

June 29, 2017

Ref. No.: 15-201-11

City of Ottawa  
Planning, Infrastructure and Economic Development Department  
100 Constellation Crescent, 6th Floor West  
Ottawa, Ontario K2G 6J8

**Attn: Mr. Ziad Ghadban, Manager CSST**

**RE: Air Quality Monitoring and Sampling at CSST Site 5, Stanley Park – June 25 to 28, 2017**

Dear Mr. Ghadban:

The following letter memo summarizes the results of the air quality monitoring completed at the Stanley Park construction site (CSST Site 5) between June 25 and 28, 2017. Site activities have been suspended on June 29 and 30<sup>th</sup>, prior to the Canada Day long weekend. It is understood that site work will resume on July 4, 2017.

## **1 EQUIPMENT AND SETUP**

### **1.1 Particulate monitoring**

Continuous monitoring of airborne particulates was completed using a DustTRAK DRK Aerosol Monitor 8533, equipped with telemetry to provide real-time, continuous records of particulate matter (PM) concentrations. Dedicated stations have been established to most effectively capture particulate generated from on-site activities. Station 1 is located east of the shaft excavation area to capture particulate matter originating from the excavation and soil stockpile location. This station is downwind of the prevailing west wind direction. The second monitoring location, Station 2 is located in the northwest portion of the site, near the entrance from Queen Victoria Street.

### **1.2 Climate Data**

An on-site climate monitoring station collects real-time, site-specific climate data, in particular wind direction, wind speed and temperature. Average daily wind direction, wind speed and temperature is presented in Table 1. Daily wind rose plots are shown on Figure 1, attached.

## **2 APPLICABLE CRITERIA**

The results of the air quality monitoring are compared to Ontario's Ambient Air Quality Criteria (MOECC, 2012). Relevant health related criteria (particulate) include the following:

- **PM<sub>2.5</sub> – 25 µg/m<sup>3</sup> (24 hour)**
- **PM<sub>10</sub> – 50 µg/m<sup>3</sup> (24 hour)**

### 3 RESULTS

Table 1 presents the results of the average (mean) particulate concentration recorded at each monitoring station over a 24 hour period.

**Table 1 - Average Daily (24 hour) Climate Data and Particulate Concentration  
 (June 25 to 28, 2017)**

Date	Climate Data			Station 1 (µg/m <sup>3</sup> )		Station 2 (µg/m <sup>3</sup> )	
	Primary Wind Direction	Wind Speed (km/hr)	Temp. (°C)	PM <sub>2.5</sub>	PM <sub>10</sub>	PM <sub>2.5</sub>	PM <sub>10</sub>
Sunday , June 25, 2017	NW	4	16.6	12	13	4	5
Monday, June 26, 2017	NW-NE	3	20.0	6	7	2	3
Tuesday, June 27, 2017	NW	3	15.4	6	7	4	4
Wednesday, June 28, 2017	NW	6	17.4	9	9	7	8
Thursday, June 29, 2017	--	--	--	--	--	--	--
Friday, June 30, 2017	--	--	--	--	--	--	--
Saturday, July 1, 2017	--	--	--	--	--	--	--

The concentration of particulate matter (PM<sub>2.5</sub> and PM<sub>10</sub>), as presented in Table 1, are below Ontario's AAQC.

### 4 COLLECTION OF LABORATORY SAMPLES

Given the limited on-site activities occurring during the reporting period, no air quality samples were collected for laboratory analysis.

Should you have any questions or require additional information, please do not hesitate to contact the undersigned.

Respectfully submitted,  
 Geofirma Engineering Ltd.

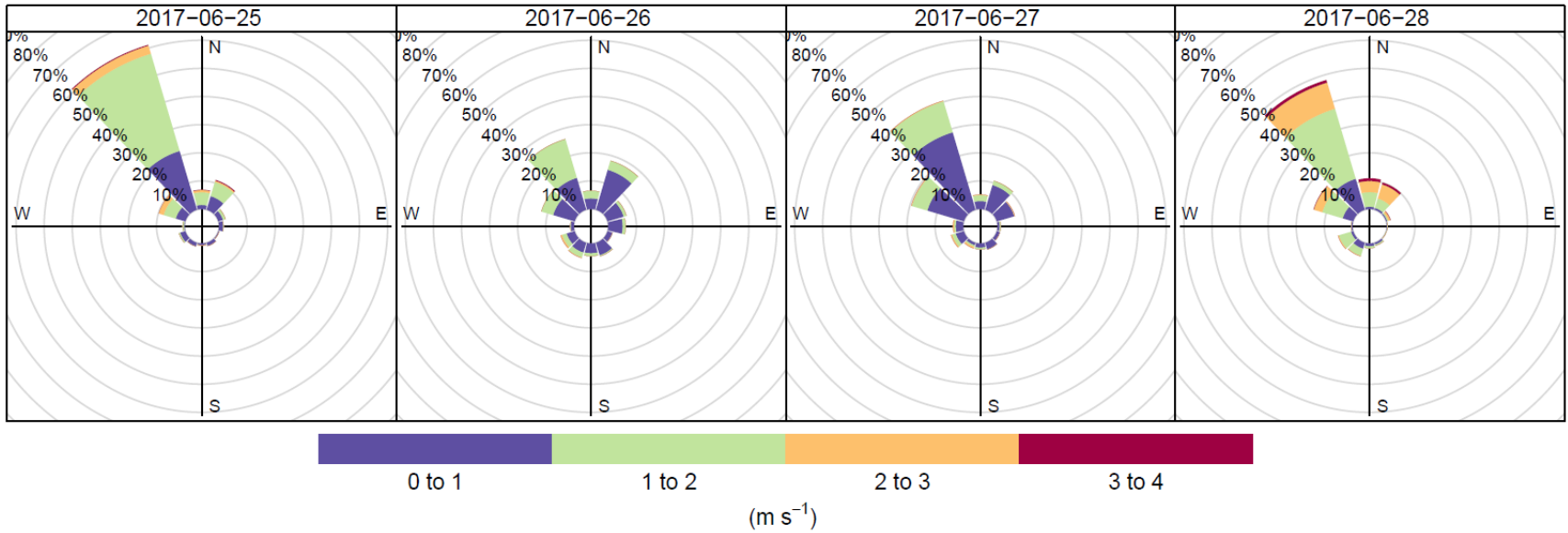


Steve Gaines, M.A.Sc., P.Eng.  
 Geo-Environmental Engineer

Attach.

- Figure 1 – Wind Rose Plot: June 25-28, 2017

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Prepared By:	Steven Gaines, P.Eng.	
Reviewed By:	Glen Briscoe, P.Eng.	



**Wind Rose Plot: June 25 – 28, 2017**  
**Air Quality Monitoring and Sampling at CSST Site 5, Stanley Park**

Prepared by: SNG

Reviewed by: GDB

Date: 29-Jun-17

**Figure 1**

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