



Contract Courses

offered by

Ontario Good Roads Association

For further information, or to inquire about booking or hosting any of the courses described in this booklet, please contact Cherry Sales at the OGRA office.

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TABLE OF CONTENTS

| | |
|--|----|
| WINTER MAINTENANCE OPERATIONS TRAINING | 4 |
| Equipment Operator Workshop | 4 |
| Supervisor/Patroller Workshop | 4 |
| Equipment Operator Refresher | 5 |
| Supervisor/Patroller Refresher | 5 |
| 1-day Combined Winter Maintenance Refresher | 6 |
| Instructors | 7 |
| LOCAL GROUP EQUIPMENT OPERATOR TRAINING | 9 |
| Grader Equipment Course | 9 |
| Loader/Backhoe Equipment Course | 10 |
| Other Heavy Equipment | 11 |
| Instructors | 12 |
| MANAGING YOUR ROAD NETWORK | 13 |
| Pavement Condition Evaluation..... | 13 |
| Flexible Pavement Condition | 14 |
| Instructor | 14 |
| Manage the road – not just the pavement..... | 15 |
| Instructor | 15 |
| MUNICIPAL INFRASTRUCTURE TRAINING | 16 |
| Bridge and Structure Inspection | 16 |
| Instructors | 16 |
| Sewer and Watermain Construction Inspection..... | 19 |
| Instructor | 19 |
| Storm Sewer Design..... | 20 |
| Instructor | 20 |
| C.S. ANDERSON ROAD SCHOOL | 21 |
| Bridge and Culvert Management..... | 21 |
| Instructors | 21 |
| Effective Management..... | 23 |
| Instructors | 23 |

| | |
|---|-----------|
| Municipal Survey..... | 25 |
| Instructors..... | 25 |
| Plan Reading and Contract Interpretation..... | 26 |
| Instructors..... | 26 |
| LEADERSHIP, SUPERVISION AND ADMINISTRATION | 28 |
| Introduction to Contract Law..... | 28 |
| Advanced Contract Law | 29 |
| Contract Dispute Resolution | 30 |
| Instructor | 30 |

WINTER MAINTENANCE OPERATIONS TRAINING

Equipment Operator Workshop

Duration: 2 days

Course Content

- Environment Canada's Code of Practice & MOECC's Local Source Water Protection
- Level of Service/Minimum Maintenance Standards
- Preseason route, equipment and facility checks
- Sources of weather information, storm patterns, overview of RWIS
- Traditional and new snow and ice control materials and methods, how salt works as a de-icer, anti-icing vs. de-icing, application methods for solids and liquids
- Salt storage, handling, and application
- Anti-icing and de-icing equipment, and best practice procedures for plowing and winging, wing and plow mounting
- Health and safety issues
- Record-keeping

Who Should Attend

Municipal and contract snowplow operators.

Supervisor/Patroller Workshop

Duration: 2 days

Course Content

- Environment Canada's Code of Practice, Salt Management Plans and MOECC's Local Source Water Protection
- Level of Service/Minimum Maintenance Standards
- Verifying routes, preparing materials, personnel, facilities and equipment
- Sources of weather information, storm patterns in Ontario
- Interpreting RWIS data to select best winter control strategies
- Traditional and new snow & ice control materials, anti-icing vs. de-icing, best practices for application of solids and liquids and snow disposal
- Best practices for salt storage, handling and application
- Hours of Service, materials handling, safety issues
- What records supervisors must keep and why

Who Should Attend

Municipal and contract winter maintenance supervisors and patrollers.

Half-day Refresher Courses

Equipment Operator Refresher

Course Content

- Preseason route reviews
- Environment Canada's Code of Practice and MOECC's Local Source Water Protection
- Best practices for winter maintenance operations
- Understanding the conditions that produce black ice and frost
- Verification of spreader control calibration
- Level of Service and winter maintenance practices
- Best practices for salt storage, handling and application
- New and emerging technology and materials

Who Should Attend

Municipal and contract snowplow operators who have attended the 2-day Equipment Operators workshop or Snow School.

Supervisor/Patroller Refresher

Course Content

- Preparing for winter
- Environment Canada's Code of Practice and MOECC's Local Source Water Protection
- Supervisor's role re. salt management plans
- Level of Service and winter maintenance practices
- Best practices for salt storage, handling and application
- Understanding the weather
- Interpreting the forecast to strategize best maintenance response
- New and emerging technology and materials
- Record-keeping
- Hours of Service

Who Should Attend

Municipal and contract winter maintenance supervisors and patrollers who have attended the 2-day Supervisor/Patroller workshop or Snow School.

1-day Combined Winter Maintenance Refresher

Course Content

| Core Modules | Optional Modules (Choose 3) |
|--|--|
| <ul style="list-style-type: none">· Environment Canada’s Code of Practice· Salt Management Plans & Local Source Water Protection· Snow & ice control: Materials· Minimum Maintenance Standards & Level of Service· Snow & ice control: Techniques· Safety· Hours of Service· Record keeping & risk management | <ul style="list-style-type: none">· Winter weather patterns & characteristics· RWIS & GPS/AVL· Making maintenance decisions based on weather & pavement condition forecasts· Beyond Circle Check· Calibration confirmation· Managing blowing snow· Winter maintenance of pedestrian walkways· Winter maintenance of gravel roads· Case study exercises |

Who Should Attend

Municipal and contract snowplow operators and supervisor/patrollers who have attended the 2-day Equipment Operators, Supervisor/Patroller workshop or Snow School.

Note: All modules can be included in a 1 ½ day format

Instructors

Paul Johnson C.E.T., C.S.T. is the Operations Manager for Wellington County in southern Ontario. He is a past chair of the Ontario Road Salt Management Group (ORSMG), which represents the largest users of road salts in Ontario.

Paul chairs the Training Committee of the ORSMG, and under his leadership, they have developed a comprehensive suite of winter maintenance operations training courses. This includes the award winning Snow School, which received the national Excellence in Education Award from the Transportation Association of Canada.

His expertise is also recognized on the international scene. Paul has delivered presentations and workshops on winter maintenance techniques in the United States, the Netherlands, Czech Republic, and Norway.

Emil Marion C.E.T., CRS-S started with the Region of Waterloo in 1988 in the Traffic Engineering group. In 1991, he moved into a technical role in the Transportation Operations Department. In 1999 he was promoted to Area Supervisor (Central Yard) and is currently the Supervisor, Technical Operations. Emil and his staff provide technical support to the Roads and Traffic Operations division. He is currently involved in all aspects of operations on a Region wide basis including the administration of the Area Maintenance Contracts which provide maintenance services on the Regional roads located within the cities of Kitchener, Waterloo and Cambridge.

Emil is a Certified Engineering Technologist with OACETT and a Certified Senior Road Supervisor with AORS. Emil is the current Chair of the Ontario Road Salt Management Group (ORSMG), is a Director of AORS, and is a member of the APWA. Emil is also an instructor at the annual OGRA Snow School along with providing on-site winter maintenance training for the OGRA.

Being involved in the roads maintenance field for most of his career from engineering to supervising in the field to providing technical expertise, he has gained a lot of experience in both the administrative and field side of the business that he enjoys sharing with others.

Warren Nicholishen, CRS., CST, CIG brings with him 28 years of Public Service experience in maintenance operations and road design. His educational background is in Land Surveying and Civil Technology. He holds the position as the Manager of Transportation, Fleet, Transit and Traffic Operations with the Municipality of Port Hope. Warren's responsibilities and experience involve the three roads maintenance programs; Roadside, Winter Operations, and Sewer infrastructure.

Previously, Warren worked with the City of Kawartha Lakes, Regional Municipality of Durham, and the City of Oshawa where he spent 12 winter seasons operating plows on the midnight shift. He also spent 3 years in the private sector with Marshall Macklin Monaghan.

Warren represents Port Hope on the Ontario Road Salt Management Group. He acted as past Chair and Secretary, and now an active representative. For the past 10 years, Warren is a dedicated OGRA volunteer instructor at the annual Winter Maintenance Snow School. Warren has delivered research papers and delivered presentations across Ontario and in numerous cities from Hartford, Connecticut to Spokane, Washington over the last 8 years with the American Public Works Association.

LOCAL GROUP EQUIPMENT OPERATOR TRAINING

Grader Equipment Course

Course Content

Classroom

- Mounting and dismounting machine
- Introduce new equipment and features
- Principles of operation: diesel engines, powershift transmissions
- Final drives and braking systems
- Open and closed centre hydraulic systems
- Service features and periodic maintenance procedures
- Starting, stopping and cycling the machine
- Winter operations (by request)
- *Occupational Health and Safety Act* and Regulations and Safe Operating Practices

Field Practice

- Inspecting and lubricating equipment
- Operating the equipment and working to grade
- Grade Station and grade set-up
- Ditching, front and back sloping
- Crowning and shaping roadways
- General road maintenance
- Operating grader on side slopes
- Using the articulated frame mode for efficient grading
- Straight blading, side casting and mixing materials
- Parking and securing equipment
- Normal and emergency shutdown

Loader/Backhoe Equipment Course

Course Content

Classroom

- Mounting and dismounting machine, diesel engine, transmissions, shuttle shift, final drives and braking systems
- Open and closed centre hydraulic systems
- Service features and periodic maintenance procedures
- Starting, stopping and cycling the machine
- Road building theory, ditches, crowns, new construction, etc.
- *Occupational Health & Safety Act* and Regulations
- Personal and crew safety, work area assessment for underground and overhead hazards
- Safety in rigging, safe working load, working load limit, factors of safety, breaking strength
- International hoisting signals
- Operating tips, proper set-up, and digging for production
- Digging to line and grade
- Using eye level, batter boards, and boning rods

Field Practice

- Secure the machine
- Inspect and lubricate equipment
- Operating the equipment, working to grade
- Grade station and grade set-up
- Trenching, culvert installation and removal
- Excavating in open and confined areas
- Backfilling trenches/excavating with loader bucket and backhoe bucket
- Shoulder maintenance with front end loader
- General road maintenance
- Identify safe lift and swing zones and safe load test methods
- Safely lift, swing, carry and place loads using proper rigging and attachment points
- Positioning trucks for efficient loading
- Backfilling, levelling, backdragging, downpressure/float position
- Plowing snow, steering control (Note: will be discussed if not in season)
- Normal and emergency shutdown

Other Heavy Equipment

- Snow control equipment
- Landfill equipment (including earthmovers and pushtractors)
- Heavy equipment safety training (for maintenance personnel)
- Skid steer loaders (Bobcat)
- Gradalls
- Excavators
- Scraper and compaction/paving equipment
- Dozers/trim dozers
- Truck AZ, DZ and Air Brake Endorsement
- Hiab and other truck hoists
- Floating and load security
- Slinging and rigging
- Book 7 traffic control
- Propane handling
- Forklift

Who Should Attend

Operators with limited or extensive experience can be accommodated with any of these courses.

Training Requirements

- Worksite (e.g. works yard, gravel pit)
- Classroom
- Local coordinator to assist in making arrangements
- Participant's usual equipment
- For operators with limited experience, one machine per operator is required.

Materials Required

Calculator, hard hat, safety vest, safety boots, safety glasses, and appropriate outdoor clothing

Accreditation

This course is recognized by:

- The Engineering Institute of Canada awards 2.8 Continuing Education Units to these courses.

Duration

- New Operators: 4 days
- Operators with at least 1 year experience: 3 days

Instructors

John Romano has 30 years of experience, which 11 of those has been in training, carrying out job duties in various capacities at the City of Brampton.

For the past eight years John has been Brampton's Fleet Training Officer and has been able to pass along his skills and experience in the operation of multiple types of heavy equipment and service vehicles to all the various user departments within the city.

John's passion for teaching/training employees how to operate various types of equipment and to also teach professional driver training has allowed me to establish a private training school (Vocational Training School of Ontario) in 2013 to provide proper heavy equipment training and knowledge to municipal employees throughout Ontario.

Jim Scott finished school and became a licenced Ontario Millwright. In 1990 he felt a need for a career change and began working in the transportation industry. In 1998 he joined the City of Brampton as a Transit Operator, Transit Road Coordinator and eventually Training Coordinator. Opportunity knocked in 2006 when Jim was offered a position with the Fleet Services division as Fleet Training Supervisor. During his time with Fleet Services, he has been seconded on 2 occasions to the role of Supervisor of Maintenance and Operations. Jim holds a certificate in Adult Education as well as several accreditations in training. Aside from his career with the city, Jim teaches at Humber College and is a partner in a private training school.

MANAGING YOUR ROAD NETWORK

Pavement Condition Evaluation

Duration: 2 days

Course Objectives

This intensive 2-day course teaches participants how to assess the condition of the flexible pavements in their roadway network. Through a mix of in-class modules and a field training circuit, participants will learn to identify and classify by type, extent and severity, typical pavement surface distresses that contribute to the reduction in serviceability of the pavement. Through the assessment of pavement condition, participants will gain an understanding of potential maintenance and rehabilitation treatments that could be used to cost-effectively extend the life of the pavement.

Course Content

- Pavement types and suitability
- Typical distresses and their cause and significance
- Determination of ride quality
- Pavement condition assessment using the Ontario Ministry of Transportation “SP-024 Manual for the Condition Rating of Flexible Pavements”
- Field evaluation circuit assessment of pavement condition and ride quality
- Evaluation and comparison of pavement condition assessments

Who Should Attend

Municipal operations and engineering technical staff as well as consulting engineers responsible for inspecting and assessing pavement condition. Class size is limited to 20 students for optimal benefit from the field circuit component and low student/instructor ratio.

Instructor

David Hein is a principal engineer with Applied Research Associates, Inc. in Toronto. Dave has worked extensively with pavement type selection and in the development and implementation of life-cycle cost evaluation tools. He is a principal author of a soon to be published U.S. National Cooperative Highway Research Program project that developed guidelines for pavement type selection and alternate bid projects, has been extensively involved in the MTO’s pavement type selection procedures and completed numerous life-cycle cost analysis projects throughout Canada and the United States. He is here today to provide us an overview with the soon to be released project that developed alternate pavement design and life-cycle cost tools for Municipal roadways in Ontario.

Flexible Pavement Condition

Duration: 2 days

Course Objectives

Participants will learn techniques for the effective assessment of the condition of flexible pavements including surface distress, roughness, structural capacity, etc. The assessment methods will be used to develop an understanding of the timing and extent of pavement maintenance and rehabilitation techniques to preserve and cost-effectively extend the service life of the pavement. This course will present case studies of pavement condition and their assessment and applicable techniques to improve pavement serviceability. This course is an excellent companion to the Pavement Condition Evaluation course.

Course Content

- Flexible pavement design
- Pavement condition evaluation techniques
- Network and project level pavement management and rehabilitation
- Early life effective maintenance techniques
- Mid-life pavement preservation
- Late-life pavement rehabilitation
- End of life pavement reconstruction
- Selection of cost-effective treatments
- Case studies of actual projects

Who Should Attend

Municipal operations and engineering technical staff, consulting engineers responsible for inspecting and assessing pavement condition, and participants from the Municipal Pavement Condition Evaluation course.

Instructor

David Hein is a principal engineer with Applied Research Associates, Inc in Toronto. Dave has worked extensively with pavement type selection and in the development and implementation of life-cycle cost evaluation tools. He is a principal author of a soon to be published U.S. National Cooperative Highway Research Program project that developed guidelines for pavement type selection and alternate bid projects, has been extensively involved in the MTO's pavement type selection procedures and completed numerous life-cycle cost analysis projects throughout Canada and the United States. He is here today to provide us an overview with the soon to be released project that developed alternate pavement design and life-cycle cost tools for Municipal roadways in Ontario.

Manage the road – not just the pavement

Duration: 2 days

Workshop Objectives

Managing a road system is far more complex than simply managing by pavement condition; it is only one factor in the final decision. This workshop will cover the identification and management of defects in six functional areas that are financial and legal risks for the municipality. Participants will learn to interpret the ratings in the Inventory Manual for Municipal Roads; to recognize the implications of defects found within the road allowance with respect to liability exposure and performance; to make decisions regarding road rehabilitation treatments; to differentiate between structural and non-structural defects, and how to relate the consequences of road rehabilitation treatments to capital budgets and programming.

Workshop Content

- Overview of the *Inventory Manual for Municipal Roads*
- Asset identification
- Existing road condition
- Traffic volume, type, and projected growth
- Point ratings of road elements
- Type and timing of required improvements
- Improvement costs
- Interpreting the data
- Liability exposure
- Managing your pavements
- Capital and maintenance budgets
- Developing strategies for optimal pavement management
- Interrelationship between pavements and other assets in the right-of-way
- Pavement defects and corrective treatments
- Case study examples of both urban and rural roads

Who Should Attend

Road managers and engineers, technologists and technicians responsible for capital planning and road system management.

Instructor

David Anderson is an Asset Management Specialist with over 30 years of experience as a municipal employee, and approximately 7 years as a consultant. Dave's municipal career began in surveys and inspection and advanced to spend the last 20 years of his municipal career at the senior manager or department head level. Dave's municipal work experience includes municipalities at the upper-tier, lower-tier, and single-tier levels.

MUNICIPAL INFRASTRUCTURE TRAINING

Bridge and Structure Inspection

Duration: 3 to 4 days

Course Objectives

This course will develop “trained eyes” to assess the condition of a structure and to recognize problems that require follow-up action.

Course Content

- Types of bridges and culverts
- Components
- Construction materials and material defects
- Procedures for conducting a detailed visual inspection using the Ontario Structure Inspection Manual (OSIM) including: identification of material defects, performance deficiencies, maintenance needs and the need for additional investigations
- Field trips

Who Should Attend

Municipal employees who are responsible for conducting detailed visual inspections of bridges and culverts under the supervision of a licensed professional engineer.

Instructors

Tony Angelo is the Manager of Structures at 407ETR Concession Company Ltd. He has over 21 years of experience in the functional planning and structural design, inspection and rehabilitation of a variety of transportation structures, including highway structures, vehicular and railway grade separations, multi-span bridges over navigable waterways and lesser scale conventional water crossings.

At 407ETR Concession Company Ltd, Tony is directly responsible for the inspection, maintenance, prioritization, budgeting, repair, rehabilitation, and construction administration of all structures within the Highway 407ETR corridor. He is registered as a Professional Engineer in Ontario.

Tony has completed structural inspections, evaluations, surveys, testing, and investigations on a wide variety of structures across most of Ontario for private and public organizations. Tony has extensive experience in the detailed design of bridges and culverts including an immense

assortment of precast concrete structures, cast in place concrete structures and structural steel structures.

Dennis Baxter is Senior Manager, Bridges for GHD Limited in Whitby, Ontario. He is a professional engineer with over 33 years of experience specializing in transportation structure design, bridge rehabilitation and inspection, asset management, structural planning and construction services. He has managed a wide variety of bridge design and rehabilitation assignments, including design of bridge structures over railways, navigable and non-navigable waterways, roadways and pedestrian thoroughfares, detailed structural inspections, detailed condition surveys, structural steel fatigue inspections, underwater inspections, timber inspection, load assessments, and emergency services.

Dennis' experience includes major assignments in the areas of bridge inspection, rehabilitation and replacement. He has also been involved in construction administration and liaison.

David Gagné is the Senior Manager of Bridge Inspections with GHD's Transportation Department with 25 years of experience. He has been involved in MBADES inspections of over 5000 bridge and culvert structures and has supervised over 500 deck condition surveys. David has been involved in over 3000 Biennial Inspections of bridge, culvert, and overhead sign support structures for various MTO regions, municipal clients and on Highway 407 ETR. David is an IHSA working at heights instructor. David has published a paper on the Logistics of Inspecting the Prince Edward Viaduct – Don River Section.

John Stephenson is a Senior Project Manager for the Region of Waterloo. He is responsible for managing infrastructure projects ranging in value from \$2 million to \$50 million. Prior to that he was the Region's Senior Transportation Infrastructure Engineer, and was responsible for coordinating bridge inspections, testing, and evaluations, as well as managing the Region's bridge and structures data base. Before joining the Region, John worked in the private sector as a bridge consultant in both Toronto and Vancouver. He has worked on numerous high profile bridge projects such as the Lions Gate Bridge in Vancouver, Peace Bridge, Thousand Islands Bridge, and the Confederation Bridge. John holds both a Bachelors degree in Civil Engineering and Management and a Master of Engineering degree from McMaster University.

Andy Kikites has nearly 20 years experience in bridge engineering, and has held designer positions with Marshall Macklin Monaghan Limited, Giffels Associates Limited, and McCormick Rankin Corporation. He was then the Deputy Manager, Bridge Engineering for Giffels Associates Limited, Head of Bridge Engineering for the City of Brampton, and is now Associate Vice President for HDR Corporation.

Andy is a Board Member of the University of Toronto PEY Advisory Committee, and the Engineering Career Centre Advisory Board. He is Chair of the Humber Institute of Technology Civil Engineering Technology Program Advisory Committee, and an Industry Partner of Humber's Strategic Plan Development Committee.

In addition to authoring several research papers, Andy has lectured at McMaster University, Ryerson University, University of Toronto, and Humber Institute of Technology.

Andy has a Master of Engineering (Structures) and Bachelor of Applied Science (Civil) from the University of Toronto; as well as a Civil Engineering Technology Diploma, and the Professional CAD Technician Certificate from Humber Institute of Technology.

Sewer and Watermain Construction Inspection

Duration: 3 days

Course Objectives

This course offers an overview of major aspects of sewer and watermain installation from an inspector's perspective.

Course Content

- Tender Documents
- Inspector's Responsibilities
- Geotechnical Considerations, Excavation and Backfill
- Watermain Design, Installation and Testing
- Disinfection of Watermains
- Construction Site Safety
- Sanitary Sewer Design, Installation and Testing
- Demonstrations of Installation and Testing
- Environmental Considerations
- Utilities
- Pipes and Fittings

Who Should Attend

This course is recommended for junior to intermediate level sewer and watermain construction inspectors.

Instructor

Frank J. Csenkey, CET., (Ret) has 35 years experience in engineering and construction as a Project Manager with the City of Toronto and 3 years with a geotechnical consultant. Over the past 15+ years he has delivered numerous courses on watermain design and sewer and watermain inspection. As project manager, he has managed numerous watermain installation, sewer installation, road construction, lead water service replacement, storm water management and sewer and watermain rehabilitation projects.

Storm Sewer Design

Duration: 4.5 days

Course Objectives

To introduce participants to the fundamental design principles used to estimate stormwater runoff and the principles used to design storm water systems.

Course Content

- Hydrology
- Hydraulics
- Storm Sewer Design Worksheet
- Sewer layout and standards
- Structural design of rigid conduits
- Structural design of flexible conduits
- Design of culverts
- Selection of corrugated steel culverts
- Stormwater control, overland flow and ponding

Who Should Attend

Those who have had some exposure to stormwater drainage and design who wish to expand their understanding of methods of accommodating storm water runoff for minor and major design storm events, e.g. field inspectors, draft persons, GIS technologists, development design technologists, water resource and development engineers.

Instructor

Arthur Smith is a licensed professional engineer and a retired professor of Civil Engineering Technology at Durham College. He also taught computer programming with the college after the closure of the civil engineering program. He has since worked as a construction inspector for Sernas Associates and as a Project Engineer (Development) for the Town of Whitby, and he is now retired.

C.S. ANDERSON ROAD SCHOOL

Bridge and Culvert Management

Duration: 2 to 3 days

Course Objectives

This course deals with the principles of good management of bridges and culverts, and outlines the need for routine inspections, preventative maintenance, and proper signage of structures.

Course Content

- Types of bridges
- Terminology and structure components
- Bridge and culvert inspection
- General housekeeping
- Concrete bridge and culvert maintenance
- Concrete deck rehabilitation
- Steel bridge and metal culvert maintenance
- Load limit posting and vertical clearance
- Deck joints and bearings
- Timber bridges
- Soil steel culvert installation and construction
- Precast concrete culvert installation and construction
- Field trip inspections of various structures

Who Should Attend

This course is structured to assist supervisors, general forepersons and other personnel involved in resolving problems associated with existing municipal bridges and culverts.

Instructors

Andy Kikites has nearly 20 years experience in bridge engineering, and has held designer positions with Marshall Macklin Monaghan Limited, Giffels Associates Limited, and McCormick Rankin Corporation. He was then the Deputy Manager, Bridge Engineering for Giffels Associates Limited, Head of Bridge Engineering for the City of Brampton, and was Associate Vice President for HDR Corporation. Andy has a Master of Engineering (Structures) and Bachelor of Applied Science (Civil) from the University of Toronto; as well as a Civil Engineering Technology Diploma, and the Professional CAD Technician Certificate from Humber Institute of Technology.

Meredith Goodwin is the Capital Project Manager in the Engineering Services Department, for the Town of Innisfil. Her previous experience includes employment by the Town of Newmarket from 2011-2015 as the Roads & Infrastructure Maintenance Coordinator in the Operations Department and as the Capital Projects Manager in the Engineering Department. Meredith began her career in Municipal Engineering at the County of Elgin in 2003 as the Engineering Technologist. Meredith is a graduate of the Georgian College Environmental Engineering Program, and has been involved with the OGRA CS Anderson Road School Bridge and Culvert Management course since 2004.

Effective Management

Duration: 2 days

Course Objectives

At the end of this course, learners will be able to apply the functions of effective management and leadership in everyday activities in their role as municipal supervisors and managers.

Course Content

- Formation of a contract including offer, acceptance, consideration, capacity and legality
- Factors affecting the contractual relationship including mistake, misrepresentation, duress, undue influence, conditional contracts, privity of contract and assignment
- The end of the contractual relationship including performance, breach, discharge by agreement, frustration, remedies for breach of contract
- The court system including adjudication and alternative dispute resolution
- The 3 most common types of contracts
- How to read, interpret and administer the contract
- Parts of a typical contract
- Performance bonds, warranties, and letters of credit
- Liability and insurance
- The best ways of dealing with substandard performance problems
- Ethics in the workplace and your relationship with contractors

Who Should Attend

This course is designed for municipal supervisors and managers, and those who may be given supervisory responsibilities in the near future.

Instructors

Robin Dunn has served as the Township of Oro-Medonte's Chief Administrative Officer (CAO) since 2007. With over 25 years of diverse operations and management experience, he leads the Senior Management Team in the implementation of continuous improvements in the Township's administration, operations and service delivery. Robin holds a Master of Arts in Management, a Masters Certificate in Municipal Leadership and is certified as an Engineering Technologist and Professional Administrator.

Jeff Celentano holds over 34 years of experience in the local public sector, over half of that in management and leadership roles and he is a retired Chief Administrative Officer. He holds a Master's of Public Administration and is an Adjunct Professor of Political Science and Public Management at Nipissing University in North Bay. Jeff is a trained Facilitator and has also received training in Alternative Dispute Resolution techniques. He is the author of a variety of

articles published in provincial and national professional journals. Jeff has held memberships in a number of provincial, national and international management organizations.

Municipal Survey

Duration: 2 to 3 days

Course Objectives

Participants will be introduced to conventional methods of construction survey work and the program will include field pick up on a typical road requiring reconstruction. They will also be introduced to basic surveying calculations applicable for general construction projects and total station survey concepts.

Course Content

- . Overview of survey equipment
- . Construction layout and procedures
- . Use of transit and level
- . Establishing benchmark loops
- . Overview of total station surveying
- . Pre-engineering survey fieldwork
- . Survey calculations for road layout and construction/inspection activities

Who Should Attend

This course is designed as an entry level survey program for supervisors involved with maintaining and rehabilitating short sections of road, in rural or urban settings.

Instructors

Mike Henderson has been a Project Manager for the Regional Municipality of Waterloo for the past 7 years; and previously was the Supervisor of Engineering Asset Management for 12 years with the City of Kitchener, and was with Proctor and Redfern Consulting Engineers for six years. Mike's involvement with OGRA began in 1997, and he has been a Course Director for the Municipal Survey course since 2005. He is the recipient of the OGRA 2003 Better Practices Competition Award for Innovative Management Practices, in recognition of the "sidewalker" GPS based mobile computing data collection initiative.

Donald Johnson has been involved with OGRA training since 1983. He worked for the City of London as a Design Technology Aide for 10 years, and then for the Town of Ingersoll for 20 years until his retirement. Don holds a Municipal Civil Engineering Technology diploma from Fanshawe College, and has studied political science at the University of Western Ontario.

Bruce McGinnes is a professor at Fanshawe College and has been involved with OGRA training for many years. Bruce worked for the City of Woodstock for 25 years as the city's engineering technologist. Bruce graduated legal surveying at Fanshawe College and attending a course at University of Waterloo.

Plan Reading and Contract Interpretation

Duration: 2 days

Course Objectives

This course will enable participants to recognize and interpret data included on engineering drawings, compare engineering drawings to existing construction site conditions, and to interpret appropriate construction actions based on the engineering plans. Participants will also learn to interpret data noted for special instructions, and how to calculate a grade for roads, sewers and watermains. Participants will be taught the purpose, most common types, and elements of standard municipal contracts. In addition, they will learn to identify which contract elements take precedence and the elements of a standard form of tender. They will also be exposed to where to locate information within a contract package to enable them the basic requirements for contract administration. The course will also explain the roles of a construction inspector and how to work with a contractor and how to complete the required documentation. The course will conclude with exercises designed to correlate contract documents and engineering drawings.

Course Content

- Symbols and abbreviations on plan views & profile views
- Existing site conditions
- Plan vs profile drawings
- Elevation and grade
- Specialized information and instructions
- Environmental contract components
- Contract elements and content
- Bonds, insurance and method payment
- Information for bidders
- Case studies based on actual projects
- Roles of Inspectors

Who Should Attend

This course will benefit road supervisors, inspectors, lead hands, forepersons, and any personnel directly involved in the administration of construction contracts.

Instructors

Gord Troughton is currently the Director of the Georgetown South Program for GO Transit, a major transit infrastructure project to support the Union Pearson Express. Gord has over 20 years of experience in highway maintenance, construction and design and has worked in the private sector, at the Municipal level and for the Ontario Ministry of Transportation. Gord is a Professional Engineer and is a graduate of the University of Waterloo with degrees in Civil Engineering and Environmental Studies.

Michael Kelly retired from the civil service after over 27 years with the Ministry of Transportation and five years with Grey County. He has recently begun a position with CC Tatham and Associates.

Mike graduated from Applied Science (Civil Engineering) from Queen's University.

LEADERSHIP, SUPERVISION AND ADMINISTRATION

Introduction to Contract Law

Duration: 1 day

Course Objectives

Participants will gain a thorough grounding in the laws governing municipal construction and rehabilitation projects, will learn about the most common types of contracts used for municipal projects, and become familiar with the risks, liabilities, and consequences of substandard performance, liens and claims. Participants will learn about the rights, limitations, and obligations affecting their relationship with contractors and the public and be able to set ethical ground rules for dealing with contractors.

Course Content

- Formation of a contract including offer, acceptance, consideration, capacity and legality
- Factors affecting the contractual relationship including mistake, misrepresentation, duress, undue influence, conditional contracts, privity of contract and assignment
- The end of the contractual relationship including performance, breach, discharge by agreement, frustration, remedies for breach of contract
- The court system including adjudication and alternative dispute resolution
- The 3 most common types of contracts
- How to read, interpret and administer the contract
- Parts of a typical contract
- Performance bonds, warranties, and letters of credit
- Liability and insurance
- The best ways of dealing with substandard performance problems
- Ethics in the workplace and your relationship with contractors

Who Should Attend

Managers and inspectors who administer contracts for municipal construction and rehabilitation projects. This workshop is recommended for new employees or those with 1-5 years experience administering municipal contracts.

Advanced Contract Law

Duration: 1 day

Workshop Objectives

This workshop will discuss administrative issues pertaining to the performance of a contract and variation of a contract. The goal is to equip the learner with the skills needed to make sound decisions based upon the express and implied terms set out in the contract. Participants should be familiar with requests for tenders and construction contracts. Attention will also be given to ethical issues involving contract administration, risk analysis, being called to court as a witness, and other relevant issues related to contract administration.

Workshop Content

- Review of basic contract law principles and terms
- The tendering process
- Liquidated damages and penalties
- Contract performance and variations
- Ethical considerations and relationships
- Being called as a witness

Who Should Attend

Employees with over 5 years' experience administering municipal contracts or those who have taken the Introduction to Contract Law workshop.

Contract Dispute Resolution

Duration: 2 days

Workshop Objectives

Participants will learn to achieve more win/win settlements with contractors, better prepare themselves before negotiating, gain confidence about their ability to negotiate effectively, and build positive long-term relationships with contractors.

Workshop Content

- Best/worst negotiators and strategies
- Why being tough doesn't always work (but neither does being the "nice guy"!)
- Understanding the nature of disagreement and conflict
- Constructive and destructive uses of conflict
- The most common negotiating styles
- The negotiating process revealed
- Tactful handling of disagreement and dialogue
- Specific techniques for offers, counter-offers, and counter-tactics
- How to persuade without being too aggressive
- Building for long-term relationships
- Conflict is healthy: constructive methods for ensuring a win/win outcome
- Dealing with the politics of conflict
- Dealing with those who refuse to negotiate
- How to determine the contractor's best alternative to a negotiated agreement

Who Should Attend

Managers and inspectors who administer contracts for municipal construction and rehabilitation projects.

Instructor

Schelley Hiebert is a mediator and trainer in private practice. She holds a B.A. from the University of Waterloo, an M.A. from Central Michigan University, mediation certificates from the University of Windsor School of Law, Osgoode Hall Law School and has attended other specialized training in mediation and arbitration. She was among the first mediators selected to be a Roster Mediator with the Ontario Mandatory Mediation Program, and is working to complete the LL.M. program in ADR from Osgoode Hall Law School.

Schelley has been practicing mediation for over 10 years and brings a wealth of knowledge to the resolution process. Her experience includes, but is not limited to, conflicts involving employment, contracts, family matters, disability issues, personal injury, educational matters, non-profit organizations, church and ecumenical partnerships, fire damage, transportation and

shipping. Schelley's active profile also encompasses professional skill development courses, seminars, workshops and conflict resolution design systems for organizations.