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Windsor - Ontario - N8W 2W8

ASHRAE Windsor Chapter NEWSLETTER

March 15, 2017 Volume: 34 - Issue: 8

MEMBERSHIP PROMOTION NIGHT
TUESDAY MARCH 21, 2017
LILLY KAZZILLY'S - SMACNA JOINT MEETING

Please confirm your attendance by calling Nathan Cook @ 519 948 5000 or Email: windsorashrae141@gmail.com

SCHEDULED MEETINGS:

Sept. 12, 2016	25th Annual Golf Tournament
Oct. 18, 2016	Ontario Climate Change Effects to HVAC Industry
Nov. 29, 2016	Applying ASHRAE Standards to Existing Buildings - DL
Dec. 13, 2016	Christmas Social
Jan. 17, 2017	Multi Family Heating Control System
Feb. 28, 2017	Climate Change and Urbanization - DL
Mar. 21, 2017	ASHRAE/SMACNA Joint Meeting
April 18, 2017	Past Presidents' Night - DL at Beach Grove Golf & CC
May 16, 2017	Students' Night

CHAPTER OFFICERS & BOARD OF GOVERNORS

President:	Paul Greff	(519) 966 6100
President-Elect:	Nathan Cook	(519) 948 5000
Treasurer:	David Dufour	(519) 916 5411
Secretary:	Adam Meeker	(519) 737 5725

BOARD OF GOVERNORS

James Smith	(519) 737 5725
Dan Castellan	(519) 253 3000
Steve Koutsonicolas	(519) 999 9954
Bill Davies	(519) 251 6824

CHAPTER COMMITTEES:

Research Promotion:	Andy Hrutka	(519) 978 3903
Membership:	Patrick Castellucci	(519) 250 2006
Technology Transfer	Bill Davies	(519) 251 6824
Historian:	Gord Snell	(519) 964 1700
Young Engineers in ASHRAE (YEA)	Rene Plourde	(226) 344 5218
Refrigeration Chair	Jon Palmer	(519) 256 7922
Grassroots Government Advocacy	Dan Castellan	(519) 253 3000
Student Activities	Jamie Smith	(519) 890 8684
Fac. Adviser - U of W Student Chapter	Dr. David Ting	(519) 253 2871
Newsletter	Adam Meeker	(519) 737 5725
Reception	Jeff Armstrong	(519) 256 7922

ASHRAE Windsor Chapter March 2017 Meeting

SMACNA Technical Speaker - Indoor Air Quality

The Windsor Chapter of ASHRAE is pleased to invite you to our March 2017 meeting. We will be gathering at a familiar location for many of our members; Lilly Kazzilly's Crabshack & Grill. As it is a joint meeting, SMACNA and ASHRAE members alike will be attending the meeting.

Located on the waterfront in east Windsor, Lilly Kazzilly's is a full service restaurant, offering guests a fabulous view of Lake St. Clair, the Detroit River, and Peche Island. With an extensive menu to offer, Lilly's offers a unique and relaxing dining experience.

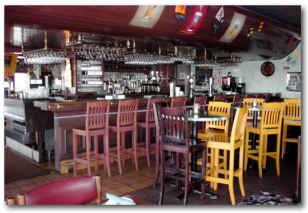
Date: **Tuesday, March 21, 2017**
5:30 PM - 6pm (EST) - Registration/Social
6pm - Dinner (presentation to follow)

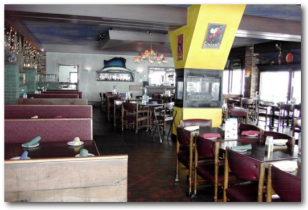
Location: **Lilly Kazzilly's Crabshack & Grill**
9550 Riverside Drive East
Windsor, Ontario
Located adjacent to the Lakeview Park Marina

ASHRAE Windsor Chapter Members and SMACNA Members: **$40**
Guests: **$50**
Students: **$20**

Dinner includes and entrée ordered from the various menu options. Beverages are not included.

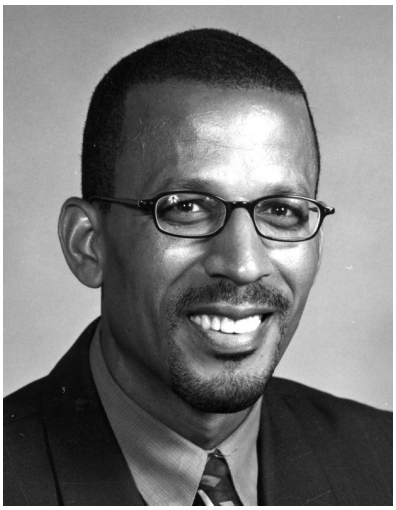
Please RSVP via email by Friday March 17th at 3:00 PM to Nathan Cook.
windsorashrae141@gmail.com
(519) 948-5000




ELI P. HOWARD, III

SMACNA EXECUTIVE DIRECTOR, TECHNICAL SALES



AS SMACNA's Executive Director of Technical Sales, Eli Howard has the overall responsibilities of the more than 30+ SMACNA Technical and ANSI Standards related to the HVAC and Sheet Metal Industry.

He is a member of ASHRAE Technical Committees:

- 90.1 Energy Standard for Buildings Except Low-Rise Residential
- SSPC 62.1 Ventilation for Acceptable IAQ
- 7.2 HVAC&R Construction and Design Build Technologies
- SPC 171P Method of Test of Seismic Restraints for HVAC&R Equipment

He has additional responsibilities as SMACNA Liaison to:

- NFPA 90A & 90B
- International Code Council (ICC)
- Canadian Commission on Building and Fire Codes (CCBFC) Standing Committee on HVAC and Plumbing
- Construction Specifications Institute (CSI)
- International Association of Plumbing and Mechanical Officials (IAPMO)

Prior to joining SMACNA he was Manager of Technical Program Development for NEMI providing technical assistance to contractors in energy engineering and IAQ technologies. His experience also includes Marriott International as Mechanical Engineer for design/construction of hotels in the United States, Hong Kong and Poland.

Mr. Howard holds a degree in Mechanical Engineering from Allegheny College.

Next Meeting:

April 21, 2017: **Past Presidents' Night - Distinguished Lecturer at Beach Grove Golf and Country Club (more details to follow).**

February 2017 Meeting Recap

Last month's Architects' Night themed meeting took the chapter to the Spago Event Lounge. Attendees had the opportunity to witness Distinguished Lecturer Dr. Dru Crawley provide a technical presentation on the '*Impacts of Climate Change and Urbanization on Future Building Performance*'.

Prior to the presentation, the group enjoyed an excellent meal and good fellowship.

Mr. Jerry Leyte of Uponor provided an informative table top display. Thank you presenters for your efforts and great presentations!

A special thanks goes to the staff of Spago Event Lounge, who provided a great dining experience.

Overall, the evening was a great success! Thank you to everyone who participated and for supporting the ASHRAE Windsor Chapter.

History Corner - Keeping You Up-To-Date

BROUGHT TO YOU BY CHAPTER HISTORIAN GORD SNELL

History of Mechanical Systems
The history of mechanical systems in buildings involves a study of inventions and ingenuity as building owners, architects, and engineers devised ways to improve the interior climate of their buildings. Following are highlights in the evolution of heating, ventilating, and cooling systems in historic buildings.

Eighteenth Century
Early heating and ventilation in America relied upon common sense methods of managing the environment. Builders purposely sited houses to capture winter sun and prevailing summer cross breezes; they chose materials that could help protect the inhabitants from the elements, and took precautions against precipitation and damaging drainage patterns. The location and sizes of windows, doors, porches, and the floor plan itself often evolved to maximize ventilation. Heating was primarily from fireplaces or stoves and, therefore, was at the source of delivery. In 1744, Benjamin Franklin designed his "Pennsylvania stove" with a fresh air intake in order to maximize the heat radiated into the room and to minimize annoying smoke.
Thermal insulation was rudimentary—often wattle and daub, brick and wood nogging. The comfort level for occupants was low, but the relatively small difference between internal and external temperatures and relative humidity allowed building materials to expand and contract with the seasons.

Regional styles and architectural features reflected regional climates. In warm, dry and sunny climates, thick adobe walls offered shelter from the sun and kept the inside temperatures cool. Verandas, courtyards, porches, and high ceilings also reduced the impact of the sun. Hot and humid climates called for elevated living floors, louvered grilles and shutters, balconies, and interior courtyards to help circulate air.

Nineteenth Century
The industrial revolution provided the technological means for controlling the environment for the first time. The dual developments of steam energy from coal and industrial mass production made possible early central heating systems with distribution of heated air or steam using metal ducts or pipes. Improvements were made to early wrought iron boilers and by late century, steam and low pressure hot water radiator systems were in common use, both in offices and residences. Some large institutional buildings heated air in furnaces and distributed it throughout the building in brick flues with a network of metal pipes delivering heated air to individual rooms.

History Corner - Keeping You Up-To-Date

Brought to you by Chapter Historian Gord Snell

Nineteenth Century (continued)

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Ventilation became more scientific and the introduction of fresh air into buildings became an important component of heating and cooling. Improved forced air ventilation became possible in mid-century with the introduction of power-driven fans. Architectural features such as porches, awnings, window and door transoms, large openwork iron roof trusses, roof monitors, cupolas, skylights and clerestory windows helped to dissipate heat and provide healthy ventilation.

Cavity wall construction, popular in masonry structures, improved the insulating qualities of a building and also provided a natural cavity for the dissipation of moisture produced on the interior of the building. In some buildings, cinder chips and broken masonry filler between structural iron beams and jack arch floor vaults provided thermal insulation as well as fireproofing. Mineral wool and cork were new sources of lightweight insulation and were forerunners of contemporary batt and blanket insulation.

The technology of the age, however, was not sufficient to produce "tight" buildings. There was still only a moderate difference between internal and external temperatures. This was due, in part, to the limitations of early insulation, the almost exclusive use of single glazed windows, and the absence of airtight construction. The presence of ventilating fans and the reliance on architectural features, such as operable windows, cupolas and transoms, allowed sufficient air movement to keep buildings well ventilated. Building materials could behave in a fairly traditional way, expanding and contracting with the seasons.

Twentieth Century

The twentieth century saw intensive development of new technologies and the notion of fully integrating mechanical systems. Oil and gas furnaces developed in the nineteenth century were improved and made more efficient, with electricity becoming the critical source of power for building systems in the latter half of the century. Forced air heating systems with ducts and registers became popular for all types of buildings and allowed architects to experiment with architectural forms free from mechanical encumbrances.

History Corner - Keeping You Up-To-Date

BROUGHT TO YOU BY CHAPTER HISTORIAN GORD SNELL

Twentieth Century (continued)
In the 1920s large-scale theaters and auditoriums introduced central air conditioning, and by mid-century forced air systems which combined heating and air conditioning in the same ductwork set a new standard for comfort and convenience. The combination and coordination of a variety of systems came together in the post-World War II high-rise buildings; complex heating and air conditioning plants, electric elevators, mechanical towers, ventilation fans, and full service electric lighting were integrated into the building's design.

The insulating qualities of building materials improved. Synthetic materials, such as spun fiberglass batt insulation, were fully developed by mid-century. Prototypes of insulated thermal glazing and integral storm window systems were promoted in construction journals. Caulking to seal out perimeter air around window and door openings became a standard construction detail.

The last quarter of the twentieth century has seen making HVAC systems more energy efficient and better integrated. The use of vapor barriers to control moisture migration, thermally efficient windows, caulking and gaskets, compressed thin wall insulation, has become standard practice. New integrated systems now combine interior climate control with fire suppression, lighting, air filtration, temperature and humidity control, and security detection. Computers regulate the performance of these integrated systems based on the time of day, day of the week, occupancy, and outside ambient temperature.

We've come a long way from trying to create comfort by means of building orientation, natural ventilation, solar heat and heat dissipation for cooling. Even though we can transfer energy through mechanical systems to accomplish all of these functions, isn't it still a little impressive that these original concepts still play an integral part in building design? Something to think about.

Source - National Park Service – U.S. Department of the interior, Preservation Brief 24 (https://www.nps.gov/tps/how-to-preserve/briefs/24-heat-vent-cool.htm#history)

CTTC Announcement—ASHRAE Technology Awards

Do you think you did an exceptional job on a design? If so, we would like to hear from you. We will be selecting project submittals and you may win the award for Windsor chapter and possibly be selected to compete with those in our region. At the very least the local winner's projects will be highlighted in our newsletter and will receive an award at our Past Presidents Night in the spring.

If the project goes on to win at the society level it will be published in the ASHRAE Journal with press releases. The winner and building owner will also receive a plaque.

These are the criteria segments:

- Energy Efficiency (water included)
- Indoor Air Quality and Thermal Comfort
- Innovation
- Operation and Maintenance
- Cost Effectiveness
- Environmental Impact
- Quality of Presentation

Your project must be commissioned, running and have some data to back up your claims in your project. Any commercial, industrial, institutional or residential project will be considered. It can be a new building or existing and also building commissioning is a separate category.

Want some inspiration or even some guidance on what could reach society level competition? Follow the link below for some examples of winning projects (look for "Technology Award" in the title):

https://www.ashrae.org/resources--publications/periodicals/ashrae-journal/features/ashrae-journal-featured-article-excerpts

Remember though, your project doesn't have to be high profile or world class. It can be just a local project that you put a lot of thought into. It should be a design that you took pride in creating and that someone else could benefit from your creativity.

Here is an idea for you. Let's say you designed the HVAC for a sunroom addition of a house. The room has in-floor heat but not cooled so no ductwork would be required. It faces south and gets quite warm in the winter and shoulder months so you install a damper to re-direct the return air to pull mainly from this room to take advantage of the passive solar gain. This will spread the heat out through the house and save on heating bills. In the summer the damper is closed by the residents to keep the warm air from entering the cooled zones.

This is not a typical design but for a small investment it will save the homeowner energy costs and reduce carbon emissions. It will also improve the thermal comfort during shoulder months when residents may need to keep opening windows to control the temperature. This project will touch upon 5 of the 7 criteria mentioned above!

Let's celebrate our hard efforts and ingenuity! *Contact Bill Davies at 519 564-7946 to discuss!*

Education and Training Opportunities

Webcast - Take Control: Using Building Analytics to Drive Building Performance

April 20, 2017 - 1:00pm to 4:00pm EDT

The ASHRAE Windsor Chapter is invited to witness the annual ASHRAE webcast!

This webcast will feature industry experts who will define the importance of, and why we should strive for, better building operations through improved controls and analytics. Viewers will be able to describe key elements of controls and analytics for building operations, and identify steps required to deploy analytics in building projects, including commissioning. This program will quantify how applying best practice controls improve building performance, and will recognize the value of analytics in building operations to achieve a reduced cost and increased performance.

Additional information on the webcast can be found at the following link.

https://www.ashrae.org/membership--conferences/webcasts

Participants will watch the webcast in the audio visual room at the Vollmer head office.

3822 Sandwich Street, Windsor

If interested in participating, contact Bill Davies to schedule.

bdavies@uniongas.com
(519) 251-6824

Attendees may be awarded with Continuing Education Hours if they are needed, so be sure to mark your calendars for this opportunity!

ASHRAE Learning Institute

2017 Online Course Series

2 WAYS TO REGISTER

Internet: www.ashrae.org/onlinecourses
Phone: Call 1-800-527-4723 (US and Canada) or 404-636-8400 (worldwide)

One-part course (3 hours) **$284** (**$219** ASHRAE Member) – -- -- Two-part course (6 hours) **$484** (**$359** ASHRAE Member)

Basics of High-Performance Building Design
Wednesday, February 8, 2017 – 1:00 p.m. to 4:00 p.m.

Designing Toward Net-Zero Energy Commercial Buildings
Tuesday, February 14, 2017 – 1:00 p.m. to 4:00 p.m.

ASHRAE Guideline 0: The Commissioning Process
Tuesday, February 21, 2017 – 1:00 p.m. to 4:00 p.m.

Commissioning Process & ASHRAE Standard 202
Monday, February 27, 2017 – 1:00 p.m. to 4:00 p.m.

NEW! Fundamental Requirements of Standard 62.1-2016
Thursday, March 9, 2017 – 1:00 p.m. to 4:00 p.m.

Commissioning Process in New and Existing Buildings
Part I: Monday, March 13, 2017 – 1:00 p.m. to 4:00 p.m.
Part II: Wednesday, March 15, 2017 – 1:00 p.m. to 4:00 p.m.

Design of Affordable & Efficient Ground Source Heat Pump Systems
Wednesday, March 29, 2017 – 1:00 p.m. to 4:00 p.m.

NEW! Complying with Standard 90.1-2016: Envelope/Lighting
Wednesday, April 5, 2017 – 1:00 p.m. to 4:00 p.m.

NEW! Complying with Standard 90.1-2016: HVAC/Mechanical
Tuesday, April 11, 2017 – 1:00 p.m. to 4:00 p.m.

NEW! Complying with Standard 90.1-2016: Appendix G
Tuesday, April 18, 2017 – 1:00 p.m. to 4:00 p.m.

Air-to-Air Energy Recovery Fundamentals
Wednesday, May 3, 2017 – 1:00 p.m. to 4:00 p.m.

Air-to-Air Energy Recovery Applications: Best Practices
Tuesday, May 9, 2017 – 1:00 p.m. to 4:00 p.m.

Humidity Control: Basic Principles, Loads and Equipment
Tuesday, June 13, 2017 – 1:00 p.m. to 4:00 p.m.

Humidity Control: Applications, Control Levels and Mold Avoidance
Tuesday, June 20, 2017 – 1:00 p.m. to 4:00 p.m.

NEW! New ASHRAE-Classified Refrigerants to Meet Society's Changing Needs
Tuesday, July 11, 2017 – 1:00 p.m. to 4:00 p.m.

Advanced High-Performance Building Design
Wednesday, August 9, 2017 – 1:00 p.m. to 4:00 p.m.

NEW! Fundamental Requirements of Standard 62.1-2016
Wednesday, September 6, 2017 – 1:00 p.m. to 4:00 p.m.

Designing High-Performance Healthcare HVAC Systems
Tuesday, September 19, 2017 – 1:00 p.m. to 4:00 p.m.

Laboratory Design: The Basics and Beyond
Tuesday, October 10, 2017 – 1:00 p.m. to 4:00 p.m.

Introduction to Ultraviolet Germicidal Irradiation (UVGI) Systems
Monday, October 16, 2017 – 1:00 p.m. to 4:00 p.m.

NEW! Complying with Standard 90.1-2016
Part I: Wednesday, November 1, 2017 – 1:00 p.m. to 4:00 p.m.
Part II: Tuesday, November 7, 2017 – 1:00 p.m. to 4:00 p.m.

NEW! New ASHRAE-Classified Refrigerants to Meet Society's Changing Needs
Tuesday, December 5, 2017 – 1:00 p.m. to 4:00 p.m.

ASHRAE HVAC Design Training

2 Courses, 5 Days of Intense Instruction

Atlanta • Dallas • Doha • Hartford • Toronto

HVAC Design: Level I – Essentials - Registration is $1,264 ($1,009 ASHRAE Member)

Gain practical skills and knowledge in designing and maintaining HVAC systems that can be put to immediate use. The training provides real-world examples of HVAC systems, including calculations of heating and cooling loads, ventilation and diffuser selection using the newly renovated ASHRAE Headquarters building as a living lab.

HVAC Design: Level II – Applications - Registration is $854 ($699 ASHRAE Member)

HVAC Design: Level II — Applications provides instruction on HVAC system design for experienced HVAC designers and those who complete the HVAC Design: Level I – Essentials training. The training provides information that allows practicing engineers and designers an opportunity to expand their exposure to HVAC systems design procedures for a better understanding of system options to save energy.

Visit www.ashrae.org/hvactraining to register and learn how your Chapter can earn PAOE points.

Contact Karen Murray (kmurray@ashrae.org) to discuss scheduling ASHRAE HVAC Training in your Chapter area.

The Benefits of an ASHRAE Certification

SHINE IN A RISING FIELD

Certification validates critical job knowledge, skills and abilities in a given practice area.

GAIN A COMPETITIVE EDGE

ASHRAE certifications are recognized by over 30 national, state and municipal entities.

DISTINGUISH YOURSELF

Use the ASHRAE Certified logo and designation—e.g. Curtis Smith, BEAP, BEMP—in email signatures, professional networking and business cards to enhance your reputation.

LET ASHRAE PROMOTE YOUR ACHIEVEMENT

Certificants and their employers are listed on the website and in ASHRAE *Insights*.

ASHRAE®
Certified

5 Easy Steps to Earn and Maintain an ASHRAE Certification

1. Read the *Candidate Guidebook*
Visit www.ashrae.org/certification and download the guidebook for the program in which you are interested.

2. Complete the Application
Complete the online application at www.ashrae.org/certification. Membership in ASHRAE is not a requirement for certification.

3. Schedule an Examination
BCxP, BEAP, BEMP, HBDP, HFDP and OPMP examinations are offered at over 300 conveniently located computer-based testing centers worldwide. Candidates may schedule an examination appointment online or by telephone.

4. Review Available Resources
The *Candidate Guidebook* for a program identifies available resources, including practice exams, that may help candidates gain an understanding of the body of knowledge that the examination tests. Purchase of books or course registrations is not a prerequisite to taking any ASHRAE certification examination.

5. Renew the Certification
Each certification is renewable every three years. To retain certification, each certification holder must earn 45* Professional Development Hours (PDHs) during the three year period following initial certification or the last renewal.

**BCxP requires 50 PDHs.*

Schedule an exam at one of over **300 testing centers** worldwide **TODAY!**

To learn more or apply, please go to

www.ashrae.org/certification

ASHRAE Certification

More than 2,500 professionals certified in six key built-environment fields.

Are You Ready to Join Them?

Validation. Pride. Recognition.

"Because of the high level of expertise, professionalism and ethics demonstrated by ASHRAE, achieving certification under their established requirements implies one of the highest levels of competence and knowledge available in the industry."

Jeffrey G Ross-Bain, BEMP, Ross-Bain Green Building, LLC

ASHRAE®
Certified

Advertising and Promotion

Actively participating in ASHRAE events is a great way to network and discuss potential projects and applications. Chapter meetings provide a captive audience and exposure to a group actively involved in our industry. Promotion opportunities are available during our chapter meetings, through the monthly newsletter and the new website.

Table Top Display

What better way to display a new product, existing line, or share great ideas than to have a table top display at our monthly chapter meetings?

The fee to provide a Table Top Display is $200.00 (CAD). In addition to the presentation, the fee also covers the cost of the presenter's meal at the event. If interested in providing a Table Top Display at a future meeting to promote product lines or technologies, please contact Nathan Cook to schedule.

windsorashrae141@gmail.com
(519) 948-5000

Business Card Promotion

The monthly newsletter is distributed to all of our ASHRAE Windsor members as well as several others that are involved in our industry. Inclusion of your business card in the newsletter would provide a great opportunity to introduce your name and company to those members who may not know you personally. Business cards may also be displayed on the new website.

The fee to include your business card in the newsletter is $100.00 (CAD) for the year ending June 30, 2017. If interested in having your business card information included in the monthly newsletter, please contact Nathan Cook.

windsorashrae141@gmail.com
(519) 948-5000

ASHRAE Social and Video

ASHRAE has established and continues to develop an active Youtube video channel. The channel includes a variety of videos including interviews, training invormation, technical discussions and instructional videos. The channel can be found at the following link:

https://www.youtube.com/user/ASHRAEvideo

Be sure to subscribe to the channel to keep tabs on recent videos and activity in the Society. In fact, ASHRAE has published two new videos that may contain some familiar faces to our chapter! The links for these specific videos are below:

#MyASHRAE—Collection 3

https://www.youtube.com/watch?v=qx4ogD9XNgg&t=2s

Members ROCK the Photo Booth at Vegas Welcome Party

https://www.youtube.com/watch?v=8zYGC6mCnBA&t=32s

Enjoy the show!

ASHRAE Chapter Involvement

It is a welcome site to see Chapter members and non-member guests alike attend the monthly meetings and events. The time and effort put fourth by all individuals to attend these events is greatly appreciated as it helps strengthen and develop our Chapter as a whole.

As it takes time and effort to attend these meetings, it also takes a great deal of time, effort and dedication to organize and prepare for these events such that they are informative and enjoyable for everyone.

It is a goal of the Chapter to increase the number of participating members. Involvement in Chapter operations is not limited to the Board of Governor and Chapter Committee positions. All individuals interested in getting involved with ASHRAE at any level are encouraged to volunteer in any capacity they are willing and able to. Any efforts to help the Chapter continue to develop and improve would be greatly appreciated.

If anyone is interested in volunteering for general involvement or have a specific task in mind, please contact Nathan Cook.

windsorashrae141@gmail.com
(519) 948-5000