



Your Partner in PUBLIC SAFETY

BC Section

Introduction to Traffic Signals – Design and Operation

May 1st and May 2nd, 2019

At the Coquitlam Executive Plaza Hotel

405 North Road Coquitlam, BC

Program Agenda

Day 1	Day 2
Reasons for traffic signalized intersections: <ul style="list-style-type: none"> - Warrants and Traffic Impact studies 	Review of Day 1: <ul style="list-style-type: none"> - Principles and Questions
Industry Standards and Practices: <ul style="list-style-type: none"> - USMUTCD <ul style="list-style-type: none"> - MoTI - Canadian MUTCD (TAC) <ul style="list-style-type: none"> - Others - How to assess appropriate design standards and how to ascertain optimal method for equipment selection 	Traffic Signal Equipment Overview: <ul style="list-style-type: none"> -Traffic Controller Cabinets (types, brands, purposes, etc.) - Traffic Controller Units (NEMA, ATC, etc.) <ul style="list-style-type: none"> - Electrical Service (power source) - Vehicle, Bike Detection (types, options, etc.) - Pedestrian Detection (types, options, etc.) <ul style="list-style-type: none"> -signal system communications
Signal Design Considerations: <ul style="list-style-type: none"> - Time consuming considerations (interaction with utilities, Rwy's, etc.) - Civil Design base (AutoCAD) <ul style="list-style-type: none"> - Site Visits, Google Earth - AutoCAD as a design tool - Signal Operation/Sequencing <ul style="list-style-type: none"> - Priority/Pre-emption - Electrical infrastructure needs 	Traffic Signal Equipment Programming and Configuration(s): <ul style="list-style-type: none"> - Signal Timings (basics) <ul style="list-style-type: none"> - Base Timings - Signal Coordination (brief overview) <ul style="list-style-type: none"> - Detection programming - Validation of desired operation and equipment setup – bench testing <ul style="list-style-type: none"> - pre-emption
Signal Equipment Layouts: <ul style="list-style-type: none"> -existing civil/electrical infrastructure impacts <ul style="list-style-type: none"> - signal pole type/positioning - conduit routing and size/qty - signal head choice and positioning - vehicle, bicycle, and pedestrian detection 	Traffic Signal Construction (Contractor and Designer Perspectives): <ul style="list-style-type: none"> - Tendering, Review of Bids, Award <ul style="list-style-type: none"> - Pre-con meeting - Site meetings and site reviews - Equipment testing and commissioning <ul style="list-style-type: none"> - Construction Oversight - Documentation and Record Drawings
Day Review	Wrap-up Discussion