# CHAPTER 30 ENVIRONMENTAL REVIEW: EXISTING NORTH SHORE MTS

## 30.1 Introduction

The results of the environmental analyses of the Existing North Shore MTS are presented in the following sections:

30.2 Land Use, Zoning, and Public Policy
30.3 Socioeconomic Conditions
30.4 Community Facilities and Services
30.5 Open Space
30.6 Cultural Resources
30.7 Urban Design, Visual Resources, and Shadows
30.8 Neighborhood Character
30.9 Natural Resources
30.10 Hazardous Materials
30.11 Water Quality
30.12 Waterfront Revitalization Program
30.13 Infrastructure, Solid Waste and Sanitation Services, and Energy
30.14 Traffic, Parking, Transit, and Pedestrians
30.15 Air Quality
30.16 Odor
30.17 Noise

Section 2.4.12 provides a summary description of the site and important characteristics of the facility design. A detailed discussion of the methodologies that were applied in conducting each analysis is provided in Chapter 3. Supplemental information on the site or the study area is provided in the following sections when appropriate to the analysis.

## 30.2 Land Use, Zoning, and Public Policy

The Existing North Shore MTS is located at the site of the North Shore Converted MTS. The analyses of the Land Use, Zoning, and Public Policy section of the North Shore Converted MTS chapter in this FDEIS provides the necessary information for the review of this facility in these respective categories.

## 30.3 Socioeconomic Conditions

The Existing North Shore MTS is located at the site of the North Shore Converted MTS. The analysis of the Socioeconomic Conditions section of the North Shore Converted MTS chapter in this FDEIS provides the necessary information for the review of this facility in this category.

## 30.4 Community Facilities and Services

The Existing North Shore MTS is located at the site of the North Shore Converted MTS. The analysis of the Community Facilities and Services section of the North Shore Converted MTS chapter in this FDEIS provides the necessary information for the review of this facility in this category.

## 30.5 Open Space

The Existing North Shore MTS is located at the site of the North Shore Converted MTS. The analysis of the Open Space section of the North Shore Converted MTS chapter in this FDEIS provides the necessary information for the review of this facility in this category.

## 30.6 Cultural Resources

The Existing North Shore MTS is located at the site of the North Shore Converted MTS. The analysis of the Cultural Resources section of the North Shore Converted MTS chapter in this FDEIS provides the necessary information for the review of this facility in this category.

## 30.7 Urban Design, Visual Resources, and Shadows

The Existing North Shore MTS is located at the site of the North Shore Converted MTS. The analyses of the Urban Design, Visual Resources, and Shadows section of the North Shore Converted MTS chapter in this FDEIS provides the necessary information for the review of this facility in these respective categories.

## 30.8 Neighborhood Character

The Existing North Shore MTS is located at the site of the North Shore Converted MTS. The analysis of the Neighborhood Character section of the North Shore Converted MTS chapter in this FDEIS provides the necessary information for the review of this facility in this category.

## 30.9 Natural Resources

The Existing North Shore MTS is located at the site of the North Shore Converted MTS. The analysis of the Natural Resources section of the North Shore Converted MTS chapter in this FDEIS provides the necessary information for the review of this facility in this category.

## 30.10 Hazardous Materials

The Existing North Shore MTS is located at the site of the North Shore Converted MTS. The analysis of the Hazardous Materials section of the North Shore Converted MTS chapter in this FDEIS provides the necessary information for the review of this facility in this category.

## 30.11 Water Quality

The Existing North Shore MTS has a smaller footprint than the North Shore Converted MTS. Since there are no unmitigatible significant adverse environmental water quality impacts from the North Shore Converted MTS, there will be no unmitigatible significant adverse environmental water quality impacts from the Existing North Shore MTS.

## 30.12 Waterfront Revitalization Program

The Existing North Shore MTS has a smaller footprint than the North Shore Converted MTS. Since there are no unmitigatible significant adverse environmental WRP impacts from the North Shore Converted MTS, there will be no unmitigatible significant adverse environmental WRP impacts from the Existing North Shore MTS.

## 30.13 Infrastructure, Solid Waste and Sanitation Services, and Energy

It is assumed that the staffing levels of the Existing North Shore MTS would be equal to or less than the staffing levels of the North Shore Converted MTS. Therefore the analyses performed for the North Shore Converted MTS to assess impacts to water supply, sanitary sewage, and solid waste would also apply to the assessment of these utilities for the Existing North Shore MTS.

## 30.14 Traffic, Parking, Transit, and Pedestrians

The Existing North Shore MTS may receive the same amount of DSNY-managed and potential commercial waste as the North Shore Converted MTS. See the Traffic, Parking, Transit, and Pedestrians section of the North Shore Converted MTS chapter in this FDEIS. If the amount of waste delivered to the Existing North Shore MTS is less than or equal to that analyzed, there will be no unmitigatible significant adverse environmental impacts.

## 30.15 Air Quality

The Existing North Shore MTS would have less on-site emission-generating equipment, but the sources located closer to the property line receptors, than the North Shore Converted MTS. This section presents the results of the air quality analysis for the Existing North Shore MTS operating at 4,800 tpd.

## 30.15.1 Potential Impacts with the Existing North Shore MTS

### *30.15.1.1 On-Site Analysis*

#### *30.15.1.1.1 Sources Considered in the Analysis*

The sources of emissions and the number of each type of source that are anticipated to be in operation during the peak hour and under daily average conditions are provided in Table 30.15-1.

**Table 30.15-1**
**Emission Sources Considered for On-Site Air Quality Analysis[1]**
**Existing North Shore MTS**

| Type of Emission Source | Maximum Number of Sources Operated During a Single Hour[2] | Number of Sources Operated During 24-hour and Annual Average Hour |
|---|---|---|
| **Within Processing Building** | | |
| Moving/Queuing Collection Vehicles | 37 | 20 |
| Space Heaters | 10 | 4 |
| Boiler | 1 | 1 |
| **Outside Processing Building** | | |
| Moving Collection Vehicles | 50 | 20 |
| Queuing Collection Vehicles[2] | 13 | 3 |
| Oceangoing Tugboats | 1 | 1 |

Notes:
(1) Emission factors used and emission rates estimated for each of these sources are included in technical backup provided to the NYCDEP.
(2) Peak 8-hour and 3-hour average number of queuing collection vehicles outside building is 5. Theoretically, the 3-hour value should be no less than one-third of the peak 1-hour value (13), but for this analysis, the 3-hour and 8-hour values are more realistic estimates of actual peak queuing activity, while the 1-hour peak is simply a conservative assumption based on the maximum available physical queuing space on the entrance road/ramp.

#### *30.15.1.1.2 Results of the Criteria Pollutant Analysis*

The highest estimated criteria pollutant concentrations at any of the receptor locations considered are presented in Table 30.15-2. These values are below the national and state ambient air quality standards for the appropriate averaging time periods. In addition, the highest estimated changes in 24-hour and annual $PM_{2.5}$ concentrations from project-generated vehicles at any of the receptor locations considered, which are also presented in Table 30.15-2, are below the STVs. The Existing North Shore MTS would not, therefore, significantly impact air quality in the area.

#### *30.15.1.1.3 Results of the Toxic Pollutant Analysis*

The results of the toxic pollutant analysis are summarized in Table 30.15-3. The highest estimated non-carcinogenic toxic air pollutant impacts are below the short-term (acute) and long-term (chronic) hazard index thresholds specified in New York State's Air Guide 1. In addition, the highest estimated carcinogenic impacts are less than the one-in-a-million threshold level that is defined by NYSDEC as being significant. As such, the potential impacts of the toxic pollutant emissions from the on-site operations of the Existing North Shore MTS are not considered to be significant.

### *30.15.1.2 Off-Site Analysis*

An off-site air quality analysis was performed for the North Shore Converted MTS. The trucks routed to the Existing North Shore MTS would be equivalent to or less than this analysis. Therefore, no additional off-site air quality analysis is required for the Existing North Shore MTS.

## Table 30.15-2
## Highest Estimated Concentrations of the Criteria Pollutants from On-Site Emissions
## Existing North Shore MTS

| Pollutant | Averaging Time Period | Maximum Impacts from On-Site Emission Sources[1] | Background Pollutant Concentrations [2] | Highest Estimated On-Site Pollutant Concentrations | NAAQS[3] | STV[4] |
|---|---|---|---|---|---|---|
| Carbon Monoxide (CO), $\mu g/m^3$ | 1-hour[6] | 782 | 3,781 | 4,563 | 40,000 | NA |
| | 8-hour[6] | 221 | 2,635 | 2,856 | 10,000 | NA |
| Nitrogen Dioxide ($NO_2$), $\mu g/m^3$ | Annual | 10 | 56 | 66 | 100 | NA |
| Particulate Matter ($PM_{10}$), $\mu g/m^3$ | 24-hour[7] | 19 | 90 | 109 | 150 | NA |
| | Annual | 5 | 20 | 25 | 50 | NA |
| Particulate Matter ($PM_{2.5}$), $\mu g/m^3$ | 24-hour | 2 | NA | NA | NA | 5 |
| | Annual Neighborhood Average | 0.02[5] | NA | NA | NA | 0.1 |
| Sulfur Dioxide ($SO_2$), $\mu g/m^3$ | 3-hour[6] | 86 | 186 | 272 | 1,300 | NA |
| | 24-hour[6] | 7 | 107 | 114 | 365 | NA |
| | Annual | 1 | 18 | 19 | 80 | NA |

**Notes:**

(1) The highest estimated pollutant concentrations found at any of the off-site receptor locations.

(2) Background concentrations were obtained from the NYCDEP on ~~April 18, 2003~~ memorandum dated February 18, 2005.

(3) NAAQS = National Ambient Air Quality Standard.

(4) Screening threshold value (STV) established by the NYCDEP and NYSDEC.

(5) Average $PM_{2.5}$ concentration over 1 km x 1 km "neighborhood-scale" receptor grid.

(6) The standards for these averaging periods allow one exceedance per year, so the use of the overall maximum concentration provides a very conservative comparison with standards.

(7) The 24-hour $PM_{10}$ NAAQS is based on a 99$^{th}$ percentile concentration, which means that the high, 4$^{th}$ high concentration is appropriate for comparison with the standard. Therefore, the use of the overall highest concentration in this comparison is quite conservative.

NA = Not Applicable.

## Table 30.15-3
## Highest Estimated Non-Cancer Hazard Index and Cancer Risk of Toxic Air Pollutants from On-Site Emissions
## Existing North Shore MTS

| No. | Toxic Air Pollutants | Acute Non-Cancer Risk | | | Chronic Non-Cancer Risk | | | Cancer Risk | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | Highest Estimated Short-Term (1-hr) Pollutant Conc.[1] ($\mu g/m^3$) | Short-Term (1-hr) Guideline Conc. (SGCs) [2] ($\mu g/m^3$) | Acute Non-Cancer Hazard Index[3] | Highest Estimated Long-Term (Annual) Pollutant Conc.[4] ($\mu g/m^3$) | Long-Term (Annual) Guideline Conc. (AGCs) [5] ($\mu g/m^3$) | Chronic Non-Cancer Hazard Index [6] | Highest Estimated Long-Term (Annual) Pollutant Conc. [4] ($\mu g/m^3$) | Unit Risk Factors [7] ($\mu g/m^3$) | Maximum Cancer Risk [8,9] |
| **Carcinogenic Pollutants** | | | | | | | | | | |
| 1 | Benzene | 3.91E-01 | 1.30E+03 | 3.01E-04 | 4.39E-03 | 1.30E-01 | 3.38E-02 | 4.39E-03 | 8.30E-06 | 3.65E-08 |
| 2 | Formaldehyde | 4.95E-01 | 3.00E+01 | 1.65E-02 | 5.56E-03 | 6.00E-02 | 9.26E-02 | 5.56E-03 | 1.30E-05 | 7.23E-08 |
| 3 | 1,3 Butadiene | 1.64E-02 | - | - | 1.84E-04 | 3.60E-03 | 5.12E-02 | 1.84E-04 | 2.80E-04 | 5.16E-08 |
| 4 | Acetaldehyde | 3.22E-01 | 4.50E+03 | 7.15E-05 | 3.61E-03 | 4.50E-01 | 8.03E-03 | 3.61E-03 | 2.20E-06 | 7.95E-09 |
| 5 | Benzo(a)pyrene | 7.89E-05 | - | - | 8.85E-07 | 2.00E-03 | 4.43E-04 | 8.85E-07 | 1.70E-03 | 1.51E-09 |
| **Non-Carcinogenic Pollutants** [10] | | | | | | | | | | |
| 6 | Propylene | 1.08E+00 | - | - | 1.22E-02 | 3.00E+03 | 4.05E-06 | 1.22E-02 | NA | NA |
| 7 | Acrolein | 3.88E-02 | 1.90E-01 | 2.04E-01 | 4.36E-04 | 2.00E-02 | 2.18E-02 | 4.36E-04 | NA | NA |
| 8 | Toluene | 1.72E-01 | 3.70E+04 | 4.64E-06 | 1.93E-03 | 4.00E+02 | 4.82E-06 | 1.93E-03 | NA | NA |
| 9 | Xylenes | 1.20E-01 | 4.30E+03 | 2.78E-05 | 1.34E-03 | 7.00E+02 | 1.92E-06 | 1.34E-03 | NA | NA |
| 10 | Anthracene | 7.84E-04 | - | - | 8.81E-06 | 2.00E-02 | 4.40E-04 | 8.81E-06 | NA | NA |
| 11 | Benzo(a)anthracene | 7.05E-04 | - | - | 7.91E-06 | 2.00E-02 | 3.96E-04 | 7.91E-06 | NA | NA |
| 12 | Chrysene | 1.48E-04 | - | - | 1.66E-06 | 2.00E-02 | 8.31E-05 | 1.66E-06 | NA | NA |
| 13 | Naphthalene | 3.56E-02 | 7.90E+03 | 4.50E-06 | 3.99E-04 | 3.00E+00 | 1.33E-04 | 3.99E-04 | NA | NA |
| 14 | Pyrene | 2.00E-03 | - | - | 2.25E-05 | 2.00E-02 | 1.13E-03 | 2.25E-05 | NA | NA |
| 15 | Phenanthrene | 1.23E-02 | - | - | 1.38E-04 | 2.00E-02 | 6.92E-03 | 1.38E-04 | NA | NA |
| 16 | Dibenz(a,h)anthracene | 2.45E-04 | - | - | 2.75E-06 | 2.00E-02 | 1.37E-04 | 2.75E-06 | NA | NA |
| | | **Total Estimated Acute Non-Cancer Hazard Index** | | 2.21E-01 | **Total Estimated Chronic Non-Cancer Hazard Index** | | 2.17E-01 | **Total Estimated Combined Cancer Risk** | | 1.70E-07 |
| | | **Acute Non-Cancer Hazard Index Threshold** [11] | | 1.0E+00 | **Chronic Non-Cancer Hazard Index Threshold** [11] | | 1.0E+00 | **Cancer Risk Threshold** [11] | | 1.0E-06 |

## 30.16 Odor

In addition to the odors from waste processing operations in the building that will be controlled through an odor neutralizing system, the Existing North Shore MTS would have full and empty barges moored and queued outdoors during operations. This section presents the results of the odor analysis for the Existing North Shore MTS operating at 4,800 tpd.

### 30.16.1 Potential Impacts with the Existing North Shore MTS

#### *30.16.1.1 Odor Source Types and Locations Considered in the Analysis*

The anticipated number and types of odor sources that would be associated with waste processing operations at peak design capacity at the Existing North Shore MTS are provided in Table 30.16-1.

**Table 30.16-1**
**Odor Sources Included in Odor Analysis**
**Existing North Shore MTS**

| Type of Emission Source | Number of Sources Operated During Peak Design Capacity |
|---|---|
| Exhaust Fans from Processing Building | 1 |
| Barge | 2 |
| Queuing Collection Vehicles[1] | 41 |

Notes:
(1) This is the number of collection vehicle sources inbound and outbound from the MTS. The actual number of vehicles is 13.

An odor control system (e.g., scrubber, neutralizing agent misting system injected into the exhaust duct work system, etc.) would be included in the design to control odorous emissions from the processing building. Odor control systems can remove between 90% and 99% of odorous compounds. For purposes of modeling odor dispersion, a 90% reduction of odorous emissions was conservatively assumed for the Existing North Shore MTS.

### *30.16.1.2 Results of the Odor Analysis*

The highest estimated odor concentrations at any of the receptor sites considered and the concentrations at the closest sensitive receptor are presented in Table 30.16-2. The predicted OU values at sensitive receptor locations are compared to an OU of 5, which represents the level of odor impact that would begin to be detected by an average observer. The highest predicted OU associated with the Existing North Shore MTS at any nearby sensitive receptor is less than 1, so odors from the Existing North Shore MTS would not be detectable by off-site sensitive receptors and the facility would comply with NYSDEC requirements for effective odor control. Therefore, no significant adverse impacts from odors on receptors are expected to occur as a result of this facility.

**Table 30.16-2**
**Highest Predicted Odor Concentration(s) from On-Site Sources**
**Existing North Shore MTS**

| **Parameter** | **Resulting Odor Unit[1]** |
|---|---|
| **Estimated Detectable Concentration** | 5.0 |
| **Highest Result** | 1.56 |
| Type of Receptor | Fence Line Receptor |
| Location of Receptor[2] | Site Boundary |
| **Closest Sensitive Receptor Result** | 0.18 |
| Type of Receptor | Residential House |
| Distance to Receptor[3] | 280 Feet |

**Notes:**
(1) D/T ratio is dimensionless.
(2) Measured from the site boundary.
(3) Measured from the site property line.

## 30.17 Noise

The noise analysis addresses on-site and off-site sources of noise emissions from Existing North Shore MTS-related solid waste management activities. It is based on Section R of the 2001 CEQR Technical Manual for both on-site and off-site sources, and, for on-site sources only, the Performance Standards of the New York City Zoning Code for Manufacturing Districts and the Current New York City Noise Code. Section 3.19 provides a general discussion of the relevant regulatory standards and methodologies used in this analysis.

### 30.17.1 Existing Conditions

#### *30.17.1.1 Introduction*

Figure 30.17-1 shows the location of the Existing North Shore MTS, the surrounding area and the points that represent the property boundary (D1, etc.) for all noise analyses. See Section 7.17.1.1 for further information.

#### *30.17.1.2 On-Site Noise Levels*

See Section 7.17.1.2.

#### *30.17.1.3 Off-Site Noise Levels*

See Section 7.17.1.3.

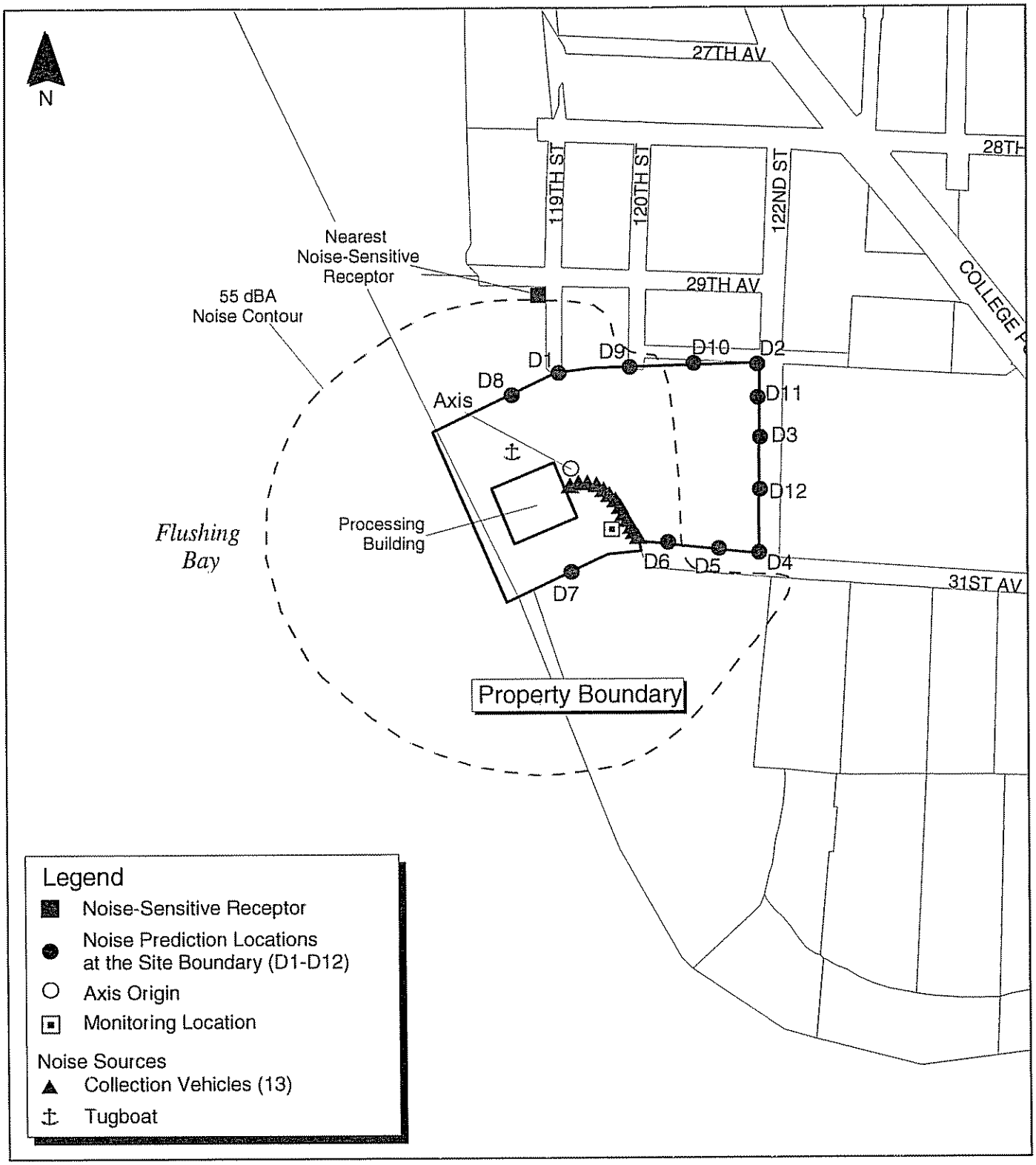
### 30.17.2 Future No-Build Conditions

#### *30.17.2.1 On-Site Noise Levels*

See Section 7.17.2.1.

#### *30.17.2.2 Off-Site Noise Levels*

See Section 7.17.2.2.




Site delineations are approximate
Base Map Source: New York City Department of City Planning

300 0 300 Feet

HDR HydroQual URBITRAN PB EEA Cambridge Environmental Inc

**Figure 30.17-1 Noise Sources and Receptors**
**Existing North Shore MTS**

CITY OF NEW YORK
DEPARTMENT OF SANITATION

THE CITY OF NEW YORK DEPARTMENT OF SANITATION

## 30.17.3 Potential Impacts with the Existing North Shore MTS

### *30.17.3.1 On-Site Noise Levels*

Equipment assumed to be operating at the Existing North Shore MTS and its reference noise levels used in the CEQR and Current Noise Code analysis are shown in Table 30.17-1. The number and types of equipment assumed for this analysis were based on the Existing North Shore MTS's peak design capacity. Shown earlier, Figure 30.17-1 indicates the Existing North Shore MTS layout, the locations of the points along its boundary where overall noise predictions were calculated and the predicted 55 dBA contour line.

**Table 30.17-1**
**Equipment Modeled in the Noise Analysis and Reference Noise Levels ($L_{eq}$)**
**Existing North Shore MTS**

| Equipment Name (quantity) (1) | Reference Sound Pressure Noise Level at 50 feet (dBA)(2) |
|---|---|
| **Indoor** | |
| Moving/Queuing Collection Vehicle (7) | ~~73~~79 |
| **Outdoor** | |
| Moving/Queuing Collection Vehicle (13) | 67 |
| Oceangoing Tugboat (1) | 73 |

Notes:
(1) Instantaneous maximum number of pieces of equipment on site at any given time.
(2) Noise level representative of each piece of equipment.

### *30.17.3.2 CEQR Analysis*

A screening analysis was conducted to determine if a detailed noise analysis would be required for the on-site operations at the Existing North Shore MTS. Noise levels from indoor and outdoor sources were combined to determine the location of the 55 dBA contour line. The 55 dBA contour line is approximately 88 meters (290 feet) from the property boundary in the direction of the nearest noise-sensitive receptor, which is approximately 92 meters (301 feet) from the property boundary. The 55 dBA contour line was selected as a limit for the study area because 55 dBA (i.e., the point off site where noises generated on-site attenuate to 55 dBA) is considered an acceptable noise level in an urban environment. Section 3.19.5.1 discusses this

concept in greater detail. The results of the screening analysis show that noise-sensitive receptors are not located within the 55 dBA contour line (see Figure 30.17-1). Therefore, an on-site noise analysis, including noise monitoring at the nearest noise-sensitive receptor, was not required.

### *30.17.3.3 Performance Standards for Zoning Code Analysis*

Performance Standards do not apply to the Existing MTS analyses since the only on-site equipment are DSNY and other agency collection vehicles and tugboats, which are not to be included in the analyses per the Zoning Code (assuming tugboats are transportation facilities).

### *30.17.3.4 NYC Noise Code Analysis – Current*

Overall noise predictions were calculated at the locations of the points (D1, etc.) representative of the Existing North Shore MTS boundary to determine the total $L_{eq}$ from all indoor and outdoor sources for comparison to the current Noise Code. This is shown in Table 30.17-3. Based on this analysis, the total $L_{eq}$ does ~~not~~ exceed the current Noise Code Standard of 70 dBA at the property boundary.

The data presented in this section is for the analysis to date. If this facility is chosen to be part of the New SWMP, a supplementary refined analysis, including refining utilization factors for equipment, will be performed.

### *30.17.3.5 Off-Site Noise Analysis*

An off-site noise analysis was performed in Section 7.17 for the North Shore Converted MTS; the trucks routed to the Existing North Shore MTS would be equivalent to or less than this analysis. Therefore, no additional off-site noise analysis was required for the Existing North Shore MTS.

### *30.17.3.6 Combined On-Site and Off-Site Noise Levels*

As a result of both the on- and off-site screening analyses performed for the Existing North Shore MTS, neither an on- or off-site noise analyses were required; therefore, a combined noise analysis was not performed.

**Table 30.17-3**
**Current Noise Code Analysis**
**Existing North Shore MTS**

| Location at Plant Boundary | Total $L_{eq}$ Contribution at Plant Boundary (dBA) |
|---|---|
| D1 | 63.7 |
| D2 | 55.4 |
| D3 | 56.9 |
| D4 | 64.5 |
| D5 | 66.7 |
| D6 | **74.6** |
| D7 | 69.4 |
| D8 | 63.8 |
| D9 | 63.2 |
| D10 | 57.4 |
| D11 | 54.1 |
| D12 | 58.2 |

Notes:
D1 through D12 are points representative of the Existing North Shore MTS boundary that are used in all noise analysis.
**Bold**= exceedence