# Update to D-005 (Section 2.7)

Traffic Control Plans in CADD Format for Operational Impacts at Traffic Signals

Christopher Geen & Diana Barrett



### D-005 (Section 2.7) – Background Info:

- The D-005 is a Special Provision that outlines conditions to contractors or project teams for the management of vehicular, cycling, and pedestrian traffic during construction.
- Section 2.7 of the Special Provision goes into details related to signalized intersections and covers items
  related to the documentation and coordination required from a contractor or project team.
- Based on feedback provided and subsequent review of the existing wording we identified the need to
  provide an update to section 2.7 to help better clarify the documentation and coordination requirements.



#### What's Old & What's New:

CADD Requirements have always been a noted requirement in D-005 (Section 2.7).

"The Contractor shall provide a CADD drawing submission for each signalized intersection affected by construction operations"

- However, it was understood that the existing wording was unclear as to what contractors were supposed to provide, and staff generally only tried to administer this requirement in special cases.
- The revised wording in the 2024 update to D-005 (Section 2.7) is intended to clearly identify the CADD requirements for traffic control plans at signalized intersections.

"The Contractor shall provide Traffic Control Plans (TCP's) in CADD format for each signalized intersection affected by construction operations, where modifications to signal displays or signal hardware may be required. The files must be provided at least twenty (20) working days prior to any construction operations that may require modifications to signal displays or signal hardware. The electronic CADD files can be provided in either MicroStation or AutoCAD formats. Electronic CADD files can be 2D or 3D and must be geo-referenced. Electronic CADD files should be clear and concise and provide all relevant information related to the Traffic Control Plan / construction operations."



### What Is Required?

- PDF copies of TCP's are still required for submission to City Traffic groups for review (*no change to current practice*). Based on initial review(s) of proposed TCP configurations, CADD information may be requested by Traffic Signal Operations for additional assessment.
- When requested, CADD files of the TCP's are required at least 20 working days prior to any construction operations that require traffic signal display modifications to allow for drawing creation and scheduling of traffic signals crews to perform works.
- The requested CADD files must include all information relevant to the proposed traffic control setup. le.
  work zone areas identified, barrel/ delineator arrangement, lane configurations, temporary signage &
  temporary pavement markings (if applicable).
- Contractors / project teams can also reach out to Traffic Operations staff to clarify / confirm CADD requirements on proposed TCP configurations and to discuss potential signal display modifications.
  - (Traffic Signal Plant Inspectors, Traffic Engineering Staff or Signal Design Staff)



## Why Is It Required?

- Depending on the configuration of proposed traffic control plan and location of work zone, revisions to traffic signal displays may be required to maintain compliance with recommended guidelines and to maintain signal head visibility for vehicles approaching the intersection.
- By providing TCP information in CADD format (georeferenced), it allows Signal Design & Operations
  practitioners at the City of Ottawa to easily review proposed TCP configurations within an existing signalized
  intersection and confirm if existing signal displays can be maintained or whether display modifications would
  be required.
- The Traffic Signal Design unit is required to produce traffic signal detail drawings for all construction stages / long duration traffic control implementations that are within signalized intersections, for legal record purposes. Providing TCP information in CADD format is a critical piece to the creation of such drawings.



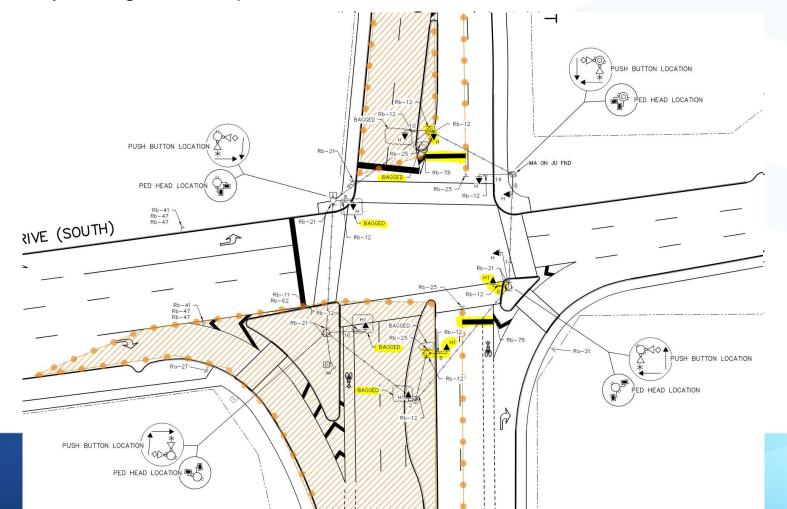
#### **Examples of When Is It Required:**

- When contractors are working within the limits of signalized intersections, or within proximity to signalized intersections, with a long-term traffic control configuration being implemented.
- When vehicle lanes need to be shifted from their typical alignment through the intersection, to accommodate construction work zones.
- When vehicle lanes need to be flipped to the opposite side of the roadway through an intersection to accommodate construction works.
- When 'one-way' roadways need to be converted to two-way traffic in a temporary configuration, which would require signal modifications.
- TCP's for Daily / Off Peak lane reductions, temporary lane configurations or works that include a Paid Duty Officer controlling traffic within an intersection should not require CADD submission.



#### **Examples:**

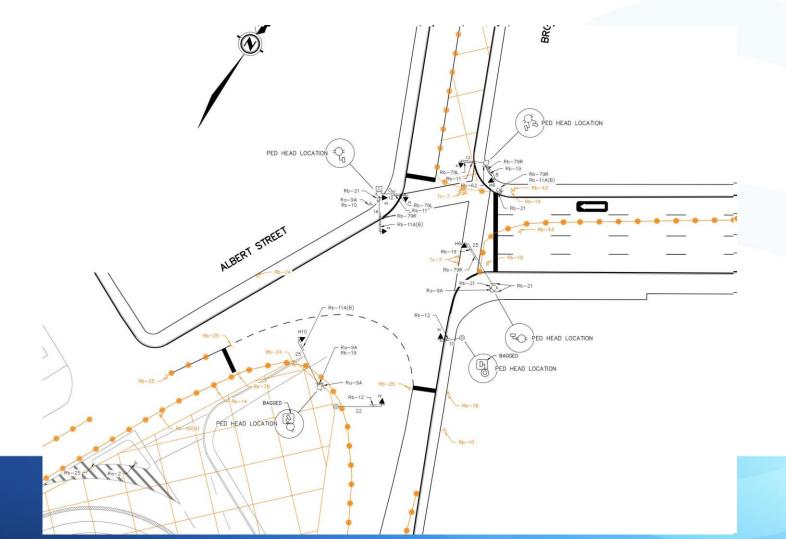
Below is an example from Bank Street Advanced Works Project where construction staging required north –
south traffic flow on Bank Street to be modified from 4 lanes to 2 lanes, flipping between the east and west
sides of the roadway during different phases of construction.





#### **Examples:**

 Below is an example from the AQSB Project, where a construction stage required Albert Street to be converted from a one-way roadway, to allow two-way traffic between Empress Avenue to Bronson Avenue





#### The other change...

- One other change made in the recent update to D-005 is the removal of the requirement for contractors to sign a "Traffic Signal Installation Coordination" form.
- It was determined through internal discussions that the "Treffic Signal installation Cocrdination" form was not being used on most projects and was also long endeamed through the scontractor to acknowledge scheduled the stignals work (tions ignals to signals). The contractor will be required to space requirements. Maintaining clear and concise communications between parties is important.

Operations Branch repentative which will provide the date(s) that City crews will be on site to complete the date(s) that City crews will be o

The Contractor shall acknowledge the requirement of its own forces and those of its arrange for a multipally graceptable date and ctipae to the relocation and liberate the state of the term of the relocation and liberate to the contractor. The Contractor shall acknowledge the requirement of its own forces and those of its subcontractors to provide adequate space and time for City crews to complete their work, as legislated in the Ontario Occupational Health and Safety Act. The unavailability of a crew on the date requested will not be considered justification for a claim by the Contractor. The Contractor. The Contractor must provide adequate space and time for City crews to complete their work, as legislated in the Ontario Occupational Health and Safety Act. The unavailability of a crew on the date requested will not be considered justification for a claim by the Contractor. The Contractor must provide adequate space and time for City crews to complete their work.



#### **Questions?**

#### **Contact Information:**

Christopher Geen: <a href="mailto:Christopher.Geen@Ottawa.ca">Christopher.Geen@Ottawa.ca</a>

Diana Barrett: <u>Diana.Barrett@Ottawa.ca</u>

