

# Traffic Signal Construction Inspection and Commissioning Checklist

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## City of Burnaby Engineering Department

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Status: DRAFT

Last Update: December 2019

Signal Location: .....

New Installation

Modification

Project Name/ ID: .....

City Project Manager: .....

Electrical Consultant (Inspector): .....

Electrical Contractor: .....

Date: .....

Asset ID (Infor/Hansen): .....

Budget (IO# for development related, WBS# for Capital projects): .....

(Activated in Infor/Hansen for related City WO creations)

## 1. Signal Design / Pre-Construction (Project Manager)

		<u>YES</u>	<u>NO</u>	<u>N/A</u>
1.1.1	Design criteria, scope, responsibility identified by TS	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1.1.2	Prepared Intersection Conceptual Design	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1.3	Obtain quotes for detailed design from consultants	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1.4	Create S/C for selected Design Consultant S/C # _____ PO # _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1.5	Review Preliminary Design submission	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1.6	Approve Final Design drawing submission	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1.7	Submit Tender/ Quotes to Purchasing	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1.8	Select Electrical Contractor for Installation	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1.9	Create S/C for selected Electrical Contractor S/C # _____ PO # _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1.10	Pre-Con Meeting Minutes (PM/Traffic, CA, Contractor)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1.11	Site Walk-through (PM, Traffic, CA, Contractor)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1.12	Service Panel Key Returned	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1.13	Order of specialized equipment			
	i. Controller & cabinet	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	ii. Opticom EVP system	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	iii. Autoscope vehicle detection (Y/N)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	iv. UPS system & cabinet (Y/N)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

## 2. Construction Phase (Project Manager)

		<u>YES</u>	<u>NO</u>	<u>N/A</u>
2.1	BC Hydro SLIM submitted	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Disc/Rec <input type="checkbox"/> New Inst <input type="checkbox"/> Load Change <input type="checkbox"/> St Lt add's <input type="checkbox"/>			
	2.1.1 Copy of Electrical Permit	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	2.1.2 Inspector Print /Design dwg	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	2.1.3 Signal Load Report	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	2.1.4 Separate SLIM for street light changes	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2.2	Traffic Management Centre (TMC) notified <b>DATE</b>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2.3	Preliminary timings received (TMC) <b>DATE</b>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	2.3.1 Phasing, L/S assignments, backup settings	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	2.3.2 Amber, all-red, ped clear, recall, start-up	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	2.3.3 Detector assignments, ToD plans / Coord	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2.4	Street light luminaires installed	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2.5	Vegetation trimming completed	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2.6	Road markings / Signs installed per drawing	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	2.6.1 Stop lines	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	2.6.2 Crosswalk lines	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	2.6.3 Lane designation (LT, RT)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2.7	Traffic Sign Shop Work Orders issued	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	2.7.1 Install temporary signs (covered)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	2.7.2 No parking / no stopping signs	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	2.7.3 Turn lane ground mounted signs	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	2.7.4 Overhead signs (street name)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	2.7.5 Remove old stop / yield / street name	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2.8	Controller & cabinet setup for burn-in @ shop	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2.9	Cabinet wrap specified	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

### 3. Flash Operation (24-48 hrs) & Check Prior to Signal Start Up

3.1	Advise Dispatch (604.294.7200) of Flash Op	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3.2	Check signal head position & visibility from approaches	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3.3	Road markings & temporary signs (bagged) in place	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3.4	Pushbuttons installed (bagged/taped)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3.5	Cabinet installed after shop burn-in	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3.6	Un-bag signal heads & put into flash operation	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Contractor: \_\_\_\_\_ Initials: \_\_\_\_\_ Date: \_\_\_\_\_

Inspector: \_\_\_\_\_ Initials: \_\_\_\_\_ Date: \_\_\_\_\_

### 4. Signal Operation – Start Up & Full Operation

	<u>YES</u>	<u>NO</u>	<u>N/A</u>	
4.1	Notify Dispatch of start-up	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4.2	Adjust vehicle detectors	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4.2.1	Verify signal operation on detection	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4.3	Pushbutton test, ensure activation & correct phase	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4.3.1	Audible / APS settings	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4.4	Signal lens inspection	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4.4.1	Confirm Red/Amber/Green & pedestrian signal	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4.4.2	Confirm signal heads are aligned with traffic lanes	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4.4.3	Vegetation trimming (if required) completed	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4.5	Operational compliance with Signal Timing Sheet	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4.6	Test time of day coordination plans	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4.7	Comm test with TMC completed (fibre optic or radio)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4.7.1	Comm Sheet for all equipment	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4.7.2	Controller DB uploaded & archived	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4.8	Observe start-up sequence and signal operation	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4.9	Uncover “New Signal” advisory signs	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4.10	Advise Dispatch, in operation / complete	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4.11	Sidewalks and boulevards restored	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Contractor: \_\_\_\_\_ Initials: \_\_\_\_\_ Date: \_\_\_\_\_

Inspector: \_\_\_\_\_ Initials: \_\_\_\_\_ Date: \_\_\_\_\_

Traffic Technician: \_\_\_\_\_ Initials: \_\_\_\_\_ Date: \_\_\_\_\_

## 5. Cabinet

5.1	Replace Contractor locks with City Lock	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5.2	Check door locks, hinges	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5.3	Floor seals (gasket, caulking) door filter	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5.4	Heater & fan operation / settings (15C / 25C)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5.5	Autoscope Comm manager installed & functional	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	5.5.1 I.P. Comm Settings	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5.6	Emergency Vehicle Pre-emption functional	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	5.6 I.P Comm Settings	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5.7	UPS installed	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	5.7.1 Set to operate without heater / fan	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5.8	Flash out phases & verify field displays	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	5.8.1 Field wiring labelled, connections checked	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5.9	Load switches installed	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5.10	Log book entry completed (time, date, people on-site)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5.11	Cabinet vacuumed	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5.12	Cabinet wrap installed	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5.13	City locks installed on cabinet & service	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

## 6. Documentation (Hard Copy to Field, Electronic Copy to TMC)

	<u>YES</u>	<u>NO</u>	<u>N/A</u>
6.1 Site drawings	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6.2 Controller programming sheets (DB, APS, Comm)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6.3 Logic wiring diagrams	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6.4 Cabinet wiring diagrams	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6.5 Conflict monitor trip sheet	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6.6 Vehicle detection documentation	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6.7 Log book signed & dated	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Traffic Technician: \_\_\_\_\_ Initials: \_\_\_\_\_ Date: \_\_\_\_\_

## 7. Project Wrap Up (Project Manager)

7.1	Final As-Built drawings submitted to GIS	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7.2	All Invoices Received			
	7.2.1 Electrical Consultant (pre, progress, final)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

7.2.2 Electrical Contractor (pre, progress, holdback)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7.2.3 Hardware Ordered by City	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7.2.4 BC Hydro connection charges	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7.3 Update Asset information in Infor/Hansen	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7.4 Remove "New Signal" advisory signs (4 weeks)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7.5 BC Hydro account assigned to consolidated traffic account	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7.6 Project Close Out, Budget, WO, PO # in SAP, INFOR	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Traffic Technician: \_\_\_\_\_ Initials: \_\_\_\_\_ Date: \_\_\_\_\_

Contractor: \_\_\_\_\_ Initials: \_\_\_\_\_ Date: \_\_\_\_\_

Inspector: \_\_\_\_\_ Initials: \_\_\_\_\_ Date: \_\_\_\_\_