Appendix F
Air Quality

A. THE FUTURE WITH THE NO CATERING FACILITY SCENARIO

MOBILE SOURCES

CARBON MONOXIDE

CO concentrations with the No Catering Facility Scenario were determined for the 2016 With-Action year using the methodology previously described. **Table F-1** shows the future maximum predicted 8-hour average CO concentrations at the intersections analyzed. (No 1-hour values are shown, since no exceedances of the NAAQS would occur and the *de minimis* criteria are only applicable to 8-hour concentrations; therefore, the 8-hour values are the most critical for impact assessment.) The values shown represent the highest predicted concentrations for all of the receptors analyzed and include the 8-hour CO ambient background concentration.

Table F-1
Future (2016) Maximum Predicted 8-Hour Average CO Concentrations With and Without the No Catering Facility Scenario (ppm)

Receptor Site	Location	Time Period	8-Hour Concentration (ppm)			
			Without the Project	With the Project	Increment	*De Minimis*
1	Richmond Terr. & Borough Pl.	Weekday PM	2.9	5.4	2.5	6.0
2	Richmond Terr. & Wall St.	Saturday MD	2.2	2.7	0.5	5.6

Note: 8-hour standard (NAAQS) is 9 ppm.

The results indicate that the No Catering Facility Scenario would not result in any violations of the 8-hour CO standard. In addition, the increments in 8-hour average CO concentrations are small and consequently would not exceed the *de minimis* CO criteria.

PARTICULATE MATTER

Using the methodology previously described, PM_{10} concentrations with and without the No Catering Facility Scenario were determined for the 2016 With-Action year. The values shown in **Table F-2** are the highest predicted concentrations for all receptors analyzed and include the PM_{10} ambient background concentration. The results indicate that the vehicle trips generated by the No Catering Facility Scenario would not result in PM_{10} concentrations that would exceed the NAAQS.

Table F-2
Future (2016) Maximum Predicted 24-Hour Average PM_{10} Concentrations With and Without the No Catering Facility Scenario (µg/m^3)

Receptor Site	Location	No-Action	With-Action
1	Richmond Terrace & Borough Place	62.30	68.64
2	Richmond Terrace & Wall Street	58.85	63.44

Note: The National Ambient Air Quality Standard for PM_{10} is 150 µg/m^3, for a 24-hour average.

Future maximum predicted 24-hour and annual average $PM_{2.5}$ concentration increments were calculated so that they could be compared to the *de minimis* criteria that would determine the potential significance of any impacts from the No Catering Facility Scenario. Based on this analysis, the maximum predicted localized 24-hour average and neighborhood-scale annual average incremental $PM_{2.5}$ concentrations are presented in **Table F-3** and **Table F-4**, respectively. Total $PM_{2.5}$ concentrations for the No Catering Facility Scenario are not presented, since impacts are assessed on an incremental basis.

Table F-3
Maximum Predicted 24-Hour Average $_{PM2.5}$ Increments (µg/m^3)

Receptor Site	Location	Increment	*De Minimis*
1	Richmond Terrace & Borough Place	4.59	5.4
2	Richmond Terrace & Wall Street	2.56	5.4

Note: The $PM_{2.5}$ *de minimis* criteria superseded the $PM_{2.5}$ interim guidance criteria on June 5, 2013. The 24-hour average interim guidance criteria for $_{PM2.5}$ were as follows: > 2 µg/m^3 (5 µg/m^3 not-to-exceed value) The $PM_{2.5}$ *de minimis* criteria is half the difference between the NAAQS of 35 µg/m^3 and the ambient monitored background of 24.2 µg/m^3. The $PM_{2.5}$ increments shown are less than the *de minimis* value.

Table F-4
Maximum Predicted Annual Average $_{PM2.5}$ Increments (µg/m^3)

Receptor Site	Location	Increment
1	Richmond Terrace & Borough Place	0.099
2	Richmond Terrace & Wall Street	0.054

Note: $PM_{2.5}$ *de minimis* criteria—annual (neighborhood scale), 0.1 µg/m^3.

The results show that the daily and annual $PM_{2.5}$ increments are predicted to be well below the *de minimis* criteria. Therefore, there would be no potential for significant adverse impacts on air quality from vehicle trips generated by the No Catering Facility Scenario.

PARKING STRUCTURES

Table F-5 shows the future maximum predicted 1-hour and 8-hour average CO concentrations from the No Catering Facility Scenario at the South Site parking structure, with ambient background, and on-street traffic levels. As shown in the table, the maximum predicted CO levels would be in compliance with the applicable CO *de minimis* criteria and federal ambient air quality standards.

Table F-5
Future (2016) Maximum Predicted CO Concentrations (ppm)

Garage Site	Time Period	Averaging Period	Background	Proposed Project	Background + Traffic[(1)] + Proposed project	Increment	*De Minimis / NAAQS*
South Site	Saturday Midday	1-hour	3.4	2.5	6.1	NA	N/A / 35
		8-hour	2.0	1.5	3.7	1.7	3.5 / 9

Notes:
(1) Concentrations from on-street traffic are 0.2 ppm and 0.1 ppm for the 1-hour and 8-hour averaging periods, respectively.
NA=not applicable. The 1–hour concentration is compared to the NAAQS. The 8-hour concentration is compared to both the *De minimis* threshold and the NAAQS.

Therefore, there would be no potential for significant adverse impacts on air quality from the proposed parking structures.

STATIONARY SOURCES

HEATING AND HOT WATER SYSTEMS

The No Catering Facility Scenario would not include the two hot water heaters provided for the catering facility at the South Site. All other HVAC sources and hot water heaters would remain the same as the proposed project. Therefore, emissions and impacts from stationary sources would be lower than the proposed project and there would be no potential significant adverse stationary source air quality impacts associated with the No Catering Facility Scenario.

POTENTIAL WATERBORNE TRANSIT LANDING

There are no proposed changes to the water taxi with the No Catering Facility Scenario. Therefore, there would be no potential significant adverse air quality impacts from the potential waterborne transit landing.

CUMULATIVE IMPACTS

Table F-6 presents the results of the cumulative $PM_{2.5}$ 24-hour increment from the mobile sources and the stationary sources from the No Catering Facility Scenario.

Table F-6
Maximum Predicted Cumulative 24-Hour Average $_{PM2.5}$ Increment from Mobile and Stationary Sources from the No Catering Facility Scenario (µg/m^3)

Location	Increment	Threshold
Richmond Terrace & Borough Place	5.12	5.4[(1)]
Richmond Terrace and Wall Street	3.50	5.4[(1)]

Notes:
(1) The $PM_{2.5}$ *de minimis* criteria superseded the $PM_{2.5}$ interim guidance criteria on June 5, 2013. The 24-hour average interim guidance criteria for $PM_{2.5}$ were as follows: > 2 µg/m^3 (5 µg/m^3 not-to-exceed value), based on the magnitude, frequency duration, location, and size of the area of the predicted concentrations. The $PM_{2.5}$ *de minimis* criteria is half the difference between the NAAQS of 35 µg/m^3 and the ambient monitored background of 24.2 µg/m^3. The $PM_{2.5}$ increments shown are less than the *de minimis* value.

The results show that the cumulative daily $PM_{2.5}$ increments are predicted to be below the *de minimis* criteria. Therefore, there would be no potential for significant adverse impacts on air quality from the mobile and stationary sources from the No Catering Facility Scenario. ✷