Feb. 15-16, 2024 E-Week Seminar Descriptions

Introductory = New to the engineering field, with little or no experience such as students.
Intermediate = A few years of experience in the field of engineering with a desire to build on it.
Advanced = A "seasoned" engineering professional with many years of experience.

T = Thursday Seminar and **F =** Friday Seminar

Note: Some of these seminars might have been offered at other locations. It is your responsibility to determine what seminars you want to attend.

BRIDGES

T - Superbox – NYSDOT's Preparation and Response to Flooding, Deterioration, and Unscheduled Culvert Replacements- Intermediate

By: Brenda Crudele, PE; NYSDOT - Brenda.crudele@dot.ny.gov and Jason Crandall; NYSDOT - Jason.Crandall2@dot.ny.gov

NYSDOT has access to a range of temporary bridge solutions that can be used in emergency or unplanned situations. These solutions tend to be for larger spans, leaving a solution gap for shorter spans in the range of 15' - 25 ft. The Superbox is a precast concrete culvert designed to accommodate fill heights up to 17' and any skew. This presentation will explore NYSDOT's need for short span temporary and permanent culvert and bridge solutions and show the implementation of the Superbox program through the 2023 calendar year.

T - Rehabilitation of the Brockport and Albion Lift Bridges over the Erie Canal - Intermediate

By: Isabel McLeod, PE - IRMcLeod@modjeski.com and Jack Hess, PE - JRHess@modjeski.com; Modjeski and Masters

This presentation will focus on the rehabilitation of two historic bridges over the Erie Canal in the villages of Brockport and Albion, New York. Each of the two bridges consists of a pony truss superstructure and a unique geometry where the lifting structure and machinery is enclosed in an underground concrete pit. The truss floor system and bottom chords were significantly deteriorated and required rehabilitation or replacement. Limited access to the machinery for maintenance, and the plans to perform in-depth structural replacements provided the opportunity to perform a full redesign of the mechanical systems and supporting structural members. The goal of this project was to restore these bridges to their as-built load carrying capacity and operating functionality, provide improvements where possible, and preserve the historical nature of these structures. A full load rating of the truss superstructure and improvements to the machinery pit accessibility for maintenance were also included in the project.

BUILDINGS

F - Advanced Manufacturing Warehouse Conversion – Intermediate

By: Andrew Bradley, PE - abradley@smrtinc.com And Peter Rand, PE - prand@smrtinc.com - SMRT Architects & Engineers

Converting traditional warehouses and other outdated buildings into modern, advanced manufacturing spaces is a complex process that requires careful planning. Structural, environmental controls, infrastructure, and program requirements, all of which must meet tight go-to-market schedules, are essential for success. In this informative session, the speakers will guide participants through the critical considerations and processes needed for a successful project and solutions that balance cost with client needs.

F - One piece of the puzzle to Carbon Neutral Buildings - Code Requirements and Best Practices about Building System Controls from an Engineer's Perspective - Intermediate

By: Chonghui Liu (CL), PE, CEM, LEED AP; Arcadis - chonghui.liu@arcadis.com

Both ASHRAE and NYSERDA have goals for carbon neutral energy code in less than 10 years, in support of global building decarbonization and New York's Climate Leadership and Community Protection Act. With the recent development and update in energy codes and guidelines (e.g. ASHRAE 90.1-2022, 2021 Internal Energy Conservation Code, ASHRAE Guideline 36-2021), controls-related requirements and best practices in HVAC, service water heating, and lighting have taken on an increasingly important role in driving today's buildings to net zero energy. This seminar presents energy code requirements and best practices for building system controls from an engineer's perspective.

CHEMICAL

T - Overview of Water/Wastewater Chemicals – Introductory to Advanced

By: Tim Clayton; Surpass Chemical - Tim.clayton@surpasschemical.com

Understanding the process to fill out a Water Treatment Chemical (WTC) report. Every chemical used at a water or wastewater plant in process with a SPDES permit in NYS should have a WTC form filled out per NYSDEC guidelines. Engineering firms and chemical providers are the first to be contacted for assistance by operators in filling out these forms.

T - Proper Application of Chemical and Industrial Tanks - Intermediate

By: Jay Frenette; Eastern Reliability - jfrenette@easternreliability.com

Topics to be discussed are:
*Definition of Chemicals for purposes of Storage; NFPA Regulations
*What fluids can and cannot be stored in Polyethylene and FRP tanks?
*What criteria are used for determining whether to use a polyethylene, FRP, steel or high alloy tank?
*What are the specific criteria included in the laws of each state?

CIVIL

F - Increasing Roadway Performance with Geogrids – (offered in 2022) -Intermediate

By: Doug McCluskey; EJ Prescott – doug.mccluskey@ejprescott.com

This course reviews the benefits that geogrids offer to paved and unpaved load bearing applications. We will discuss the impact that materials and manufacturing processes have on geogrid performance, and how they affect lateral restraint and radial stiffness.
Punched and Drawn Polypropylene Geogrids will be covered in greater detail. The progression from Biaxial, to Triax, to 3D Triplanar geogrids will be explained with supporting paved and unpaved designs and examples.

F - Critical Factors of Storm Water Management – Advanced

By: Michael Fortuna; ACO USA; Michael.fortuna@aco.com

Overview of surface water management using trench drains to capture water. Site analysis, trench drain sizing, grate option and consideration for safety and water catchment. Subsurface retention/detention system options.

F - Mitigating Climate Change Effects on Municipal Infrastructure – Intermediate
By: Craig Coggins; EJ USA, Inc – craig.coggins@ejco.com
This presentation will provide an introduction and overview of manhole technology, its materials, components, functionality, and applications as they apply to storm events and infrastructure. The attendees will gain an understanding of the problems faced by flood events and ways to mitigate their impact on our sewer systems.

F - Are "Pay-If-Paid" Clauses Codifying Contractual Harshness? - Introductory
By: Ashraf Ghaly, PE, PhD; Union College – ghalya@union.edu
Pay-if-paid clauses condition a subcontractor's right to payment on the general contractor's receipt of funds from the owner. These clauses are viewed as harsh because they shift the risk to financially weaker parties. They are often at the center of debate in courtrooms and state capitols throughout the United States. This presentation will contrast two cases in two states where the outcome of litigation was totally different. Another case will be discussed where the state legislature banned the practice altogether.

F - Plastic Stormwater Chambers Ideal Uses – Intermediate
By: Taylor Abbott; Cultec - Taylor.abbott@cultec.com
Underground storage options are numerous, but when is it best to design with each option that may be available? This seminar will seek to impart a better understanding of different applications for which plastic stormwater chambers can best be utilized for new designs. The presentation will spend time looking closely at when a plastic stormwater chamber can be used and when it may be better practice to look for an alternative method of storage.

CONCRETE

T - Concrete Pavement for Intersections and Roundabouts – Introductory to Advanced
By: Luke McHugh, PE; NRMCA - lmchugh@nrmca.org
Roundabouts and intersections successfully meter the confluence of traffic approaching a single point from multiple directions. Since these pavements also experience all the wheel loads from corresponding traffic from every direction, the durability and uninterrupted service life provided by concrete deserves serious consideration to counter the pavement the stresses like rutting, shopping, and wash boarding commonly associated with asphalt pavements; requiring more frequent repair, more service disruptions, and a higher cost to maintain.

T - Concrete Pavement Preservation: The Key to Long Life Pavements - Intermediate
By: Nicholas Davis; **International Grooving and Grinding Association - ndavis@igga.net**
Pavement preservation is one of the most important investments owner agencies need to make. It is as important as changing the oil in your car. Nick Davis will walk you through the best pavement preservation techniques and show the cost and carbon benefits of pavement highway maintenance.

T - Intro to New York State Buy Clean Concrete Guidelines – Intermediate
By: Mariane Jang; NYS Office of General Services - Mariane.jang@ogs.ny.gov
New York State was the first to release guidelines for low carbon concrete that is applicable to all state agencies, in response to State Finance Law 136-d. This session will go into how the guidelines were developed, and the guidelines Themselves: eligibility, how low carbon concrete is defined (namely, Global Warming Potential – GWP), and what mechanisms are being used for compliance purposes such as Environmental Product Declarations.

T - How Lightweight Concrete Masonry Units Enhance Every CMU Wall Property - Introductory

By: Nicholas Carparelli; NYS Concrete Masonry Association - ncarparelli@nys-cma.org

This presentation introduces the concept of using stronger and lighter concrete masonry units (CMU) to build stronger, safer and more energy efficient concrete masonry walls without increasing costs. Information on CMU materials, construction productivity, energy code impacts, and sustainability are presented to help the designer evaluate wall options. “Next Generation” CMU are also introduced to bring designers up to date on the latest advances in CMU product standards; specifically, increases in unit strength and allowable unit dimensions.
As a result, participants will:

1. Come away with a greater understanding regarding lightweight CMU physical properties.
2. Understand how lightweight CMU Wall Systems can outperform normal weight CMU.
3. Develop greater awareness regarding lightweight CMU ability to provide improved thermal performance.
4. Learn how to properly specify Lightweight CMU

ELECTRICAL

F - IEEE 2800 Compliance Verification for Inverter-Based Transmission-Connected Resources - Intermediate

By: Reigh Walling; Walling Energy Systems Consulting, LLC - rwalling@wesconsult.com

IEEE 2800 is the new standard that sets performance and interconnection requirements for Inverter-based resources connected to transmission systems. These requirements apply at the plant level, and thus testing or certification of Inverters at the unit level cannot verify plant compliance. IEEE P2800.2 is a Recommended Practice under development that establishes the approach to verification of plant compliance based on simulations using validated models. This seminar describes the unique P2800.2 processes.

F - Harmonics: Designing for Critical Loads - Intermediate

By: Christopher Alexopoulos; Milton Cat - Chris_alexopoulos@miltoncat.com

This seminar will provide a presentation on the definition of harmonics, sources and symptoms of harmonics as well as mitigation techniques in regarding to applications with electric power generators.

F - Using Probing Input Signals for Enhanced Power Grid Monitoring and Control - Advanced

By: Luigi Vanfretti, PhD; Rensselaer Polytechnic Institute (RPI) - vanfrl@rpi.edu, luigi.vanfretti@gmail.com

The current transformation of the grid with the adoption of new energy sources and electrification efforts has brought new challenges to maintain adequate grid performance for grid operators. To assess adequate performance, oscillation monitoring tools are being deployed to track important performance indicators, which are the grid’s “modes” that can be characterized by estimating their oscillation frequency and damping from real-time measurement data. Consequently, accurate and low variance estimates of damping are critical for adequate monitoring and decision making. Based on prediction-error system identification techniques, this talk will introduce a framework for designing probing signals that when applied to control inputs of High Voltage dc lines or power plants, that is able to provide low variance damping estimate. To bring these techniques closer to practice, the work carried out in prototyping probing experiments is also discussed.

F - Shaft Grounding in Electric Motors - Intermediate

By: Andy Kressbach; Electro Static Technology - Andrew.Kressbach@est-aegis.com

This presentation will look at why bearings fail from electrical damage even when controlled by Variable Frequency Drives. We will look at VFD technology, its importance in today's market, common problems with VFD's and motor reliability, and current technology comparisons in shaft grounding. We also look at how you can effectively protect against poor reliability on any size motors and examine Shaft Grounding Technology best practices. Last, we will review the installation and monitoring of effective shaft grounding, and a demonstration of induced shaft voltage and how it's measured.

ENERGY

T - Introduction to Power System Challenges and Protection in the Renewable Energy Future – Intermediate

By: Kevin Diehl – diehlk@starktech.com and Peter Woodin – woodinp@starktech.com; Stark Tech

With the drive in NYS for Electrification and the Federal, State and Local legislations moving the power industry from Fossil Fuels to Clean Energy sources many new challenges arise for the power engineering industry. We will introduce some of the protection challenges that are starting to be seen globally with the shift from traditional Synchronous Energy Generation Production to Inverter Based Resources (IBRs) as used in the PV, Wind and Battery Energy Storage Solutions of today. This presentation will cover some of the key issues/concerns being faced by the Utility Distribution Providers as identified in IEEE-2800 and NREL (National Renewable Energy Laboratory/DoE) along with some of the evolving solutions from the power equipment industry.

T - CLCPA Achievement and Transmission Policy Planning – Intermediate

By: Tom Vaccaro - Thomas.vaccaro@nationalgrid.com and Jeff Maher - Jeffrey.Maher@nationalgrid.com; National Grid

Description of how National Grid has approached transmission planning for renewable deliverability in accord with NY requirement for 70% renewable grid by 2030 and a 100% clean grid by 2040, including CLCPA Phases 1 and 2, and the Coordinated Grid Planning Process.

ENVIRONMENTAL

F - An Engineer's Toolbox for Coastal Protection – Intermediate

By: Peter Hanrahan; Hanrahan Environmental, LLC - hanrahanenvironmental@yahoo.com

This seminar will provide an overview of the tools and techniques available for the protection of our seacoast. This toolbox has evolved rapidly over the last few decades, as coastal communities continue to cope with rising seas, more frequent and intense storm events, and more dramatic storm surges.

F - Transitioning the NY/NJ Regional Transportation System to "Net-Zero" Greenhouse Gas Emissions (Why and How?)- Intermediate

By: Joseph Englot, PE; HNTB Corporation – jenglot@hntb.com

The presentation will explain why the reduction of greenhouse gas emissions from highway vehicles are essential to meeting the international goal to achieve Net Zero Emissions by 2050. It will show the GHG impact for each vehicle type (both electric and hydrogen fuel cell power), as well as the hazards posed by each vehicle type and the necessary mitigation strategies.

F - Stormwater 1-2-3: SWPPP Prep and SPDES Permit Steps – Introductory to Advanced

By: Ellen Hahn Kubek, CPESC, CPSWQ; NYS Department of Transportation - Ellen.Kubek@dot.ny.gov

This session will break down the steps involved in preparing a Stormwater Pollution Prevention Plan and obtaining a SPDES Construction Permit, including evaluating site conditions, site plan components, applying stormwater calculations, erosion and sediment control plan steps and filing an eNOI. Suitable for those just starting out or as a refresher.

F - Capitalizing on Innovation: NYSDOT Mini-Forest Pilot – Introductory

By: Christian Keller - christian.keller@dot.ny.gov; Connor Sullivan – connor.sullivan@dot.ny.gov and Phyllis Elgut - phyllis.elgut@dot.ny.gov; New York State Department of Transportation-R10

This seminar provides an overview of NYSDOT's implementation process and benefits of a rapid growth mini-forest at a pilot location in Region 10 Long Island, completed in spring 2023. Objectives from this seminar are to provide an understanding of what is a mini-forest, and to outline Region 10's design, pilot location selection criteria, acceptance, implementation, and future applications.

F - Effective Soft Armor Alternatives to Rock for Permanent Erosion Control – Intermediate

By: Tim Lancaster; GrassWorx LLC - Tim.lancaster@grassworxllc.com

This presentation discusses the development of a new category of permanent erosion control products known as Hybrid-Turf Instant Armor Mats, which were specifically developed to meet the erosion challenges of more severe weather driven by climate change. These products offer substantially increased pre-vegetated erosion protection for a reduced risk of failure prior to vegetation establishment, therefore extending the use of natural vegetation in place of hard armor materials such as rock riprap in high flow channel, steep slope and shoreline protection applications.

T - Love Canal: Before Then, Then and Now – Intermediate

By: Steven Scharf, PE; NYSDEC - Steven.scharf@dec.ny.gov

Technical Aspects leading up to William Love's proposed Design of Love Canal. This class describes the past and present Love Canal project located in Niagara Falls NY. The Love Canal Site was the first hazardous waste superfund project in NYS. This site was also huge in terms of its breadth and the scope. This includes but is not limited to the impacts to human health for the residents that were directly and indirectly affected. The lecture will go through the important aspects of the Love Canal Site starting with the history and going through the current status. This site was the precursor to the creation of numerous environmental regulations and guidance documents not yet in place for the EPA and the NYS Department of Environmental Conservation (NYSDEC) in the mid to late nineteen seventies. Love Canal involved every level of government including local, state and federal officials.

T - Undeniably Sustainable – Intermediate

By: Trygve Hoff, PE, ENV SP; American Concrete Pipe Association - thoff@concretepipe.org

Resilience stands as the bedrock of sustainable infrastructure, ensuring longevity and adaptability amid mounting challenges. In the face of climate change, natural disasters, and manmade disasters, resilient systems can withstand shocks, recover swiftly, and continue functioning efficiently. Integrating resilient designs, materials, and strategies safeguards investments, while minimizing environmental impact. After all, specifying a resilient product that will remain in use for 100+ years is significantly more sustainable than using one that must be remade and replaced multiple times.

ETHICS

T - Ethics and Design Professional Practice for the New York State Professional Engineer Licensee – Introductory to Advanced

By: Eric Greppo, PE; NYS Education Dept. Office of the Profession - eric.greppo@nysed.gov and Len Woods, PE – len.woods@ramboll.com

Join representatives of NYSED and the Board for a discussion about the regulated practice of engineering and the responsibilities of design professionals in New York. Topics will include, among other things, professional entities authorized to practice, supervising and signing work, contracting practices, and professional conduct. The discussion will focus on common practice issues and will also inform PE's who are mentoring others and endorsing licensure qualifying engineering experience.

F - The Intent In Engineering Design: Why Is The Road to Hell Paved With Good Intentions? - Introductory

By: Ashraf Ghaly, PE, PhD; Union College – ghalya@union.edu

Intent refers to a person's state of mind and the mental objective behind an act. Determining the intent is of great importance in common morality and the law. In the course of their work, engineers make many design decisions, each with certain intent. This presentation will offer numerous case histories where the intent was pivotal in assigning blame for wrong done.

MECHANICAL

T - Heating Cable Application – Intermediate

By: Rob Zerrillo; Liberty Electric Products - rzerrillo@libertyelectricproducts.com

Topics to be discussed are:
*Types of Heating Cable: Self Regulating, Constant Watt, Mineral Insulated
*Applications: Roof & Gutter De-Icing, Slab Snow Melting, Pipe Tracing Protection, Fire Sprinkler Protection, Grease Flow Protection
*Low Voltage Systems
*Common Cable Controls
*Specs and Installation

T - Introduction to Composites – Introductory to Intermediate

By: Brett Kimball, PE; Trelleborg Sealing Solutions Albany, Inc. - Brett.kimball@trelleborg.com

An introduction to composite material basics including polymers, fibers, and a focus on continuous fiber composites.

F - Enhancing HVAC Systems with Fan Array Technology – Intermediate

By: Steven Cavanah, PE; Tremco, WTI Pure Air - scavanah@wtiservices.com

Much in the design and implementation of HVAC systems has remained unchanged in the modern era. The two exceptions being controls and blower technology. This seminar will explore the sustainable solution of retrofitting older chilled water air handler units with new ECM Fan Array technology for improved performance, built-in redundancy and ease of maintenance.

OTHER

T - Designing a Ski Lift – Intermediate

By: Neville Sachs, PE; nevsachseng@gmail.com

Designing a ski lift typically starts with an entrepreneur's idea that they want to get lots of people up a hill to slide down on snow, or ride down on bicycles, or slowly ride up the hill to look at the beautiful fall foliage and scenery. Then the engineer's job is to figure out how to design the foundations, towers, wire ropes, chairs (or gondolas) motors, rope drives, and safety devices to meet both the entrepreneur's ides and the ANSI and state codes and standards.

T - Get Alarmed about Carbon Monoxide - Introductory to Intermediate

By: Todd Crawford; New York State Department of Health – todd.crawford@health.ny.gov

Carbon monoxide poisonings are not "accidents" – they are caused by engineering problems that haven't been solved yet. Most CO poisonings are caused by appliances that don't combust fuels safely; relying on alarms that are designed to go off after people are poisoned; and not recognizing where CO can accumulate at dangerous concentrations. Tragedies are usually caused by three factors: an unrecognized source of CO, a poorly ventilated space, and an inadequate alarm system. This talk will show you why engineers should 'Get Alarmed about Carbon Monoxide' and what they can do to prevent CO poisonings and deaths.

STRUCTURAL

T - Engineered Wood Products in Mid-Rise Structures – Intermediate

By: Drexel Hermann, PE; Weyerhaeuser - Drexel.hermann@wy.com

This course addresses mid-rise wood-frame buildings, a cost effective, sustainable solution. We will discuss allowable heights and areas and the fire-resistant requirements for engineered wood products in Type III and Type V structures. Topics include code requirements for rated floor, wall and roof assemblies, testing methods, Flame Spread and Fire-Retardant Treatment (FRT). Sound Transition Class (STC), Impact Insulation Class (IIC) ratings of one and two layer rated floor/ceiling assemblies will be introduced.

F - Hot Dipped Galvanizing Myths and Facts – Intermediate

By: Frank Gerace; Hubbell Galvanizing - geracefp@whyrust.com

Galvanizing has been used for steel corrosion protection for over a century. Over that time, many myths have arisen about HDG such as galvanizing can't be painted or galvanizing compromises steel strength. While some of the myths have some basis in experience, there are also mitigating factors. This seminar addresses some of the more common myths and addresses them with facts.

F - Cracking the Post-Installed Anchor Codes – Introductory to Advanced

By: Derek Gilbert, PE; Simpson Strong-Tie - degilbert@strongtie.com

This presentation provides an overview of the latest industry standards related to the design and installation of post-installed anchors in concrete and masonry base materials. It discusses specific code sections and standards related to the latest requirements for the proper design and specification of code compliant post-installed anchors.

F - Drill Your Concrete Anchor Designs for the First Time! – Introductory to Advanced

By: Derek Gilbert, PE; Simpson Strong-Tie - degilbert@strongtie.com

This webinar introduces attendees to Simpson Strong-Tie® Anchor Designer™, a free cast-in-place and post-installed concrete anchor design application that eliminates the need for tedious, time-consuming hand or spreadsheet solutions. This webinar provides a walk thru of the graphical user interface and explanation of the design input workflow. It then goes over a detailed post-installed anchor design example for both an adhesive and mechanical anchor layout in accordance with ACI 318 strength design methodologies. It concludes with completing a base plate finite element analysis, producing design results, understanding design settings, and template functionality.

T - Carbon Reduction: Tales from the Trenches - Intermediate

By: Jim D'Aloisio, PE; Klepper, Hahn & Hyatt - jad@khhpc.com

Sustainability and embodied carbon are fast-becoming critical design aspects in the design and construction industry. With the SE2050 program, structural engineers are committing to reduce the embodied carbon of their structures over time to help curb global temperature rise. Many projects and products promote themselves as "sustainable," but a quantitative assessment can reveal that some strategies have low efficacy, regarding reduction of carbon emissions. We can take a critical look at project choices, from concept to construction. This session will share a variety of actual examples of both successes and failures to reduce embodied carbon and will offer practical suggestions that practitioners can implement.

T - Archaic, Low-Carbon Structural Systems – Intermediate

By: Jim D'Aloisio, PE; Klepper, Hahn & Hyatt - jad@khhpc.com

A variety of different types of structural building systems have been used over the years, only to eventually fall out of favor. Today, most building construction is confined to a very narrow range of archetypes that are tried and true and leave little room for innovation. We'll revisit some old structural concepts that are no longer used, and some that are barely remembered. Examples include foundations, floor slabs, walls and long-span roof systems, including some schemes that are remarkably frugal with materials and resources. Maybe some of these strategies are worth revisiting, in this era of awareness of the need to reduce embodied carbon from our structures. For each concept, we'll consider the pros and cons from a structural engineer's perspective, in some cases trace the lineage of the idea to systems that are currently in use, and explore the reasons why the abandoned ideas didn't survive to the present day.

TRANSPORTATION

F - Airport Security Design for Engineers - Intermediate

By: Joseph Englot, PE; HNTB Corporation – jenglot@hntb.com

This seminar is for Engineers and Architects who have responsibility for the design, operation, state of good repair and protection of major airport transportation system infrastructure assets and who will benefit from knowledge about security planning and mitigation strategies for credible terrorist threats, all in accordance with the latest TSA and FAA guidelines.

F - Asphalt – Latest/Greatest in the Asphalt World - Intermediate

By: Bruce Barkevich; New York Construction Materials Association - bruce@nymaterials.com

The Asphalt Paving Industry is an ever-changing world to meet the needs of the traveling public and the agencies who use the product. This program will highlight the many changes and the latest/greatest in technologies which have reshaped the asphalt industry over the last 20 years. This will include some history of where we have been and some crystal ball/fortune telling on where we are going.

F - Asphalt – Meeting Environmental Challenges – Intermediate

By: Bruce Barkevich; New York Construction Materials Association - bruce@nymaterials.com

As the continued push to Sustainable Products continues to ramp up, the Asphalt Industry has continued to keep pace as the most recycled product in the US. Warm Mix Asphalt, Porous Asphalt, Operational improvements alongside the recycling efforts continue to keep asphalt at the forefront of Sustainable Infrastructure.

F - Methods and Tools in Planning Rail Passenger Services - Introductory

By: Wes Coates, FCIRO; HNTB Corporation - jcoates@hntb.com

The presentation will introduce the processes and methodologies used to build Rail Passenger Service Delivery Strategies following a step-by-step approach. The discussion will outline how to start with objectives of the operation of the rail passenger service, developing schedules and supporting operating programs. A demonstration of on the use of network simulations will show operational analysis tools and benchmarking of service standards to evaluate how well the service delivery matches the goals of the Concept of Operations