-703-7888

E-mail: waderw@telus.net

CONSULTING • DESIGN • INSPECTION • TESTING SERVICES

**Anton J. Vlooswyk, P.Eng.**

Cel: (403) 651-1514  
Tel: (403) 287-0888  
Fax: (403) 287-0880  
Email: anton@bee.ca



**BUILDING  
ENVELOPE  
ENGINEERING  
INC.**

102, 4029- 8th Street S.E.  
Calgary, Alberta, T2G 3A5  
www.bee.ca

## Kenken Puzzle Answer

7	4	1	8	3	2	6	9	5
3	9	8	7	6	5	4	1	2
2	5	6	9	1	4	7	3	8
6	3	7	2	9	8	1	5	4
1	2	5	3	4	7	8	6	9
4	8	9	1	5	6	2	7	3
9	6	3	4	8	1	5	2	7
8	1	2	5	7	3	9	4	6
5	7	4	6	2	9	3	8	1

### TEST YOUR OPERATOR IQ ANSWERS

Answers: 1)b 2)b 3)a 4)b 5)a





**JOIN US:**  
**TUESDAY MARCH 12, 2024 AT 5PM FOR OUR**  
**IN-PERSON MONTHLY MEETING**

**Title:** VFD and motor starters.  
Basic fundamentals of VFD's/motor starters,  
how they work common terminologies  
associated with most starters.

**Presenter:** Simon Wojnowski  
Coral Canada Wide Ltd

**Location:** Danish Canadian Club, 727 11 Ave SW,  
Calgary, AB T2R 0E3





# Just for laughs!

**Why are elevator jokes so good?**  
They work on many levels.

**What is a flower's favorite kind of pickle?**  
A daffo-dill.



**What does Jeff Bezos do before he goes to sleep?**  
He puts his PJ-Amazon.

## BOA CALGARY OPERATOR MAGAZINE ADVERTISING RATES:



1/8 page	\$200	<b>Premium Locations:</b>	
1/4 page	\$400	1/2 page inside/outside cover	\$850
1/2 page	\$775	1/2 page outside cover	\$900
Full page	\$1000		

Deadline for ads is the 10th of each month. For any questions, please email: [advertising@boacalgary.com](mailto:advertising@boacalgary.com).



**Thank you to our incredible sponsors! Your support of the Building Operators Association is invaluable!!**

**GOLD LEVEL SPONSORS**

















**SILVER LEVEL SPONSORS**













**BRONZE LEVEL SPONSORS**











# Advertisers Directory



**Support those that support  
YOU!**

Next time you are looking for a product or a service provider, please consider connecting with one of our advertisers & members of the Building Operators Association of Calgary

<b>Boiler Services</b> <b>Black &amp; McDonald</b>	<b>403-235-0331</b>
Drain Services Revive Pipes	403-903-4445
Engineering Services Building Envelope Engineering	403-287-0888
Filtration BGE Air Quality Solutions Ltd.	403-243-5941
Fire Protection Services Constant Fire Protection	403-279-7973
HVAC & Electrical Services Black & McDonald	403-235-0331
Indoor Air Quality Services Gasonic Instrument Inc,	403-276-2201
Motor Services James Electric Motor Services	403-252-5477
Power Systems Custom Power Products	855-948-8810
Supply Services DC Sales Corporation	403-253-6808

**Alberta Certified Power Engineers  
Online Directory**

**Check to see when your power  
engineer certificate is due for  
renewal!**

[www.absa.ca/directories/alberta-certified-power-engineers-directory/](http://www.absa.ca/directories/alberta-certified-power-engineers-directory/)



# James Electric



## Motor Services Ltd.

### Professional Pump & Electric Motor Repair

35,000 Square Foot Service Center and Warehouse

In-House Machine Shop & Fabrication Departments

Fully Equipped Service Vans

Certified Hydronic Designer on Staff

Calgary's Largest Replacement Motor Inventory

Largest Stock of Pumps & Pump Parts in Western Canada

Custom Built Fans and Blowers to Meet Your Specifications

ISO & COR Certified

Consumer Choice Award 8 Years Running

All Service Technicians are Trained in Confined Space Entry

Fire Pump, Booster Pump and Sump Pit Annual Inspections Available

Energy Efficient Audits and Solutions

On Call 24 Hours, 7 Days a Week

#### Motors

A.O. Smith, Baldor, Century, Emerson, Franklin, Fasco, Lafert, Leeson, Marathon, WEG, Teco-Westinghouse, US Motors

#### Pumps

Armstrong, Albany, Barnes, Bell & Gossett, Burkes, Darling, Franklin, Goulds, Grundfos, Hydromatic, Liberty, Little Giant, Monarch, Paco, Taco, Tsurumi, Xylem

#### Fans & Blowers

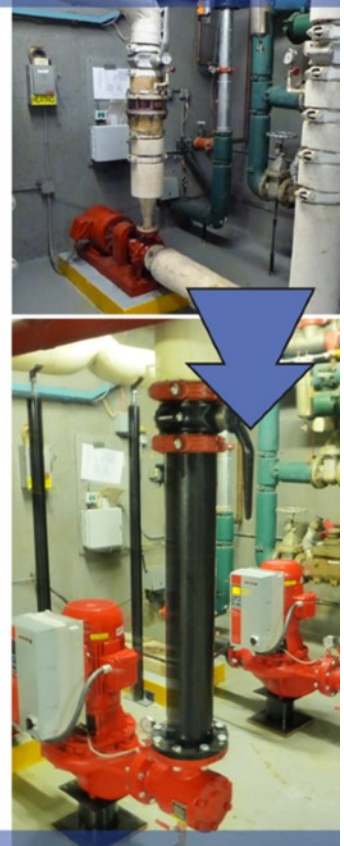
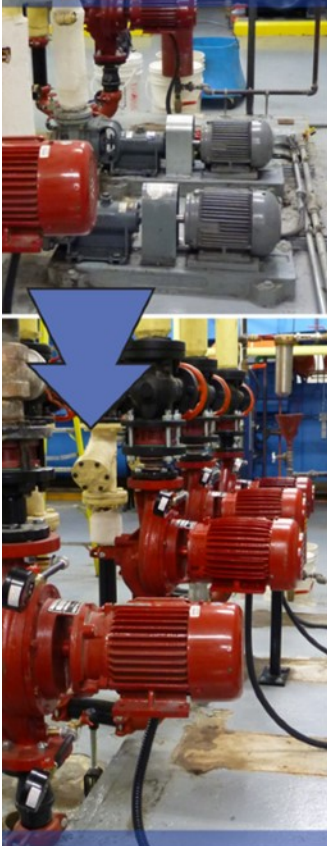
Airdex, AirKing, Broan, Dayton, Delhi, Fantech, Fasco, Greenheck, Lau, Nederman, Nutone, Schaefer, Tjernlund

#### Variable Frequency Drives & Motor Controls

ABB, Danfoss, Baldor/Reliance, WEG, Santerno, Teco-Westinghouse, Tornatech

#### Accessories

Gear Boxes, Pressure Tanks, Gauges, Bearings, Mechanical Seals, Flow Indicators, Filter Housings, Filters, Flanges, V-Belts, Float Switches, Pressure Switches, Pulleys, Sheaves, Relays, Contactors, Pressure Reducing Valves



## Are your pumps leaking money?



### Booster Audit

We have ability to monitor water usage and power consumption to provide the following:

- A comprehensive pre audit booster inspection
- An energy audit with an estimate of annual energy savings and potential payback.
- The "scope of work" for the installing contractor
- Start-up and commissioning on site
- Yearly maintenance inspections
- On site service 24/7/365

### Grundfos BoosterpaQ

- Most efficient cascade control, application optimized software in the industry
- Single source responsibility: One manufacturer for pumps, motors, drives and control
- Plug & Play - Easy to install and commission
- Large, clear, user friendly & advanced controls interface
- Reduced floor space footprint
- Ethernet & BUS communications option
- Drinking water approvals: NSF61/372, Hygienic designed 316SS manifolds



4020 - 8 Avenue S.E, Calgary, Alberta, T2G 3A7 [www.jameselectric.ca](http://www.jameselectric.ca) [motors@jameselectric.ca](mailto:motors@jameselectric.ca)

We look forward to seeing you in-person for our meeting at the Danish Canadian Club (727 11 Ave SW) on Tuesday March 12, 2024 @ 5pm

Please visit the Building Operators Association of Canada YouTube Channel to watch the Speakers.



**Need Trained Building Operators?**  **'Be A Part of the First Training of Its Kind'**

**5<sup>th</sup> Class Power Engineering 'Building Operator' Training Program**



- ▶ Our first ever program graduated nineteen 5<sup>th</sup> Class Power Engineers Building Operators
- ▶ 90% secured employment with major companies in town!

**If you are a Building Owner/ Manager and would like to:**

- know more about this training or
- be a work experience host employer or
- have recruiting advantage after completion of training

**At no cost to you!**

**Please contact:**  
 Monika Bhandari  
 Phone: 403.514.8328  
 Email: mbhandari@ccisab.ca  
 1111-11 Ave SW 5th Floor  
 Calgary, Alberta T2R 0G5  
 www.ogtp.ca

Funder by:   In Partnership with: 

### Black&McDonald

**Calgary Office**  
1071 26 St NE Calgary  
403-235-0331

#### Services

- Heating, Ventilation & Air Conditioning
- Sheet Metal
- Electrical
- Building Automation Systems
- Plumbing
- Refrigeration
- Voice & Data Communications
- Instrumentation
- High Voltage
- Process Piping
- Millwright & Rigging

#### Capabilities

- Design/Build
- Renovation & Upgrade
- Fast-track Change-out
- Building Commissioning
- Infrared Thermography
- Facilities Management & Operation
- Planned Preventive Maintenance
- Sheet Metal Fabrication Pipe
- Complete Boiler Services
- 24-hour Emergency Service**

#### Facilities

- Commercial/Office
- Industrial
- Education & Institutional
- Healthcare
- Industrial
- Telecom & Data Centers
- Sports & Assembly
- Airport & Transit Stations
- Military Bases



*Black & McDonald is a leader in quality service, committed to implementing innovative solutions throughout a facility's life cycle.*

[www.blackandmedonald.com](http://www.blackandmedonald.com)