APPENDIX M

TONNAGES MEMO

MARCH 2005

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Memo

To: File	
From: Elo Comfort	Project: DSNY MTS EIS
CC: Dan Harkins, Joyce Mariani, Elena Barnett, Susan Raila	
Date: 2/8/2005	Job No: 07912-147-180-91

Document2

RE: Tonnages analyzed at the Converted MTSs for the EIS

This memo is intended to describe the tonnage capacity for each of the Converted Marine Transfer Stations (MTSs) that is supported by the New York City Environmental Quality Review (CEQR) based Environmental Impact Statement (EIS) for this project. This memo describes the origin of the data used for these calculations as well as sample calculations for each of the eight Converted MTSs.

Data Origin

The last year for which representative data is available on the average and peak day waste delivery profiles to the existing MTSs is Fiscal Year (FY) 1998, except for the Bronx, which is FY 1997. In the subsequent years, as Interim Export was implemented, there was considerable variation in the total amount of DSNY-managed Waste generated in the City (disposed and recycled). For example, in the fiscal year period of 1998 though 2004, there is a difference of 1000 tpd between the reported high (1998) and low (2002) numbers. Compounding this variability are changes in the Curbside Recycling Program, which showed steady increases in the diversion rate from 1998 to 2002, followed by a substantial drop in 2003 as budget cuts affected the scope of the program. This history of variability means that there is no single best set of data to rely upon to report MTS loads and tons. It was decided that FY 1998 and FY 1997 for the Bronx would be used because these years represented a relative high in the waste generation rates for New York City.

FY 1997 & FY 1998 Tonnage Data - CEQR Environmental Review of the MTS Conversion Program

Work on the CEQR Environmental Review of the MTS Conversion Program began in the summer of 2002. The loads and tons delivery profile data necessary for evaluating off-site traffic, air and noise impacts was provided initially in late 2003 by DSNY's Bureau of Cleaning and Collection (BCC). It was based on average peak values from FY 1997 and RY 1998. Using this data, the Operations Management Division (OMD) in DSNY broke out loads and tons by Community District (CD) of origin and by "Splinter Groups" (Auxiliary Field Force (AFF), EZ pack, Self-Help Bulk, (SH Bulk) Miscellaneous (MISC), Lot Cleaning (LC) and Other Collected Departments (OCD)). The OMD data also classified loads into three categories for each CD and splinter group priority, non-priority, and relay. This classification was used to assign the appropriate truck route from the CD to the MTS and determine peak hour arrival rates. The allocation of loads and tons to each MTS was based on CD assignments to each MTS and assumptions on how the splinter groups would be divided among the MTSs.

This data was used to evaluate peak day traffic, air and noise impacts in the CEQR Environmental Review of the MTS Conversion Program. In addition to using the relatively high tonnage data from FY1997 and FY 1998, these analyses assumed an additional 20% increment on the actual peak hourly arrival rate as a margin of conservatism for the DEIS analysis.

Historical Tonnage Data - MTS AND BQB RFPS

When work began on the MTS RFP, DSNY Bureau of Long Term Export had identified a number of anomalies in the loads and tons data for 1998. DSNY made a decision to construct a composite tonnage allocation scenario for the MTSs. This allocation was based on historical patterns of waste disposed within a

borough as a whole with allocations then made to specific MTSs. This allocation determined an average tons per day (tpd) number for each MTS. The average tpd numbers would be used in the MTS RFP for purposes of obtaining vendor pricing. These data are reported in Table 4-2, page 4-5 of the MTS RFP.

CWMS Converted MTSs – Summary Report - Commercial Waste Processing and Analysis of Potential Impacts

In developing the Summary Report in Volume III of the Commercial Waste Management Study (CWMS), DSNY Bureau of Long Term Export had to establish the capacity to be reserved at the MTSs for its own use and then determine the capacity potentially available for deliveries of commercial waste. The starting point for this analysis was the average tpd allocation used in the MTS RFP, which was used as a baseline for calculating an average peak tpd. The average peak tpd was calculated by evaluating on a borough basis the relationship between average and average-peak-day tonnage based on the data sets for several fiscal years. Factors were derived and applied to the average tpd number to establish a peak tonnage for each borough. In the cases of Manhattan and Brooklyn, the borough peak was then allocated to each of the three respective MTSs in each borough based on the allocation factors prescribed by DSNY. These data are reported in the Volume III Summary Report, Processing Commercial Waste at the Converted MTS and Related Potential Impacts.

Section 2 0 of the CWMS explains the methodology used to establish a DSNY Capacity Scenario. Table 2 1-1 presents DSNY's tpd requirements under the column headed DSNY-managed Waste Reserved Capacity. These numbers are the average tpd allocations to each MTS adjusted for the peaking factor as previously described. Based on the DSNY Capacity Scenario, the amount of additional Commercial Waste that each converted MTS could process was calculated, and then the environmental constraints that would reduce the tonnage that could be delivered to each Converted MTS without causing a significant environmental impact were considered.

SUMMARY

The CEQR Environmental Review of the draft New Solid Waste Management Plan began under time pressures without the benefit of a comprehensive review of annual data. Later in time, DSNY needed to construct a tonnage allocation scenario that had an historical basis, reflected what the expected quantities of waste disposed, but corrected various anomalies in reported data. As a matter of policy, DSNY has determined that the DSNY Capacity Scenario reflects their long term requirements for capacity at the MTSs. The average peak tpd numbers in this scenario are based on the DSNY's average tpd allocation among the MTSs, adjusted with a peaking factor. The average peak day numbers used in the CEQR Environmental Review of the MTS Conversion Program are in all cases higher than the DSNY Capacity Scenario. The fact that the CEQR Environmental Review of the MTS Conversion Program numbers are higher points to the fact this review was done with a margin of conservatism in the analysis of off-site impacts

Attachment A

FEIS Tonnage and Truck Distribution

Excess Capacity Summary
Open Top Design

FEIS Tonnages Analyzed at Converted MTSs
Average Peak Day - Annual Average

MTS Facility	Total Number of Loading Slots	DSNY Managed Waste Deliveries, (tons)[1]	Average Day Design Capacity, (tons)[2]	Average Day			
				Total Excess Capacity (tons)	Excess Capacity, 8 am - 8 pm (tons)	Excess Capacity for Commercial Vendors, 8 pm - 8 am	Maximum Tons in Stock Pile
West 135th Street	4	1,416	4,290	2,874	1,035	1,783	104
East 91st Street	4	1,093	4,290	3,197	1,019	2,178	299
West 59th Street*	3	1,068	2,145	1,077	115	925	451
South Bronx	4	2,804	4,290	1,486	0	1,472	767
North Shore	4	2,672	4,290	1,618	449	830	259
Greenpoint	4	3,387	4,290	903	0	555	326
Hamilton Avenue	4	2,248	4,290	2,042	578	1,306	96
Southwest Brooklyn	4	1,388	4,290	2,902	1,234	1,595	74
Totals		16,076	32,175	16,099	4,429	10,644	

Notes:

[1] Based on waste information received from the New York City Department of Sanitation BCC

[2] Based on running MTS under normal operating conditions. Spare operating lines are not used to process waste.

* - West 59th Street is a Lift and Load operation, not an open top hopper system

MTS - Marine Transfer Station

Excess Capacity Summary
Open Top Design

General Assumptions

Assume that the MTS will keep the Loader Level floor as clear as possible, therefore pushing all waste received into containers as soon as possible (HDR)
Assume that each open-top line can operate 24-hours per day (G&H)
Assume that there is enough storage room for full containers so that container loading operations are not interrupted during the time it takes to switch barges. (HDR)
Assume that the MTSs with 4 hoppers will not operate more than three (3) hoppers per hour. (G&H)
Assume that MTSs with 4 hoppers can process 10 containers per hour (G&H) = 220 tons per hour (10 containers x 22 tons per container)
Assume the daily capacity of the MTSs with 4 hoppers is 4,290 tons per day [220 tons per hour x 6.5 work hours per shift x 3 shifts per day]
Assume that the 59th Street MTS can process 5 containers per hour (G&H) = 110 tons per hour (5 containers x 22 tons per container)
Assume the daily capacity of the 59th Street MTS is 2,145 tons per day [110 tons per hour x 6.5 work hours per shift x 3 shifts per day]
Assume that commercial waste is delivered to each MTS only during the time period from 8 p.m. to 8 a.m. (DSNY)
Assume Commercial Waste delivery trucks deliver an average of 11 tons per truck (HDR from field data)
Assume that there are a maximum of 5 barge switches per day at each facility (G&H)
Assume that barge capacity is not a limiting factor to MTS throughput [5 barges per day x 1056 tons per barge = 5,280 tons per day > 4,290 tons per day]

Hours of Work Assumptions
Assume 6.5 hours of work per 8 hour shift
- Assume 0.5 hours down time at the beginning of a shift
- Assume 0.5 hours down time for lunch break
- Assume 0.5 hours down time at the end of a shift

Container Assumptions
Assume 22 tons per container (G&H)
Assume 48 containers per barge (G&H)
Assume 1056 tons per barge (22 tons per container X 48 containers per barge) (Calculated)

Number of Hoppers per Facility

Facility	Maximum Number of Operating Lines per Facility	
West 135th St	4	
East 91st St	4	
West 59th St	3	Lift & Load Operation
South Bronx	4	
North Shore	4	
Greenpoint	4	
Hamilton Avenue	4	
Southwest Brooklyn	4	

(HDR) - HDR assumptions
(G&H) - G&H assumptions
(DSNY) - New York City Department of Sanitation assumptions

Excess Capacity Summary
Open Top Design

West 135th St Historical Average Peak Day Throughput

Hour	Start Time	End Time	Inbound Tonnage	Number of DCV	Tons Containerized in the Hour	Fluctuation in Stock Pile (tons)	Tons in Stock Pile	Cumulative Tons Received	Cumulative Tons Containerized	Hour of the Beginning of a barge switch	Excess Capacity, 8 am - 8 pm (tons)	Excess Capacity, 8 pm - 8 am (tons)	Excess number of Commercial Vehicles, 11 tons per vehicle	Total Number of Trucks, Including Commercial Vehicles
1	8:00	9:00	194.4	18	110.0	84.4	84.4	194.4	110.0		0.0	0.0	0	18
2	9:00	10:00	222.5	21	220.0	2.5	86.8	416.8	330.0		0.0	0.0	0	21
3	10:00	11:00	187.2	17	220.0	-32.8	54.0	604.0	550.0		0.0	0.0	0	17
4	11:00	12:00	139.7	13	110.0	29.7	83.8	743.8	660.0		0.0	0.0	0	13
5	12:00	13:00	101.5	9	185.2	-83.8	0.0	845.2	845.2		34.8	0.0	0	9
6	13:00	14:00	46.2	4	46.2	0.0	0.0	891.4	891.4		173.8	0.0	0	4
7	14:00	15:00	20.9	2	20.9	0.0	0.0	912.3	912.3		199.1	0.0	0	2
8	15:00	16:00	5.4	1	5.4	0.0	0.0	917.7	917.7		104.6	0.0	0	1
9	16:00	17:00	13.3	1	13.3	0.0	0.0	931.0	931.0		96.7	0.0	0	1
10	17:00	18:00	41.0	4	41.0	0.0	0.0	972.0	972.0		179.0	0.0	0	4
11	18:00	19:00	35.3	3	35.3	0.0	0.0	1007.3	1007.3		184.7	0.0	0	3
12	19:00	20:00	47.6	4	47.6	0.0	0.0	1054.9	1054.9		62.4	0.0	0	4
13	20:00	21:00	31.7	3	31.7	0.0	0.0	1086.6	1086.6	Barge Switch	0.0	188.3	18	21
14	21:00	22:00	55.3	5	55.3	0.0	0.0	1142.0	1142.0		0.0	164.7	15	20
15	22:00	23:00	8.5	1	8.5	0.0	0.0	1150.4	1150.4		0.0	211.5	20	21
16	23:00	0:00	10.8	1	10.8	0.0	0.0	1161.2	1161.2		0.0	99.2	10	11
17	0:00	1:00	36.6	3	36.6	0.0	0.0	1197.8	1197.8		0.0	73.4	7	10
18	1:00	2:00	60.5	6	60.5	0.0	0.0	1258.3	1258.3		0.0	159.5	15	21
19	2:00	3:00	31.6	3	31.6	0.0	0.0	1289.9	1289.9		0.0	188.4	18	21
20	3:00	4:00	22.1	2	22.1	0.0	0.0	1312.0	1312.0		0.0	87.9	8	10
21	4:00	5:00	7.9	1	0.0	7.9	7.9	1319.9	1312.0		0.0	212.1	20	21
22	5:00	6:00	7.4	1	0.0	7.4	15.4	1327.4	1312.0		0.0	204.6	19	20
23	6:00	7:00	17.0	2	0.0	17.0	32.3	1344.3	1312.0		0.0	187.7	18	20
24	7:00	8:00	71.7	7	0.0	71.7	104.0	1416.0	1312.0		0.0	6.0	1	8
Totals			1,416.0	132	1312.0						1035.1	1783.3	169	301

Excess Capacity Summary
Open Top Design

East 91st St Historical Average Peak Day Throughput

Hour	Start Time	End Time	Inbound Tonnage	Number of DCV	Tons Containerized in the Hour	Fluctuation in Stock Pile (tons)	Tons in Stock Pile	Cumulative Tons Received	Cumulative Tons Containerized	Hour of the Beginning of a barge switch	Excess Capacity, 8 am - 8 pm (tons)	Excess Capacity, 8 pm - 8 am (tons)	Excess number of Commercial Vehicles, 11 tons per vehicle	Total Number of Trucks, Including Commercial Vehicles
1	8:00	9:00	140.9	13	110.0	30.9	30.9	140.9	110.0		0.0	0.0	0	13
2	9:00	10:00	239.6	21	220.0	19.6	50.5	380.5	330.0		0.0	0.0	0	21
3	10:00	11:00	326.3	29	220.0	106.3	156.8	706.8	550.0		0.0	0.0	0	29
4	11:00	12:00	252.1	23	110.0	142.1	298.8	958.8	660.0		0.0	0.0	0	23
5	12:00	13:00	86.1	8	220.0	-133.9	164.9	1044.9	880.0		0.0	0.0	0	8
6	13:00	14:00	24.4	2	189.4	-164.9	0.0	1069.4	1069.4	Barge Switch	30.6	0.0	0	2
7	14:00	15:00	2.0	1	2.0	0.0	0.0	1071.4	1071.4		218.0	0.0	0	1
8	15:00	16:00	0.0	0	0.0	0.0	0.0	1071.4	1071.4		110.0	0.0	0	0
9	16:00	17:00	0.0	0	0.0	0.0	0.0	1071.4	1071.4		110.0	0.0	0	0
10	17:00	18:00	0.0	0	0.0	0.0	0.0	1071.4	1071.4		220.0	0.0	0	0
11	18:00	19:00	0.0	0	0.0	0.0	0.0	1071.4	1071.4		220.0	0.0	0	0
12	19:00	20:00	0.0	0	0.0	0.0	0.0	1071.4	1071.4		110.0	0.0	0	0
13	20:00	21:00	0.0	0	0.0	0.0	0.0	1071.4	1071.4		0.0	220.0	20	20
14	21:00	22:00	0.0	0	0.0	0.0	0.0	1071.4	1071.4		0.0	220.0	20	20
15	22:00	23:00	0.0	0	0.0	0.0	0.0	1071.4	1071.4		0.0	220.0	20	20
16	23:00	0:00	0.0	0	0.0	0.0	0.0	1071.4	1071.4		0.0	110.0	10	10
17	0:00	1:00	0.0	0	0.0	0.0	0.0	1071.4	1071.4		0.0	110.0	10	10
18	1:00	2:00	0.0	0	0.0	0.0	0.0	1071.4	1071.4		0.0	220.0	20	20
19	2:00	3:00	0.0	0	0.0	0.0	0.0	1071.4	1071.4		0.0	220.0	20	20
20	3:00	4:00	0.0	0	0.0	0.0	0.0	1071.4	1071.4		0.0	110.0	10	10
21	4:00	5:00	0.0	0	0.0	0.0	0.0	1071.4	1071.4		0.0	220.0	20	20
22	5:00	6:00	0.0	0	0.0	0.0	0.0	1071.4	1071.4		0.0	220.0	20	20
23	6:00	7:00	0.0	0	0.0	0.0	0.0	1071.4	1071.4		0.0	220.0	20	20
24	7:00	8:00	21.6	2	0.0	21.6	21.6	1093.0	1071.4		0.0	88.4	9	11
Totals			1,093.0	99	1071.4						1018.6	2178.4	199	298

Excess Capacity Summary
Open Top Design

West 59th St Historical Average Peak Day Throughput

Hour	Start Time	End Time	Inbound Tonnage	Number of DCV	Tons Containerized in the Hour	Fluctuation in Stock Pile (tons)	Tons in Stock Pile	Cumulative Tons Received	Cumulative Tons Containerized	Hour of the Beginning of a barge switch	Excess Capacity, 8 am - 8 pm (tons)	Excess Capacity, 8 pm - 8 am (tons)	number of Commercial Vehicles, 11 tons per	Total Number of Trucks, Including Commercial Vehicles
1	8:00	9:00	115.1	11	55.0	60.1	60.1	115.1	55.0		0.0	0.0	0	11
2	9:00	10:00	226.5	22	110.0	116.5	176.5	341.5	165.0		0.0	0.0	0	22
3	10:00	11:00	249.9	24	110.0	139.9	316.4	591.4	275.0		0.0	0.0	0	24
4	11:00	12:00	189.8	18	55.0	134.8	451.2	781.2	330.0		0.0	0.0	0	18
5	12:00	13:00	84.2	8	110.0	-25.8	425.4	865.4	440.0		0.0	0.0	0	8
6	13:00	14:00	31.3	3	110.0	-78.7	346.7	896.7	550.0		0.0	0.0	0	3
7	14:00	15:00	20.9	2	110.0	-89.1	257.5	917.5	660.0		0.0	0.0	0	2
8	15:00	16:00	1.3	1	55.0	-53.7	203.8	918.8	715.0		0.0	0.0	0	1
9	16:00	17:00	0.3	1	55.0	-54.7	149.1	919.1	770.0		0.0	0.0	0	1
10	17:00	18:00	3.5	1	110.0	-106.5	42.6	922.6	880.0		0.0	0.0	0	1
11	18:00	19:00	3.3	1	45.9	-42.6	0.0	925.9	925.9		64.1	0.0	0	1
12	19:00	20:00	4.0	1	4.0	0.0	0.0	929.9	929.9		51.0	0.0	0	1
13	20:00	21:00	3.3	1	3.3	0.0	0.0	933.3	933.3		0.0	106.7	10	11
14	21:00	22:00	1.8	1	1.8	0.0	0.0	935.1	935.1		0.0	108.2	10	11
15	22:00	23:00	0.7	1	0.7	0.0	0.0	935.7	935.7		0.0	109.3	10	11
16	23:00	0:00	0.0	0	0.0	0.0	0.0	935.7	935.7		0.0	55.0	5	5
17	0:00	1:00	24.3	2	24.3	0.0	0.0	960.1	960.1		0.0	30.7	3	5
18	1:00	2:00	26.8	3	26.8	0.0	0.0	986.8	986.8		0.0	83.2	8	11
19	2:00	3:00	28.4	3	28.4	0.0	0.0	1015.2	1015.2		0.0	81.6	8	11
20	3:00	4:00	23.1	2	23.1	0.0	0.0	1038.3	1038.3		0.0	31.9	3	5
21	4:00	5:00	8.6	1	0.0	8.6	8.6	1046.9	1038.3		0.0	101.4	10	11
22	5:00	6:00	3.5	1	0.0	3.5	12.1	1050.4	1038.3		0.0	97.9	9	10
23	6:00	7:00	3.7	1	0.0	3.7	15.8	1054.1	1038.3		0.0	94.2	9	10
24	7:00	8:00	13.9	1	0.0	13.9	29.7	1068.0	1038.3		0.0	25.3	3	4
Totals			1,068.0	110	1038.3						115.1	925.4	88	198

Excess Capacity Summary
Open Top Design

South Bronx Historical Average Peak Day Throughput

Hour	Start Time	End Time	Inbound Tonnage	Number of DCV	Tons Containerized in the Hour	Fluctuation in Stock Pile (Tons)	Tons in Stock Pile	Cumulative Tons Received	Cumulative Tons Containerized	Hour of the Beginning of a barge switch	Excess Capacity, 8 am - 8 pm (tons)	Excess Capacity, 8 pm - 8 am (tons)	number of Commercial Vehicles, 11 tons per	Total Number of Trucks, Including Commercial Vehicles
1	8:00	9:00	310.4	34	110.0	200.39	200.39	310.4	110.0		0.0	0.0	0	34
2	9:00	10:00	369.0	41	220.0	149.00	349.39	679.4	330.0		0.0	0.0	0	41
3	10:00	11:00	388.7	43	220.0	168.69	518.08	1,068.1	550.0		0.0	0.0	0	43
4	11:00	12:00	315.2	35	110.0	205.21	723.30	1,383.3	660.0		0.0	0.0	0	35
5	12:00	13:00	263.7	29	220.0	43.67	766.96	1,647.0	880.0		0.0	0.0	0	29
6	13:00	14:00	170.7	19	220.0	-49.33	717.63	1,817.6	1,100.0	Barge Switch	0.0	0.0	0	19
7	14:00	15:00	63.4	7	220.0	-156.61	561.02	1,881.0	1,320.0		0.0	0.0	0	7
8	15:00	16:00	19.6	2	110.0	-90.41	470.62	1,900.6	1,430.0		0.0	0.0	0	2
9	16:00	17:00	54.1	6	110.0	-55.87	414.75	1,954.7	1,540.0		0.0	0.0	0	6
10	17:00	18:00	86.9	10	220.0	-133.09	281.65	2,041.7	1,760.0		0.0	0.0	0	10
11	18:00	19:00	108.3	12	220.0	-111.65	170.00	2,150.0	1,980.0		0.0	0.0	0	12
12	19:00	20:00	99.2	11	110.0	-10.78	159.22	2,249.2	2,090.0		0.0	0.0	0	11
13	20:00	21:00	77.1	9	220.0	-142.95	16.27	2,326.3	2,310.0	Barge Switch	0.0	0.0	0	9
14	21:00	22:00	88.0	10	104.2	-16.27	0.00	2,414.2	2,414.2		0.0	115.8	11	21
15	22:00	23:00	37.2	4	37.2	0.00	0.00	2,451.5	2,451.5		0.0	182.8	17	21
16	23:00	0:00	1.0	1	1.0	0.00	0.00	2,452.5	2,452.5		0.0	109.0	10	11
17	0:00	1:00	12.5	1	12.5	0.00	0.00	2,465.0	2,465.0		0.0	97.5	9	10
18	1:00	2:00	28.4	3	28.4	0.00	0.00	2,493.4	2,493.4		0.0	191.6	18	21
19	2:00	3:00	40.9	5	40.9	0.00	0.00	2,534.3	2,534.3		0.0	179.1	17	22
20	3:00	4:00	46.1	5	46.1	0.00	0.00	2,580.4	2,580.4		0.0	63.9	6	11
21	4:00	5:00	22.8	3	0.0	22.79	22.79	2,603.2	2,580.4		0.0	197.2	18	21
22	5:00	6:00	28.2	3	0.0	28.15	50.94	2,631.3	2,580.4		0.0	169.1	16	19
23	6:00	7:00	2.5	1	0.0	2.49	53.43	2,633.8	2,580.4		0.0	166.6	16	17
24	7:00	8:00	170.2	19	0.0	170.20	223.63	2,804.0	2,580.4		0.0	0.0	0	19
Totals			2,804.0	313	2,580.4						0.0	1472.5	138	451

Excess Capacity Summary
Open Top Design

North Shore Historical Average Peak Day Throughput

Hour	Start Time	End Time	Inbound Tonnage	Number of DCV	Tons Containerized in the Hour	Fluctuation in Stock Pile (tons)	Tons in Stock Pile	Cumulative Tons Received	Cumulative Tons Containerized	Hour of the Beginning of a barge switch	Excess Capacity, 8 am - 8 pm (tons)	Excess Capacity, 8 pm - 8 am (tons)	number of Commercial Vehicles, 11 tons per	Total Number of Trucks, Including Commercial Vehicles
1	8:00	9:00	160.6	20	110.0	50.6	50.6	160.6	110.0		0.0	0.0	0	20
2	9:00	10:00	207.6	25	220.0	-12.4	38.2	368.2	330.0		0.0	0.0	0	25
3	10:00	11:00	198.4	24	220.0	-21.6	16.6	566.6	550.0		0.0	0.0	0	24
4	11:00	12:00	205.0	25	110.0	95.0	111.6	771.6	660.0		0.0	0.0	0	25
5	12:00	13:00	169.9	21	220.0	-50.1	61.5	941.5	880.0		0.0	0.0	0	21
6	13:00	14:00	117.4	14	178.9	-61.5	0.0	1058.9	1058.9	Barge Switch	41.1	0.0	0	14
7	14:00	15:00	74.2	9	74.2	0.0	0.0	1133.1	1133.1		145.8	0.0	0	9
8	15:00	16:00	18.8	2	18.8	0.0	0.0	1151.9	1151.9		91.2	0.0	0	2
9	16:00	17:00	110.1	13	110.0	0.1	0.1	1262.0	1261.9		0.0	0.0	0	13
10	17:00	18:00	131.0	16	131.2	-0.1	0.0	1393.1	1393.1		88.8	0.0	0	16
11	18:00	19:00	138.3	17	138.3	0.0	0.0	1531.4	1531.4		81.7	0.0	0	17
12	19:00	20:00	124.8	15	110.0	14.8	14.8	1656.2	1641.4		0.0	0.0	0	15
13	20:00	21:00	90.6	11	105.4	-14.8	0.0	1746.8	1746.8		0.0	114.6	11	22
14	21:00	22:00	128.6	16	128.6	0.0	0.0	1875.3	1875.3		0.0	91.4	9	25
15	22:00	23:00	41.6	5	41.6	0.0	0.0	1916.9	1916.9		0.0	178.4	17	22
16	23:00	0:00	39.1	5	39.1	0.0	0.0	1956.1	1956.1		0.0	70.9	7	12
17	0:00	1:00	92.7	11	92.7	0.0	0.0	2048.8	2048.8		0.0	17.3	2	13
18	1:00	2:00	126.4	15	126.4	0.0	0.0	2175.2	2175.2	Barge Switch	0.0	93.6	9	24
19	2:00	3:00	127.7	16	127.7	0.0	0.0	2302.9	2302.9		0.0	92.3	9	25
20	3:00	4:00	118.6	14	110.0	8.6	8.6	2421.6	2412.9		0.0	0.0	0	14
21	4:00	5:00	90.9	11	0.0	90.9	99.5	2512.5	2412.9		0.0	120.5	11	22
22	5:00	6:00	77.5	9	0.0	77.5	177.0	2590.0	2412.9		0.0	43.0	4	13
23	6:00	7:00	35.1	4	0.0	35.1	212.2	2625.1	2412.9		0.0	7.8	1	5
24	7:00	8:00	46.9	6	0.0	46.9	259.1	2672.0	2412.9		0.0	0.0	0	6
Totals			2,672.0	324	2412.9						448.6	829.7	80	404

Excess Capacity Summary
Open Top Design

Greenpoint Historical Average Peak Day Throughput

Hour	Start Time	End Time	Inbound Tonnage	Number of DCV	Tons Containerized in the Hour	Fluctuation in Stock Pile (tons)	Tons in Stock Pile	Cumulative Tons Received	Cumulative Tons Containerized	Hour of the Beginning of a barge switch	Excess Capacity, 8 am - 8 pm (tons)	Excess Capacity, 8 pm - 8 am (tons)	number of Commercial Vehicles, 11 tons per	Total Number of Trucks, Including Commercial Vehicles
1	8:00	9:00	142.4	15	110.0	32.4	32.4	142.4	110.0		0.0	0.0	0	15
2	9:00	10:00	258.5	26	220.0	38.5	70.8	400.8	330.0		0.0	0.0	0	26
3	10:00	11:00	283.5	29	220.0	63.5	134.4	684.4	550.0		0.0	0.0	0	29
4	11:00	12:00	264.9	27	110.0	154.9	289.2	949.2	660.0		0.0	0.0	0	27
5	12:00	13:00	256.7	26	220.0	36.7	325.9	1205.9	880.0		0.0	0.0	0	26
6	13:00	14:00	153.4	16	220.0	-66.6	259.3	1359.3	1100.0	Barge Switch	0.0	0.0	0	16
7	14:00	15:00	93.2	10	220.0	-126.8	132.5	1452.5	1320.0		0.0	0.0	0	10
8	15:00	16:00	40.9	4	110.0	-69.1	63.4	1493.4	1430.0		0.0	0.0	0	4
9	16:00	17:00	124.2	13	110.0	14.2	77.7	1617.7	1540.0		0.0	0.0	0	13
10	17:00	18:00	193.7	20	220.0	-26.3	51.4	1811.4	1760.0		0.0	0.0	0	20
11	18:00	19:00	204.7	21	220.0	-15.3	36.1	2016.1	1980.0		0.0	0.0	0	21
12	19:00	20:00	232.1	24	110.0	122.1	158.3	2248.3	2090.0		0.0	0.0	0	24
13	20:00	21:00	136.8	14	220.0	-83.2	75.0	2385.0	2310.0	Barge Switch	0.0	0.0	0	14
14	21:00	22:00	145.9	15	220.0	-74.1	0.9	2530 9	2530.0		0.0	0.0	0	15
15	22:00	23:00	67.2	7	68.0	-0.9	0.0	2598.0	2598.0		0.0	152.0	14	21
16	23:00	0:00	7.4	1	7.4	0.0	0.0	2605.4	2605.4		0.0	102.6	10	11
17	0:00	1:00	78.1	8	78.1	0.0	0.0	2683.5	2683.5		0.0	31.9	3	11
18	1:00	2:00	161.7	17	161.7	0.0	0.0	2845,2	2845.2		0.0	58.3	6	23
19	2:00	3:00	189.1	19	189.1	0.0	0.0	3034.4	3034.4		0.0	30.9	3	22
20	3:00	4:00	159.8	16	110.0	49.8	49.8	3194 2	3144.4		0.0	0.0	0	16
21	4:00	5:00	66.9	7	0.0	66.9	116.7	3261.1	3144.4		0.0	103.3	10	17
22	5:00	6:00	60.1	6	0.0	60.1	176.8	3321.2	3144.4		0.0	43.2	4	10
23	6:00	7:00	10.8	1	0.0	10.8	187.6	3332.0	3144.4		0.0	32.4	3	4
24	7:00	8:00	55.0	6	0.0	55.0	242.6	3387.0	3144.4		0.0	0.0	0	6
Totals			3,387.0	348	3144.4						0.0	554.6	53	401

Excess Capacity Summary
Open Top Design

Hamilton Avenue Historical Average Peak Day Throughput

Hour	Start Time	End Time	Inbound Tonnage	Number of DCV	Tons Containerized in the Hour	Fluctuation in Stock Pile (tons)	Tons in Stock Pile	Cumulative Tons Received	Cumulative Tons Containerized	Hour of the Beginning of a barge switch	Excess Capacity, 8 am - 8 pm (tons)	Excess Capacity, 8 pm - 8 am (tons)	number of Commercial Vehicles, 11 tons per	Total Number of Trucks, Including Commercial Vehicles
1	8:00	9:00	139.1	15	110.0	29.1	29.1	139.1	110.0		0.0	0.0	0	15
2	9:00	10:00	212.2	23	220.0	-7.8	21.2	351.2	330.0		0.0	0.0	0	23
3	10:00	11:00	210.0	23	220.0	-10.0	11.2	561.2	550.0		0.0	0.0	0	23
4	11:00	12:00	194.6	21	110.0	84.6	95.8	755.8	660.0		0.0	0.0	0	21
5	12:00	13:00	162.3	17	220.0	-57.7	38.1	918.1	880.0		0.0	0.0	0	17
6	13:00	14:00	98.3	11	136.5	-38.1	0.0	1016.5	1016.5		83.5	0.0	0	11
7	14:00	15:00	29.6	3	29.6	0.0	0.0	1046.1	1046.1		190.4	0.0	0	3
8	15:00	16:00	80.8	9	80.8	0.0	0.0	1126.9	1126.9	Barge Switch	29.2	0.0	0	9
9	16:00	17:00	122.7	13	110.0	12.7	12.7	1249.7	1236.9		0.0	0.0	0	13
10	17:00	18:00	84.7	9	97.5	-12.7	0.0	1334.4	1334.4		122.5	0.0	0	9
11	18:00	19:00	90.0	10	90.0	0.0	0.0	1424.4	1424.4		130.0	0.0	0	10
12	19:00	20:00	88.0	9	88.0	0.0	0.0	1512.5	1512.5		22.0	0.0	0	9
13	20:00	21:00	48.5	5	48.5	0.0	0.0	1561.0	1561.0		0.0	171.5	16	21
14	21:00	22:00	87.3	9	87.3	0.0	0.0	1648.3	1648.3		0.0	132.7	13	22
15	22:00	23:00	8.6	1	8.6	0.0	0.0	1656.9	1656.9		0.0	211.4	20	21
16	23:00	0:00	30.2	3	30.2	0.0	0.0	1687.2	1687.2		0.0	79.8	8	11
17	0:00	1:00	103.9	11	103.9	0.0	0.0	1791.1	1791.1		0.0	6.1	1	12
18	1:00	2:00	132.4	14	132.4	0.0	0.0	1923.4	1923.4		0.0	87.6	8	22
19	2:00	3:00	134.6	14	134.6	0.0	0.0	2058.0	2058.0		0.0	85.4	8	22
20	3:00	4:00	102.5	11	102.5	0.0	0.0	2160.5	2160.5	Barge Switch	0.0	7.5	1	12
21	4:00	5:00	39.0	4	0.0	39.0	39.0	2199.5	2160.5		0.0	181.0	17	21
22	5:00	6:00	17.7	2	0.0	17.7	56.7	2217.2	2160.5		0.0	163.3	15	17
23	6:00	7:00	6.4	1	0.0	6.4	63.1	2223.6	2160.5		0.0	156.9	15	16
24	7:00	8:00	24.4	3	0.0	24.4	87.5	2248.0	2160.5		0.0	22.5	3	6
Totals			2,248.0	241	2160.5						577.5	1305.6	125	366

Excess Capacity Summary
Open Top Design

Southwest Brooklyn Historical Average Peak Day Throughput

Hour	Start Time	End Time	Inbound Tonnage	Number of DCV	Tons Containerized in the Hour	Fluctuation in Stock Pile (tons)	Tons in Stock Pile	Cumulative Tons Received	Cumulative Tons Containerized	Hour of the Beginning of a barge switch	Excess Capacity, 8 am - 8 pm (tons)	Excess Capacity, 8 pm - 8 am (tons)	number of Commercial Vehicles, 11 tons per	Total Number of Trucks, Including Commercial Vehicles
1	8:00	9:00	123.8	13	110.0	13.8	13.8	123.8	110.0		0.0	0.0	0	13
2	9:00	10:00	211.1	22	220.0	-8.9	4.9	334.9	330.0		0.0	0.0	0	22
3	10:00	11:00	154.8	16	159.7	-4.9	0.0	489.7	489.7		60.3	0.0	0	16
4	11:00	12:00	104.5	11	104.5	0.0	0.0	594.2	594.2		5.5	0.0	0	11
5	12:00	13:00	40.8	4	40.8	0.0	0.0	634.9	634.9		179.2	0.0	0	4
6	13:00	14:00	12.1	1	12.1	0.0	0.0	647.0	647.0		207.9	0.0	0	1
7	14:00	15:00	11.3	1	11.3	0.0	0.0	658.3	658.3		208.7	0.0	0	1
8	15:00	16:00	14.2	1	14.2	0.0	0.0	672.5	672.5		95.8	0.0	0	1
9	16:00	17:00	46.1	5	46.1	0.0	0.0	718.5	718.5		63.9	0.0	0	5
10	17:00	18:00	46.3	5	46.3	0.0	0.0	764.8	764.8		173.7	0.0	0	5
11	18:00	19:00	47.5	5	47.5	0.0	0.0	812.3	812.3		172.5	0.0	0	5
12	19:00	20:00	43.2	5	43.2	0.0	0.0	855.5	855.5		66.8	0.0	0	5
13	20:00	21:00	41.0	4	41.0	0.0	0.0	896.6	896.6		0.0	179.0	17	21
14	21:00	22:00	37.5	4	37.5	0.0	0.0	934.1	934.1		0.0	182.5	17	21
15	22:00	23:00	2.8	1	2.8	0.0	0.0	937.0	937.0		0.0	217.2	20	21
16	23:00	0:00	0.0	0	0.0	0.0	0.0	937.0	937.0		0.0	110.0	10	10
17	0:00	1:00	129.1	13	110.0	19.1	19.1	1066.1	1047.0		0.0	0.0	0	13
18	1:00	2:00	118.4	12	137.5	-19.1	0.0	1184.5	1184.5	Barge Switch	0.0	82.5	8	20
19	2:00	3:00	88.0	9	88.0	0.0	0.0	1272.5	1272.5		0.0	132.0	12	21
20	3:00	4:00	41.2	4	41.2	0.0	0.0	1313.7	1313.7		0.0	68.8	7	11
21	4:00	5:00	18.0	2	0.0	18.0	18.0	1331.7	1313.7		0.0	202.0	19	21
22	5:00	6:00	6.2	1	0.0	6.2	24.2	1337.9	1313.7		0.0	195.8	18	19
23	6:00	7:00	6.3	1	0.0	6.3	30.5	1344.2	1313.7		0.0	189.5	18	19
24	7:00	8:00	43.8	5	0.0	43.8	74.3	1388.0	1313.7		0.0	35.7	4	9
Totals			1,388.0	145	1313.7						1234.5	1594.9	150	295

Historical Tonnage and Truck Distribution

Excess Capacity Summary
Open Top Design

Commercial Waste Capacity at Converted MTSs
Average Peak Day - Annual Average

MTS Facility	Total Number of Loading Slots	Dept. Managed Waste Deliveries, (tons)[1]	Average Day Design Capacity, (tons)[2]	Average Day			
				Total Excess Capacity (tons)	Excess Capacity, 8 am - 8 pm (tons)	Excess Capacity for Commercial Vendors, 8 pm - 8 am (tons)	Maximum Tons in Stock Pile
West 135th Street	4	1,180	4,290	3,110	1,211	1,853	87
East 91st Street	4	880	4,290	3,410	1,227	2,183	136
West 59th Street*	3	880	2,145	1,265	279	956	314
South Bronx	4	2,190	4,290	2,100	333	1,732	420
North Shore	4	2,370	4,290	1,920	622	1,000	222
Greenpoint	4	2,360	4,290	1,930	575	1,145	136
Hamilton Avenue	4	2,170	4,290	2,120	630	1,337	84
Southwest Brooklyn	4	1,090	4,290	3,200	1,418	1,725	58
Totals		13,120	32,175	19,055	6,295	11,930	

Notes:

[1] Based on waste information received from the New York City Department of Sanitation BWD

[2] Based on running MTS under normal operating conditions. Spare operating lines are not used to process waste.

* 59th Street is a Lift and Load operation, NOT an open top hopper system

MTS - Marine Transfer Station

Excess Capacity Summary
Open Top Design

General Assumptions

Assume that the MTS will keep the Loader Level floor as clear as possible, therefore pushing all waste received into containers as soon as possible (HDR)
Assume that each open-top line can operate 24-hours per day (G&H)
Assume that there is enough storage room for full containers so that container loading operations are not interrupted during the time it takes to switch barges. (HDR)
Assume that the MTSs with 4 hoppers will not operate more than three (3) hoppers per hour. (G&H)
Assume that MTSs with 4 hoppers can process 10 containers per hour (G&H) = 220 tons per hour (10 containers x 22 tons per container)
Assume the daily capacity of the MTSs with 4 hoppers is 4,290 tons per day [220 tons per hour x 6.5 work hours per shift x 3 shifts per day]
Assume that the 59th Street MTS can process 5 containers per hour (G&H) = 110 tons per hour (5 containers x 22 tons per container)
Assume the daily capacity of the 59th Street MTS is 2,145 tons per day [110 tons per hour x 6.5 work hours per shift x 3 shifts per day]
Assume that commercial waste is delivered to each MTS only during the time period from 8 p.m. to 8 a.m. (DSNY)
Assume Commercial Waste delivery trucks deliver an average of 11 tons per truck (HDR from field data)
Assume that there are a maximum of 5 barge switches per day at each facility (G&H)
Assume that barge capacity is not a limiting factor to MTS throughput [5 barges per day x 1056 tons per barge = 5,280 tons per day > 4,290 tons per day]

Hours of Work Assumptions
Assume 6.5 hours of work per 8 hour shift
- Assume 0.5 hours down time at the beginning of a shift
- Assume 0.5 hours down time for lunch break
- Assume 0.5 hours down time at the end of a shift

Container Assumptions
Assume 22 tons per container (G&H)
Assume 48 containers per barge (G&H)
Assume 1056 tons per barge (22 tons per container X 48 containers per barge) (Calculated)

Number of Hoppers per Facility

Facility	Maximum Number of Operating Lines per Facility	
West 135th St	4	
East 91st St	4	
West 59th St	3	Lift & Load Operation
South Bronx	4	
North Shore	4	
Greenpoint	4	
Hamilton Avenue	4	
Southwest Brooklyn	4	

(HDR) - HDR assumptions
(G&H) - G&H assumptions
(DSNY) - New York City Department of Sanitation assumptions

Excess Capacity Summary
Open Top Design

West 135th St Historical Average Peak Day Throughput

Hour	Start Time	End Time	Inbound Tonnage	Number of DCV	Tons Containerized in the Hour	Fluctuation in Stock Pile (tons)	Tons in Stock Pile	Cumulative Tons Received	Cumulative Tons Containerized	Hour of the Beginning of a barge switch	Excess Capacity, 8 am - 8 pm (tons)	Excess Capacity, 8 pm - 8 am (tons)	Excess number of Commercial Vehicles, 11 tons per vehicle	Total Number of Trucks, Including Commercial Vehicles
1	8:00	9:00	162.0	15	110.0	52.0	52.0	162.0	110.0		0.0	0.0	0	15
2	9:00	10:00	185.4	17	220.0	-34.6	17.3	347.3	330.0		0.0	0.0	0	17
3	10:00	11:00	156.0	14	173.4	-17.3	0.0	503.4	503.4		46.6	0.0	0	14
4	11:00	12:00	116.4	11	110.0	6.4	6.4	619.8	613.4		0.0	0.0	0	11
5	12:00	13:00	84.6	8	91.0	-6.4	0.0	704.4	704.4		129.0	0.0	0	8
6	13:00	14:00	38.5	4	38.5	0.0	0.0	742.9	742.9		181.5	0.0	0	4
7	14:00	15:00	17.4	2	17.4	0.0	0.0	760.3	760.3		202.6	0.0	0	2
8	15:00	16:00	4.5	1	4.5	0.0	0.0	764.8	764.8		105.5	0.0	0	1
9	16:00	17:00	11.1	1	11.1	0.0	0.0	775.9	775.9		98.9	0.0	0	1
10	17:00	18:00	34.1	3	34.1	0.0	0.0	810.0	810.0		185.9	0.0	0	3
11	18:00	19:00	29.4	3	29.4	0.0	0.0	839.4	839.4		190.6	0.0	0	3
12	19:00	20:00	39.7	4	39.7	0.0	0.0	879.1	879.1		70.3	0.0	0	4
13	20:00	21:00	26.4	2	26.4	0.0	0.0	905.5	905.5		0.0	193.6	18	20
14	21:00	22:00	46.1	4	46.1	0.0	0.0	951.6	951.6		0.0	173.9	16	20
15	22:00	23:00	7.1	1	7.1	0.0	0.0	958.7	958.7		0.0	212.9	20	21
16	23:00	0:00	9.0	1	9.0	0.0	0.0	967.7	967.7		0.0	101.0	10	11
17	0:00	1:00	30.5	3	30.5	0.0	0.0	998.2	998.2		0.0	79.5	8	11
18	1:00	2:00	50.4	5	50.4	0.0	0.0	1048.6	1048.6		0.0	169.6	16	21
19	2:00	3:00	26.3	2	26.3	0.0	0.0	1074.9	1074.9	Barge Switch	0.0	193.7	18	20
20	3:00	4:00	18.4	2	18.4	0.0	0.0	1093.3	1093.3		0.0	91.6	9	11
21	4:00	5:00	6.6	1	0.0	6.6	6.6	1099.9	1093.3		0.0	213.4	20	21
22	5:00	6:00	6.2	1	0.0	6.2	12.8	1106.1	1093.3		0.0	207.2	19	20
23	6:00	7:00	14.1	1	0.0	14.1	26.9	1120.3	1093.3		0.0	193.1	18	19
24	7:00	8:00	59.7	6	0.0	59.7	86.7	1180.0	1093.3		0.0	23.3	3	9
Totals			1,180.0	112	1093.3						1210.9	1852.7	175	287

Excess Capacity Summary
Open Top Design

East 91st St Historical Average Peak Day Throughput

Hour	Start Time	End Time	Inbound Tonnage	Number of DCV	Tons Containerized in the Hour	Fluctuation in Stock Pile (tons)	Tons in Stock Pile	Cumulative Tons Received	Cumulative Tons Containerized	Hour of the Beginning of a barge switch	Excess Capacity, 8 am - 8 pm (tons)	Excess Capacity, 8 pm - 8 am (tons)	Excess number of Commercial Vehicles, 11 tons per vehicle	Total Number of Trucks, Including Commercial Vehicles
1	8:00	9:00	113.4	10	110.0	3.4	3.4	113.4	110.0		0.0	0.0	0	10
2	9:00	10:00	192.9	17	196.3	-3.4	0.0	306.3	306.3		23.7	0.0	0	17
3	10:00	11:00	262.7	23	220.0	42.7	42.7	569.1	526.3		0.0	0.0	0	23
4	11:00	12:00	202.9	18	110.0	92.9	135.6	772.0	636.3		0.0	0.0	0	18
5	12:00	13:00	69.3	6	205.0	-135.6	0.0	841.3	841.3		15.0	0.0	0	6
6	13:00	14:00	19.7	2	19.7	0.0	0.0	861.0	861.0		200.3	0.0	0	2
7	14:00	15:00	1.6	1	1.6	0.0	0.0	862.6	862.6		218.4	0.0	0	1
8	15:00	16:00	0.0	0	0.0	0.0	0.0	862.6	862.6		110.0	0.0	0	0
9	16:00	17:00	0.0	0	0.0	0.0	0.0	862.6	862.6		110.0	0.0	0	0
10	17:00	18:00	0.0	0	0.0	0.0	0.0	862.6	862.6		220.0	0.0	0	0
11	18:00	19:00	0.0	0	0.0	0.0	0.0	862.6	862.6		220.0	0.0	0	0
12	19:00	20:00	0.0	0	0.0	0.0	0.0	862.6	862.6		110.0	0.0	0	0
13	20:00	21:00	0.0	0	0.0	0.0	0.0	862.6	862.6		0.0	220.0	20	20
14	21:00	22:00	0.0	0	0.0	0.0	0.0	862.6	862.6		0.0	220.0	20	20
15	22:00	23:00	0.0	0	0.0	0.0	0.0	862.6	862.6		0.0	220.0	20	20
16	23:00	0:00	0.0	0	0.0	0.0	0.0	862.6	862.6		0.0	110.0	10	10
17	0:00	1:00	0.0	0	0.0	0.0	0.0	862.6	862.6		0.0	110.0	10	10
18	1:00	2:00	0.0	0	0.0	0.0	0.0	862.6	862.6		0.0	220.0	20	20
19	2:00	3:00	0.0	0	0.0	0.0	0.0	862.6	862.6		0.0	220.0	20	20
20	3:00	4:00	0.0	0	0.0	0.0	0.0	862.6	862.6		0.0	110.0	10	10
21	4:00	5:00	0.0	0	0.0	0.0	0.0	862.6	862.6		0.0	220.0	20	20
22	5:00	6:00	0.0	0	0.0	0.0	0.0	862.6	862.6		0.0	220.0	20	20
23	6:00	7:00	0.0	0	0.0	0.0	0.0	862.6	862.6		0.0	220.0	20	20
24	7:00	8:00	17.4	2	0.0	17.4	17.4	880.0	862.6		0.0	92.6	9	11
Totals			880.0	79	862.6						1227.4	2182.6	199	278

Excess Capacity Summary
Open Top Design

West 59th St Historical Average Peak Day Throughput

Hour	Start Time	End Time	Inbound Tonnage	Number of DCV	Tons Containerized in the Hour	Fluctuation in Stock Pile (tons)	Tons in Stock Pile	Cumulative Tons Received	Cumulative Tons Containerized	Hour of the Beginning of a barge switch	Excess Capacity, 8 am - 8 pm (tons)	Excess Capacity, 8 pm - 8 am (tons)	number of Commercial Vehicles, 11 tons per	Total Number of Trucks, Including Commercial Vehicles
1	8:00	9:00	94.8	9	55.0	39.8	39.8	94.8	55.0		0.0	0.0	0	9
2	9:00	10:00	186.6	18	110.0	76.6	116.4	281.4	165.0		0.0	0.0	0	18
3	10:00	11:00	205.9	20	110.0	95.9	212.3	487.3	275.0		0.0	0.0	0	20
4	11:00	12:00	156.4	15	55.0	101.4	313.7	643.7	330.0		0.0	0.0	0	15
5	12:00	13:00	69.4	7	110.0	-40.6	273.1	713.1	440.0		0.0	0.0	0	7
6	13:00	14:00	25.8	2	110.0	-84.2	188.8	738.8	550.0		0.0	0.0	0	2
7	14:00	15:00	17.2	2	110.0	-92.8	96.0	756.0	660.0		0.0	0.0	0	2
8	15:00	16:00	1.0	1	55.0	-54.0	42.1	757.1	715.0		0.0	0.0	0	1
9	16:00	17:00	0.2	1	42.3	-42.1	0.0	757.3	757.3		12.7	0.0	0	1
10	17:00	18:00	2.9	1	2.9	0.0	0.0	760.2	760.2		107.1	0.0	0	1
11	18:00	19:00	2.7	1	2.7	0.0	0.0	762.9	762.9		107.3	0.0	0	1
12	19:00	20:00	3.3	1	3.3	0.0	0.0	766.2	766.2		51.7	0.0	0	1
13	20:00	21:00	2.7	1	2.7	0.0	0.0	769.0	769.0		0.0	107.3	10	11
14	21:00	22:00	1.5	1	1.5	0.0	0.0	770.5	770.5		0.0	108.5	10	11
15	22:00	23:00	0.5	1	0.5	0.0	0.0	771.0	771.0		0.0	109.5	10	11
16	23:00	0:00	0.0	0	0.0	0.0	0.0	771.0	771.0		0.0	55.0	5	5
17	0:00	1:00	20.0	2	20.0	0.0	0.0	791.1	791.1		0.0	35.0	4	6
18	1:00	2:00	22.1	2	22.1	0.0	0.0	813.1	813.1		0.0	87.9	8	10
19	2:00	3:00	23.4	2	23.4	0.0	0.0	836.5	836.5		0.0	86.6	8	10
20	3:00	4:00	19.1	2	19.1	0.0	0.0	855.5	855.5		0.0	35.9	4	6
21	4:00	5:00	7.1	1	0.0	7.1	7.1	862.6	855.5		0.0	102.9	10	11
22	5:00	6:00	2.9	1	0.0	2.9	10.0	865.5	855.5		0.0	100.0	10	11
23	6:00	7:00	3.0	1	0.0	3.0	13.0	868.6	855.5		0.0	97.0	9	10
24	7:00	8:00	11.4	1	0.0	11.4	24.5	880.0	855.5		0.0	30.5	3	4
Totals			880.0	93	855.5						278.8	956.1	91	184

Excess Capacity Summary
Open Top Design

South Bronx Historical Average Peak Day Throughput

Hour	Start Time	End Time	Inbound Tonnage	Number of DCV	Tons Containerized in the Hour	Fluctuation in Stock Pile (Tons)	Tons in Stock Pile	Cumulative Tons Received	Cumulative Tons Containerized	Hour of the Beginning of a barge switch	Excess Capacity, 8 am - 8 pm (tons)	Excess Capacity, 8 pm - 8 am (tons)	number of Commercial Vehicles, 11 tons per	Total Number of Trucks, Including Commercial Vehicles
1	8:00	9:00	242.4	27	110.0	132.42	132.42	242.4	110.0		0.0	0.0	0	27
2	9:00	10:00	288.2	32	220.0	68.20	200.63	530.6	330.0		0.0	0.0	0	32
3	10:00	11:00	303.6	34	220.0	83.58	284.20	834.2	550.0		0.0	0.0	0	34
4	11:00	12:00	246.2	27	110.0	136.19	420.39	1,080.4	660.0		0.0	0.0	0	27
5	12:00	13:00	205.9	23	220.0	-14.07	406.32	1,286.3	880.0		0.0	0.0	0	23
6	13:00	14:00	133.3	15	220.0	-86.70	319.62	1,419.6	1,100.0	Barge Switch	0.0	0.0	0	15
7	14:00	15:00	49.5	5	220.0	-170.49	149.13	1,469.1	1,320.0		0.0	0.0	0	5
8	15:00	16:00	15.3	2	110.0	-94.70	54.43	1,484.4	1,430.0		0.0	0.0	0	2
9	16:00	17:00	42.3	5	96.7	-54.43	0.00	1,526.7	1,526.7		13.3	0.0	0	5
10	17:00	18:00	67.9	8	67.9	0.00	0.00	1,594.6	1,594.6		152.1	0.0	0	8
11	18:00	19:00	84.6	9	84.6	0.00	0.00	1,679.2	1,679.2		135.4	0.0	0	9
12	19:00	20:00	77.5	9	77.5	0.00	0.00	1,756.7	1,756.7		32.5	0.0	0	9
13	20:00	21:00	60.2	7	60.2	0.00	0.00	1,816.9	1,816.9		0.0	159.8	15	22
14	21:00	22:00	68.7	8	68.7	0.00	0.00	1,885.6	1,885.6		0.0	151.3	14	22
15	22:00	23:00	29.1	3	29.1	0.00	0.00	1,914.7	1,914.7		0.0	190.9	18	21
16	23:00	0:00	0.8	1	0.8	0.00	0.00	1,915.5	1,915.5		0.0	109.2	10	11
17	0:00	1:00	9.8	1	9.8	0.00	0.00	1,925.3	1,925.3		0.0	100.2	10	11
18	1:00	2:00	22.2	2	22.2	0.00	0.00	1,947.4	1,947.4		0.0	197.8	18	20
19	2:00	3:00	31.9	4	31.9	0.00	0.00	1,979.4	1,979.4		0.0	188.1	18	22
20	3:00	4:00	36.0	4	36.0	0.00	0.00	2,015.3	2,015.3		0.0	74.0	7	11
21	4:00	5:00	17.8	2	0.0	17.80	17.80	2,033.1	2,015.3		0.0	202.2	19	21
22	5:00	6:00	22.0	2	0.0	21.99	39.78	2,055.1	2,015.3		0.0	180.2	17	19
23	6:00	7:00	1.9	1	0.0	1.95	41.73	2,057.1	2,015.3		0.0	178.3	17	18
24	7:00	8:00	132.9	15	0.0	132.93	174.66	2,190.0	2,015.3		0.0	0.0	0	15
Totals			2,190.0	246	2,015.3						333.3	1732.1	163	409

Excess Capacity Summary
Open Top Design

North Shore Historical Average Peak Day Throughput

Hour	Start Time	End Time	Inbound Tonnage	Number of DCV	Tons Containerized in the Hour	Fluctuation in Stock Pile (tons)	Tons in Stock Pile	Cumulative Tons Received	Cumulative Tons Containerized	Hour of the Beginning of a barge switch	Excess Capacity, 8 am - 8 pm (tons)	Excess Capacity, 8 pm - 8 am (tons)	number of Commercial Vehicles, 11 tons per	Total Number of Trucks, Including Commercial Vehicles
1	8:00	9:00	142.4	17	110.0	32.4	32.4	142.4	110.0		0.0	0.0	0	17
2	9:00	10:00	184.2	22	216.6	-32.4	0.0	326.6	326.6		3.4	0.0	0	22
3	10:00	11:00	176.0	21	176.0	0.0	0.0	502.5	502.5		44.0	0.0	0	21
4	11:00	12:00	181.9	22	110.0	71.9	71.9	684.4	612.5		0.0	0.0	0	22
5	12:00	13:00	150.7	18	220.0	-69.3	2.5	835.1	832.5		0.0	0.0	0	18
6	13:00	14:00	104.1	13	106.7	-2.5	0.0	939.2	939.2		113.3	0.0	0	13
7	14:00	15:00	65.8	8	65.8	0.0	0.0	1005.0	1005.0		154.2	0.0	0	8
8	15:00	16:00	16.7	2	16.7	0.0	0.0	1021.7	1021.7		93.3	0.0	0	2
9	16:00	17:00	97.7	12	97.7	0.0	0.0	1119.4	1119.4	Barge Switch	12.3	0.0	0	12
10	17:00	18:00	116.2	14	116.2	0.0	0.0	1235.6	1235.6		103.8	0.0	0	14
11	18:00	19:00	122.7	15	122.7	0.0	0.0	1358.3	1358.3		97.3	0.0	0	15
12	19:00	20:00	110.7	14	110.0	0.7	0.7	1469.0	1468.3		0.0	0.0	0	14
13	20:00	21:00	80.4	10	81.1	-0.7	0.0	1549.3	1549.3		0.0	138.9	13	23
14	21:00	22:00	114.0	14	114.0	0.0	0.0	1663.4	1663.4		0.0	106.0	10	24
15	22:00	23:00	36.9	5	36.9	0.0	0.0	1700.3	1700.3		0.0	183.1	17	22
16	23:00	0:00	34.7	4	34.7	0.0	0.0	1735.0	1735.0		0.0	75.3	7	11
17	0:00	1:00	82.3	10	82.3	0.0	0.0	1817.2	1817.2		0.0	27.7	3	13
18	1:00	2:00	112.1	14	112.1	0.0	0.0	1929.4	1929.4		0.0	107.9	10	24
19	2:00	3:00	113.3	14	113.3	0.0	0.0	2042.6	2042.6		0.0	106.7	10	24
20	3:00	4:00	105.2	13	105.2	0.0	0.0	2147.9	2147.9	Barge Switch	0.0	4.8	1	14
21	4:00	5:00	80.6	10	0.0	80.6	80.6	2228.5	2147.9		0.0	139.4	13	23
22	5:00	6:00	68.7	8	0.0	68.7	149.4	2297.2	2147.9		0.0	70.6	7	15
23	6:00	7:00	31.2	4	0.0	31.2	180.5	2328.4	2147.9		0.0	39.5	4	8
24	7:00	8:00	41.6	5	0.0	41.6	222.1	2370.0	2147.9		0.0	0.0	0	5
Totals			2,370.0	289	2147.9						621.7	999.9	95	384
										Max	154 2	183 1	17	24

Excess Capacity Summary
Open Top Design

Greenpoint Historical Average Peak Day Throughput

Hour	Start Time	End Time	Inbound Tonnage	Number of DCV	Tons Containerized in the Hour	Fluctuation in Stock Pile (tons)	Tons in Stock Pile	Cumulative Tons Received	Cumulative Tons Containerized	Hour of the Beginning of a barge switch	Excess Capacity, 8 am - 8 pm (tons)	Excess Capacity, 8 pm - 8 am (tons)	number of Commercial Vehicles, 11 tons per	Total Number of Trucks, Including Commercial Vehicles
1	8:00	9:00	99.2	10	99.2	0.0	0.0	99.2	99.2		10.8	0.0	0	10
2	9:00	10:00	180.1	18	180.1	0.0	0.0	279.3	279.3		39.9	0.0	0	18
3	10:00	11:00	197.6	20	197.6	0.0	0.0	476.9	476.9		22.4	0.0	0	20
4	11:00	12:00	184.5	19	110.0	74.5	74.5	661.4	586.9		0.0	0.0	0	19
5	12:00	13:00	178.9	18	220.0	-41.1	33.4	840.3	806.9		0.0	0.0	0	18
6	13:00	14:00	106.9	11	140.3	-33.4	0.0	947.2	947.2		79.7	0.0	0	11
7	14:00	15:00	64.9	7	64.9	0.0	0.0	1012.1	1012.1		155.1	0.0	0	7
8	15:00	16:00	28.5	3	28.5	0.0	0.0	1040.6	1040.6		81.5	0.0	0	3
9	16:00	17:00	86.6	9	86.6	0.0	0.0	1127.2	1127.2	Barge Switch	23.4	0.0	0	9
10	17:00	18:00	135.0	14	135.0	0.0	0.0	1262.2	1262.2		85.0	0.0	0	14
11	18:00	19:00	142.6	15	142.6	0.0	0.0	1404.8	1404.8		77.4	0.0	0	15
12	19:00	20:00	161.7	17	110.0	51.7	51.7	1566.5	1514.8		0.0	0.0	0	17
13	20:00	21:00	95.3	10	147.0	-51.7	0.0	1661.8	1661.8		0.0	73.0	7	17
14	21:00	22:00	101.6	10	101.6	0.0	0.0	1763.5	1763.5		0.0	118.4	11	21
15	22:00	23:00	46.8	5	46.8	0.0	0.0	1810.3	1810.3		0.0	173.2	16	21
16	23:00	0:00	5.1	1	5.1	0.0	0.0	1815.4	1815.4		0.0	104.9	10	11
17	0:00	1:00	54.4	6	54.4	0.0	0.0	1869.8	1869.8		0.0	55.6	6	12
18	1:00	2:00	112.7	12	112.7	0.0	0.0	1982.5	1982.5		0.0	107.3	10	22
19	2:00	3:00	131.8	13	131.8	0.0	0.0	2114.3	2114.3	Barge Switch	0.0	88.2	9	22
20	3:00	4:00	111.4	11	110.0	1.4	1.4	2225.7	2224.3		0.0	0.0	0	11
21	4:00	5:00	46.6	5	0.0	46.6	48.0	2272.3	2224.3		0.0	172.0	16	21
22	5:00	6:00	41.9	4	0.0	41.9	89.8	2314.1	2224.3		0.0	130.2	12	16
23	6:00	7:00	7.5	1	0.0	7.5	97.3	2321.6	2224.3		0.0	122.7	12	13
24	7:00	8:00	38.4	4	0.0	38.4	135.7	2360.0	2224.3		0.0	0.0	0	4
Totals			2,360.0	243	2224.3						575.2	1145.4	109	352

Excess Capacity Summary
Open Top Design

Hamilton Avenue Historical Average Peak Day Throughput

Hour	Start Time	End Time	Inbound Tonnage	Number of DCV	Tons Containerized in the Hour	Fluctuation in Stock Pile (tons)	Tons in Stock Pile	Cumulative Tons Received	Cumulative Tons Containerized	Hour of the Beginning of a barge switch	Excess Capacity, 8 am - 8 pm (tons)	Excess Capacity, 8 pm - 8 am (tons)	number of Commercial Vehicles, 11 tons per	Total Number of Trucks, Including Commercial Vehicles
1	8:00	9:00	134.2	14	110.0	24.2	24.2	134.2	110.0		0.0	0.0	0	14
2	9:00	10:00	204.8	22	220.0	-15.2	9.0	339.0	330.0		0.0	0.0	0	22
3	10:00	11:00	202.7	22	211.7	-9.0	0.0	541.7	541.7		8.3	0.0	0	22
4	11:00	12:00	187.9	20	110.0	77.9	77.9	729.6	651.7		0.0	0.0	0	20
5	12:00	13:00	156.6	17	220.0	-63.4	14.5	886.3	871.7		0.0	0.0	0	17
6	13:00	14:00	94.9	10	109.5	-14.5	0.0	981.2	981.2		110.5	0.0	0	10
7	14:00	15:00	28.6	3	28.6	0.0	0.0	1009.8	1009.8		191.4	0.0	0	3
8	15:00	16:00	78.0	8	78.0	0.0	0.0	1087.8	1087.8	Barge Switch	32.0	0.0	0	8
9	16:00	17:00	118.5	13	110.0	8.5	8.5	1206.3	1197.8		0.0	0.0	0	13
10	17:00	18:00	81.8	9	90.3	-8.5	0.0	1288.1	1288.1		129.7	0.0	0	9
11	18:00	19:00	86.9	9	86.9	0.0	0.0	1375.0	1375.0		133.1	0.0	0	9
12	19:00	20:00	85.0	9	85.0	0.0	0.0	1460.0	1460.0		25.0	0.0	0	9
13	20:00	21:00	46.9	5	46.9	0.0	0.0	1506.9	1506.9		0.0	173.1	16	21
14	21:00	22:00	84.3	9	84.3	0.0	0.0	1591.1	1591.1		0.0	135.7	13	22
15	22:00	23:00	8.3	1	8.3	0.0	0.0	1599.5	1599.5		0.0	211.7	20	21
16	23:00	0:00	29.2	3	29.2	0.0	0.0	1628.6	1628.6		0.0	80.8	8	11
17	0:00	1:00	100.3	11	100.3	0.0	0.0	1728.9	1728.9		0.0	9.7	1	12
18	1:00	2:00	127.8	14	127.8	0.0	0.0	1856.7	1856.7		0.0	92.2	9	23
19	2:00	3:00	129.9	14	129.9	0.0	0.0	1986.6	1986.6		0.0	90.1	9	23
20	3:00	4:00	98.9	11	98.9	0.0	0.0	2085.5	2085.5		0.0	11.1	2	13
21	4:00	5:00	37.7	4	0.0	37.7	37.7	2123.2	2085.5		0.0	182.3	17	21
22	5:00	6:00	17.1	2	0.0	17.1	54.7	2140.2	2085.5		0.0	165.3	16	18
23	6:00	7:00	6.2	1	0.0	6.2	60.9	2146.5	2085.5		0.0	159.1	15	16
24	7:00	8:00	23.5	3	0.0	23.5	84.5	2170.0	2085.5		0.0	25.5	3	6
Totals			2,170.0	234	2085.5						630.0	1336.7	129	363

Excess Capacity Summary
Open Top Design

Southwest Brooklyn Historical Average Peak Day Throughput

Hour	Start Time	End Time	Inbound Tonnage	Number of DCV	Tons Containerized in the Hour	Fluctuation in Stock Pile (tons)	Tons in Stock Pile	Cumulative Tons Received	Cumulative Tons Containerized	Hour of the Beginning of a barge switch	Excess Capacity, 8 am - 8 pm (tons)	Excess Capacity, 8 pm - 8 am (tons)	number of Commercial Vehicles, 11 tons per	Total Number of Trucks, Including Commercial Vehicles
1	8:00	9:00	97.2	10	97.2	0.0	0.0	97.2	97.2		12.8	0.0	0	10
2	9:00	10:00	165.8	17	165.8	0.0	0.0	263.0	263.0		54.2	0.0	0	17
3	10:00	11:00	121.6	13	121.6	0.0	0.0	384.5	384.5		98.4	0.0	0	13
4	11:00	12:00	82.1	9	82.1	0.0	0.0	466.6	466.6		27.9	0.0	0	9
5	12:00	13:00	32.0	3	32.0	0.0	0.0	498.6	498.6		188.0	0.0	0	3
6	13:00	14:00	9.5	1	9.5	0.0	0.0	508.1	508.1		210.5	0.0	0	1
7	14:00	15:00	8.9	1	8.9	0.0	0.0	517.0	517.0		211.1	0.0	0	1
8	15:00	16:00	11.1	1	11.1	0.0	0.0	528.1	528.1		98.9	0.0	0	1
9	16:00	17:00	36.2	4	36.2	0.0	0.0	564.2	564.2		73.8	0.0	0	4
10	17:00	18:00	36.4	4	36.4	0.0	0.0	600.6	600.6		183.6	0.0	0	4
11	18:00	19:00	37.3	4	37.3	0.0	0.0	637.9	637.9		182.7	0.0	0	4
12	19:00	20:00	33.9	4	33.9	0.0	0.0	671.9	671.9		76.1	0.0	0	4
13	20:00	21:00	32.2	3	32.2	0.0	0.0	704.1	704.1		0.0	187.8	18	21
14	21:00	22:00	29.5	3	29.5	0.0	0.0	733.6	733.6		0.0	190.5	18	21
15	22:00	23:00	2.2	1	2.2	0.0	0.0	735.8	735.8		0.0	217.8	20	21
16	23:00	0:00	0.0	0	0.0	0.0	0.0	735.8	735.8		0.0	110.0	10	10
17	0:00	1:00	101.4	11	101.4	0.0	0.0	837.2	837.2		0.0	8.6	1	12
18	1:00	2:00	92.9	10	92.9	0.0	0.0	930.2	930.2		0.0	127.1	12	22
19	2:00	3:00	69.1	7	69.1	0.0	0.0	999.3	999.3		0.0	150.9	14	21
20	3:00	4:00	32.4	3	32.4	0.0	0.0	1031.7	1031.7		0.0	77.6	8	11
21	4:00	5:00	14.1	1	0.0	14.1	14.1	1045.8	1031.7		0.0	205.9	19	20
22	5:00	6:00	4.9	1	0.0	4.9	19.0	1050.7	1031.7		0.0	201.0	19	20
23	6:00	7:00	4.9	1	0.0	4.9	23.9	1055.6	1031.7		0.0	196.1	18	19
24	7:00	8:00	34.4	4	0.0	34.4	58.3	1090.0	1031.7		0.0	51.7	5	9
Totals			1,090.0	116	1031.7						1418.1	1724.8	162	278

Commercial Waste Capacity Based on Historical Distribution

West 135th St

Hour	Design Capacity		DSNY Delivered Waste, tons, 8 pm - 8 am	Capacity with Noise Restraints	
	Total Commercial Vehicles	CW Tonnage 8 pm - 8 am		Total Commercial Vehicles	CW Tonnage 8 pm - 8 am
8:00 PM	18	194	26	18	194
9:00 PM	16	174	46	16	174
10:00 PM	20	213	7	12	132
11:00 PM	10	101	9	10	110
12:00 AM	8	80	30	8	88
1:00 AM	16	170	50	0	0
2:00 AM	18	194	26	0	0
3:00 AM	9	92	18	0	0
4:00 AM	20	213	7	2	22
5:00 AM	19	207	6	10	110
6:00 AM	18	193	14	16	176
7:00 AM	3	23	60	3	23
Total	175	1,853	301	95	1,029

Analysis incomplete - Alternate routes that pass sensitive receptors must be evaluated

East 91st Street

Hour	Design Capacity		DSNY Delivered Waste, tons, 8 pm - 8 am	Capacity with Noise Restraints	
	Total Commercial Vehicles	CW Tonnage 8 pm - 8 am		Total Commercial Vehicles	CW Tonnage 8 pm - 8 am
8:00 PM	20	220	0	11	121
9:00 PM	20	220	0	10	110
10:00 PM	20	220	0	8	88
11:00 PM	10	110	0	6	66
12:00 AM	10	110	0	4	44
1:00 AM	20	220	0	4	44
2:00 AM	20	220	0	2	22
3:00 AM	10	110	0	1	11
4:00 AM	20	220	0	3	33
5:00 AM	20	220	0	7	77
6:00 AM	20	220	0	14	154
7:00 AM	9	93	17	1	11
Total	199	2,183	17	71	781

Need to use different routes for CW vehicles in order to be able to deliver the full amount of excess capacity

West 59th St

Hour	Design Capacity		DSNY Delivered Waste, tons, 8 pm - 8 am	Capacity with Noise Restraints	
	Total Commercial Vehicles	CW Tonnage 8 pm - 8 am		Total Commercial Vehicles	CW Tonnage 8 pm - 8 am
8:00 PM	10	107	3	10	107
9:00 PM	10	109	1	10	109
10:00 PM	10	109	1	10	109
11:00 PM	5	55	0	5	55
12:00 AM	4	35	20	4	35
1:00 AM	8	88	22	8	88
2:00 AM	8	87	23	8	87
3:00 AM	4	36	19	4	36
4:00 AM	10	103	7	10	103
5:00 AM	10	100	3	10	100
6:00 AM	9	97	3	9	97
7:00 AM	3	31	11	3	31
Total	91	956	114	91	956

Can take all CW without any problems

South Bronx

Hour	Design Capacity		DSNY Delivered Waste, tons, 8 pm - 8 am	Capacity with Noise Restraints	
	Total Commercial Vehicles	CW Tonnage 8 pm - 8 am		Total Commercial Vehicles	CW Tonnage 8 pm - 8 am
8:00 PM	15	160	60	13	143
9:00 PM	14	151	69	14	151
10:00 PM	18	191	29	17	187
11:00 PM	10	109	1	10	109
12:00 AM	10	100	10	10	100
1:00 AM	18	198	22	11	121
2:00 AM	18	188	32	15	165
3:00 AM	7	74	36	7	74
4:00 AM	19	202	18	19	202
5:00 AM	17	180	22	17	180
6:00 AM	17	178	2	17	178
7:00 AM	0	0	133	0	0
Total	163	1,732	433	150	1,611

Need to use different routes for CW vehicles in order to be able to deliver the full amount of excess capacity

North Shore

Hour	Design Capacity		DSNY Delivered Waste, tons, 8 pm - 8 am	Capacity with Noise Restraints	
	Total Commercial Vehicles	CW Tonnage 8 pm - 8 am		Total Commercial Vehicles	CW Tonnage 8 pm - 8 am
8:00 PM	13	139	80	13	139
9:00 PM	10	106	114	10	106
10:00 PM	17	183	37	17	183
11:00 PM	7	75	35	7	75
12:00 AM	3	28	82	3	28
1:00 AM	10	108	112	10	108
2:00 AM	10	107	113	10	107
3:00 AM	1	5	105	1	5
4:00 AM	13	139	81	13	139
5:00 AM	7	71	69	7	71
6:00 AM	4	39	31	4	39
7:00 AM	0	0	42	0	0
Total	95	1,000	901	95	1,000

There is a route to the North Shore Converted MTS that does not pass sensitive receptors that must be used from 12 am to 6 am in order to deliver the full amount there is for commercial capacity The route should not be used at other times upon request from DOT due to congestion that occurs at certain intersections along the route during daytime traffic hours

Greenpoint

Hour	Design Capacity		DSNY Delivered Waste, tons, 8 pm - 8 am	Capacity with Noise Restraints	
	Total Commercial Vehicles	CW Tonnage 8 pm - 8 am		Total Commercial Vehicles	CW Tonnage 8 pm - 8 am
8:00 PM	7	73	95	7	73
9:00 PM	11	118	102	11	118
10:00 PM	16	173	47	16	173
11:00 PM	10	105	5	10	105
12:00 AM	6	56	54	6	56
1:00 AM	10	107	113	10	107
2:00 AM	9	88	132	9	88
3:00 AM	0	0	111	0	0
4:00 AM	16	172	47	16	172
5:00 AM	12	130	42	12	130
6:00 AM	12	123	8	12	123
7:00 AM	0	0	38	0	0
Total	109	1,145	793	109	1,145

Need to use different routes for CW vehicles in order to be able to deliver the full amount of excess capacity

Hamilton Ave

Hour	Design Capacity		DSNY Delivered Waste, tons, 8 pm - 8 am	Capacity with Noise Restraints	
	Total Commercial Vehicles	CW Tonnage 8 pm - 8 am		Total Commercial Vehicles	CW Tonnage 8 pm - 8 am
8:00 PM	16	173	47	16	173
9:00 PM	13	136	84	13	136
10:00 PM	20	212	8	20	212
11:00 PM	8	81	29	8	81
12:00 AM	1	10	100	1	10
1:00 AM	9	92	128	9	92
2:00 AM	9	90	130	7	77
3:00 AM	2	11	99	1	11
4:00 AM	17	182	38	15	165
5:00 AM	16	165	17	16	165
6:00 AM	15	159	6	15	159
7:00 AM	3	26	24	3	26
Total	129	1,337	710	124	1,306

Need to use different routes for CW vehicles in order to be able to deliver the full amount of excess capacity

Southwest Brooklyn

Hour	Design Capacity		DSNY Delivered Waste, tons, 8 pm - 8 am	Capacity with Noise Restraints	
	Total Commercial Vehicles	CW Tonnage 8 pm - 8 am		Total Commercial Vehicles	CW Tonnage 8 pm - 8 am
8:00 PM	18	188	32	13	143
9:00 PM	18	191	29	13	143
10:00 PM	20	218	2	10	110
11:00 PM	10	110	0	5	55
12:00 AM	1	9	101	1	9
1:00 AM	12	127	93	2	22
2:00 AM	14	151	69	0	0
3:00 AM	8	78	32	0	0
4:00 AM	19	206	14	2	22
5:00 AM	19	201	5	7	77
6:00 AM	18	196	5	18	196
7:00 AM	5	52	34	5	52
Total	162	1,725	418	76	828

Outbound trucks passing 26th St b/w Cropsey & Shore limit the number of inbound CW vehicles that the SW Brooklyn Converted MTS can accommodate