A. INTRODUCTION

This chapter examines the potential for air quality impacts associated with the proposed Intermodal Facility. Air quality impacts can be either direct or indirect. Direct impacts stem from emissions generated by stationary sources at a development site, such as emissions from fuel burned on site for heating, ventilation, and air conditioning (HVAC) systems or emissions from parking facilities. Indirect impacts are caused by potential emissions resulting from mobile sources (vehicles) generated by a project.

An assessment of the potential air quality effects of the Project on Carbon Monoxide (CO) concentrations that would result from vehicles coming to and departing from the Intermodal Facility was performed following the procedures outlined in the New York State Department of Transportation (NYSDOT) *Environmental Procedures Manual (EPM),* January 2001. The Project will include a multi-level, naturally ventilated parking garage. Emissions from vehicles using the naturally ventilated parking garage could potentially affect ambient levels of CO near the Project Site. Therefore, an analysis was performed to estimate pollutant levels at various distances from the parking garage. Emissions from vehicles entering, parking, and exiting the garage were estimated using the U.S. Environmental Protection Agency's MOBILE6.2 mobile source emission model. This chapter presents the results of the air quality analyses that were performed to assess the potential for air quality impacts from the Project.

B. POLLUTANTS FOR ANALYSIS

Ambient air quality is affected by air pollutants produced by both motor vehicles and stationary sources. Emissions from motor vehicles are referred to as mobile source emissions, while emissions from fixed facilities are referred to as stationary source emissions.

CARBON MONOXIDE

The Project will increase traffic volumes on streets near the Project Site and will therefore result in local increases in CO levels. A mobile source screening analysis was performed to identify locations where increases in traffic volumes are projected to be great enough that a detailed analysis of mobile source air quality is appropriate. Based on the screening analysis, no detailed analysis was warranted. An analysis was also conducted to evaluate future CO concentrations with the operation of the proposed parking garage.

NITROGEN OXIDES, VOCS, AND OZONE

The Project will not have a significant effect on the overall volume of vehicular travel in the metropolitan area; therefore, no measurable impact on regional NO_x emissions or on ozone levels is predicted. An analysis of project-related emissions of these pollutants from mobile sources was therefore not warranted.

LEAD

No significant sources of lead are associated with the Project and, therefore, analysis was not warranted.

RESPIRABLE PARTICULATE MATTER—PM_{10} AND $PM_{2.5}$

Diesel-powered vehicles, especially heavy duty trucks and buses, are a significant source of respirable PM, most of which is $PM_{2.5}$; PM concentrations may, consequently, be locally elevated near roadways with high volumes of heavy diesel powered vehicles. The Project will not result in a significant increase in truck traffic or any other significant source of particulate matter emissions near the Project Site or in the region. Therefore, an analysis of potential impacts from PM was not warranted.

SULFUR DIOXIDE

The Project will not involve the addition of any new stationary emission sources. Therefore, an analysis of potential increases in SO_2 emissions was not warranted.

C. NATIONAL AND STATE AIR QUALITY STANDARDS

As required by the Clean Air Act (CAA), primary and secondary National Ambient Air Quality Standards (NAAQS) have been established for six major air pollutants: CO, NO_2, ozone, respirable PM (both $PM_{2.5}$ and PM_{10}), SO_2, and lead. The NAAQS for CO, NO_2, and SO_2 have also been adopted as the ambient air quality standards for New York State, but are defined on a running 12-month basis rather than for calendar years only.

TRANSPORTATION CONFORMITY

The Project is included in the TIP for the New York Metropolitan Transportation Council (NYMTC), the federally recognized metropolitan planning organization for the New York City metropolitan area. The Project will not result in an increase in regional vehicle trips. Therefore, the Project will not affect the State Implementation Plan for attaining or maintaining NAAQS and will meet conformity requirements.

D. THE PROJECT

MOBILE SOURCES

The results of the screening analysis based on NYSDOT's *EPM* indicate that none of the project-affected intersections require detailed microscale air quality analysis. Therefore, no significant adverse air quality impacts are expected to occur as a result of the Project's mobile sources.

PARKING GARAGE ANALYSIS

The maximum predicted CO concentrations from the proposed parking facility were analyzed. The proposed parking garage was modeled as a worst-case parking facility using two receptor locations: a near side receptor on the same side of the street as the parking facility and a far side receptor on the opposite side of the street from the parking facility. The total CO impacts

included both background CO levels and the far side receptor included contributions from traffic on adjacent roadways.

The maximum overall predicted future CO concentrations, with ambient background levels, at receptor locations, were predicted to be 2.1 ppm and 1.1 ppm for the 1- and 8-hour periods, respectively. The values are the highest predicted concentrations for any time period analyzed.

The CO impacts from the parking garage were substantially below the applicable standard of 9 ppm. Therefore, it can be concluded that the proposed parking facility will not result in any significant adverse air quality impacts. ✷