

# **Appendix C**

## **Noise and Vibration**



# Construction Activities

Site Alternative P1



# NYCT 8<sup>th</sup> Ave Subway Emergency Vent Plant Construction & Operational Analysis

1. See attached detailed Construction Schedule
2. See attached Stage drawings for proposed closures of traffic lanes, parking spaces and sidewalks for each construction phase.
3. We estimate there will be approximately 2 daily non-employee vehicle trips generated by the proposed construction.
4. We estimate 40 employees will be working on the construction site during the daytime shift.
5. Breakdown on Construction Site Activities follows this page.
6. 2 Acres, including staging and storage areas, will be under construction.
7. The quantities (cubic yards) of spoil and debris removed from excavation are as follows:

Cubic Yards of Debris				
	Stage 1	Stage 2	Stage 3	Stage 4
Greenwich Ave	750	750	0	0
Fan Facility	600	1500	600	600
7 <sup>th</sup> Avenue	0	0	1100	0

# P1 - GENERAL

## ALL STAGES

<b>Construction Equipment &amp; Labor</b>	<b>Units</b>	<b>Start Date</b>	<b>End Date</b>
<b>Equipment</b>			
Front End Loaders	1	2/19/2010	8/26/2013
Trucks - Pick Up	2	2/1/2010	8/26/2013
Field Office	1	2/1/2010	8/26/2013
Job Boxes	3	2/1/2010	8/26/2013
<b>Labor</b>			
Super	1	2/1/2010	8/26/2013
Project Engineer	1	2/1/2010	8/26/2013
Office Engineer	1	2/1/2010	8/26/2013
Safety Engineer	1	2/1/2010	8/26/2013
QA Engineer	1	2/1/2010	8/26/2013
Operator	1	2/19/2010	8/26/2013
Laborers	2	2/19/2010	8/26/2013

# P1 - Fan Facility - Secure Site

## Stage 1 Phase A

<b>Construction Equipment &amp; Labor</b>	<b>Units</b>	<b>Start Date</b>	<b>End Date</b>
<b>Equipment</b>			
Flatbed Trailer	1	2/8/2010	2/12/2010
<b>Labor</b>			
Foreman	1	2/8/2010	2/12/2010
Laborers	4	2/8/2010	2/12/2010
	Number	Number	
	of	of	
<b>Construction Activity</b>	<b>Hrs/day</b>	<b>Truck Trips/hr</b>	
Install Fence and Gates	8	0.25	

# P1 - Greenwich Ave - Excavate NB Lane

## Stage 1 - Phase B

<b>Construction Equipment &amp; Labor</b>	<b>Units</b>	<b>Start Date</b>	<b>End Date</b>
<b>Equipment</b>			
Excavators	1	2/26/2010	4/29/2010
Dump Trucks	3	2/26/2010	4/29/2010
Cherry Picker	1	2/26/2010	3/11/2010
Flatbed Trailer	1	2/26/2010	3/11/2010
Compressor	1	2/19/2010	2/25/2010
<b>Labor</b>			
Oiler	1	2/26/2010	4/29/2010
Teamster	3	2/26/2010	4/29/2010
Operator	2	2/26/2010	4/29/2010
Foreman	2	2/8/2010	6/8/2010
Laborers	3	2/8/2010	6/8/2010
Iron Workers	3	2/26/2010	3/11/2010
	Number	Number	
	of	of	
<b>Construction Activity</b>	<b>Hrs/day</b>	<b>Truck Trips/hr</b>	
Close off and excavate roadway	8	0.25	
Install Pile & Lagging	8	0.25	
Install Roadway Decking	8	0.1	
Flatbed for Steel and Wood deliveries	8	0.1	

# P1 - Seventh Avenue - Install Mini-Piles

## Stage 1 - Phase C

Construction Equipment & Labor	Units	Start Date	End Date
<b>Equipment</b>			
Pile Rig	1	2/8/2010	3/19/2010
Work Train	2	2/8/2010	3/19/2010
<b>Labor</b>			
Operator	1	2/8/2010	3/19/2010
Foreman	1	2/8/2010	3/19/2010
Laborers	4	2/8/2010	3/19/2010
	Number	Number	
	of	of	
<b>Construction Activity</b>	<b>Hrs/day</b>	<b>Truck Trips/hr</b>	

Install Mini - Piles inside Subway Tunnel

8

0

Requires Track outages

# P1 - Seventh Avenue - Jet Grout

## Stage 1 - Phase D

<b>Construction Equipment &amp; Labor</b>	<b>Units</b>	<b>Start Date</b>	<b>End Date</b>
<b>Equipment</b>			
Drill Rig	1	3/22/2010	4/30/2010
Jet Grout Rig	1	3/22/2010	4/30/2010
Work Train	2	3/22/2010	4/30/2010
<b>Labor</b>			
Operator	1	3/22/2010	4/30/2010
Foreman	1	3/22/2010	4/30/2010
Laborers	4	3/22/2010	4/30/2010

<b>Construction Activity</b>	<b>Number of Hrs/day</b>	<b>Number of Truck Trips/hr</b>
Install Jet Grout	8	0
Cut-off Walls inside Subway Tunnel		
Requires Track outages		

# P1 - Fan Facility - Excavation

## STAGE 2 - Phase A

<b>Construction Equipment &amp; Labor</b>	<b>Units</b>	<b>Start Date</b>	<b>End Date</b>
<b>Equipment</b>			
Excavators	1	6/9/2010	7/21/2010
Dump Trucks	3	6/9/2010	7/21/2010
Compressor	1	6/9/2010	7/21/2010
<b>Labor</b>			
Operator	1	6/9/2010	7/21/2010
Oiler	1	6/9/2010	7/21/2010
Teamster	3	6/9/2010	7/21/2010
Foreman	1	6/9/2010	7/21/2010
Laborers	4	6/9/2010	7/21/2010
	<b>Number</b>	<b>Number</b>	
	<b>of</b>	<b>of</b>	
<b>Construction Activity</b>	<b>Hrs/day</b>	<b>Truck Trips/hr</b>	
Excavate for Vent Fan Facility	8	0.25	

# P1 - Fan Facility - Install Secant Piles

## Stage 2 - Phase B

<b>Construction Equipment &amp; Labor</b>	<b>Units</b>	<b>Start Date</b>	<b>End Date</b>
<b>Equipment</b>			
Drill Rig	1	6/9/2010	12/17/2010
Dump Trucks	2	6/9/2010	12/17/2010
Compressor	1	6/9/2010	12/17/2010
Cherry Picker	1	6/9/2010	12/17/2010
<b>Labor</b>			
Teamster	2	6/9/2010	12/17/2010
Operator	3	6/9/2010	12/17/2010
Oiler	1	6/9/2010	12/17/2010
Foreman	1	6/9/2010	12/17/2010
Laborers	3	6/9/2010	12/17/2010
	Number	Number	
	of	of	
<b>Construction Activity</b>	<b>Hrs/day</b>	<b>Truck Trips/hr</b>	
Install Secant Pile Walls w/ Drill Rig	8	0	
Dump Trucks remove spoils from drilling	8	0.25	

# P1 - Greenwich Ave - Excavate SB Lane

## STAGE 2 - Phase C

<b>Construction Equipment &amp; Labor</b>	<b>Units</b>	<b>Start Date</b>	<b>End Date</b>
<b>Equipment</b>			
Excavators	1	6/10/2010	9/2/2010
Dump Trucks	3	6/10/2010	9/2/2010
Cherry Picker	1	6/17/2010	6/30/2010
Flatbed Trailer	1	6/17/2010	6/30/2010
Compressor	3	6/10/2010	9/2/2010
<b>Labor</b>			
Oiler	1	6/10/2010	9/2/2010
Teamster	3	6/10/2010	9/2/2010
Operator	3	6/10/2010	9/2/2010
Foreman	2	6/10/2010	9/2/2010
Laborers	3	6/10/2010	9/2/2010
Iron Workers	3	6/17/2010	6/30/2010
	<b>Number</b>	<b>Number</b>	
	<b>of</b>	<b>of</b>	
<b>Construction Activity</b>	<b>Hrs/day</b>	<b>Truck Trips/hr</b>	
Install Pile & Lagging	8	0.1	
Install Roadway Decking	2	0.5	
Flatbed for Steel and Wood deliveries	1	1	

# P1 - Greenwich Ave - Construct Plenum

## STAGE 2 - Phase D

<b>Construction Equipment &amp; Labor</b>	<b>Units</b>	<b>Start Date</b>	<b>End Date</b>
<b>Equipment</b>			
Cherry Picker	1	9/3/2010	11/30/2010
<b>Labor</b>			
Operator	1	9/3/2010	11/30/2010
Carpenters	2	9/3/2010	11/30/2010
Lathers	3	9/3/2010	11/30/2010
Foreman	3	9/3/2010	11/30/2010
Laborers	3	9/3/2010	11/30/2010

<b>Construction Activity</b>	<b>Number of Hrs/day</b>	<b>Number of Truck Trips/hr</b>
Install Rebar & Formwork	8	0.1
Place Concrete	8	0.25
Remove Formwork	8	0.1

# P1 - Greenwich Ave - Backfill and Restore Traffic Lanes

## STAGE 2 - Phase E

<b>Construction Equipment &amp; Labor</b>	<b>Units</b>	<b>Start Date</b>	<b>End Date</b>
<b>Equipment</b>			
Excavator	1	12/1/2010	12/20/2010
Dump Trucks	3	12/1/2010	2/4/2011
Paver	1	12/1/2010	2/4/2011
Compactors	2	12/1/2010	12/20/2010
<b>Labor</b>			
Operators	2	12/1/2010	2/4/2011
Foreman	2	12/1/2010	2/4/2011
Laborers	12	12/1/2010	2/4/2011
Teamsters	3	12/1/2010	2/4/2011

<b>Construction Activity</b>	<b>Number of Hrs/day</b>	<b>Number of Truck Trips/hr</b>
Backfill over Plenum	8	0.1
Compact Soil	8	0.1
Concrete Base for Roadway - 9" thick	8	0.1
Asphalt Wearing Surface - 3" thick	8	0.1
Curbs and Sidewalks - 4" thick	8	0.1
Asphalt Deliveries	2	0.5

# P1 - Fan Facility - Excavation

## STAGE 3 - Phase A

<b>Construction Equipment &amp; Labor</b>	<b>Units</b>	<b>Start Date</b>	<b>End Date</b>
<b>Equipment</b>			
Excavators	1	2/8/2011	3/21/2011
Dump Trucks	3	2/8/2011	3/21/2011
Compressor	1	2/8/2011	3/21/2011
<b>Labor</b>			
Operator	1	2/8/2011	3/21/2011
Oiler	1	2/8/2011	3/21/2011
Teamster	3	2/8/2011	3/21/2011
Foreman	1	2/8/2011	3/21/2011
Laborers	4	2/8/2011	3/21/2011
	<b>Number</b>	<b>Number</b>	
	<b>of</b>	<b>of</b>	
<b>Construction Activity</b>	<b>Hrs/day</b>	<b>Truck Trips/hr</b>	
Excavate for Vent Fan Facility	8	0.25	

# P1 - Seventh Avenue - Secant Piles

## STAGE 3 - Phase B

<b>Construction Equipment &amp; Labor</b>	<b>Units</b>	<b>Start Date</b>	<b>End Date</b>
<b>Equipment</b>			
Drill Rig	1	2/10/2011	4/15/2011
Dump Trucks	2	2/10/2011	4/15/2011
Compressor	1	2/10/2011	4/15/2011
Cherry Picker	1	2/10/2011	4/15/2011
<b>Labor</b>			
Teamster	2	2/10/2011	4/15/2011
Operator	3	2/10/2011	4/15/2011
Oiler	1	2/10/2011	4/15/2011
Foreman	1	2/10/2011	4/15/2011
Laborers	3	2/10/2011	4/15/2011

<b>Construction Activity</b>	<b>Number of Hrs/day</b>	<b>Number of Truck Trips/hr</b>
Install Secant Pile Walls w/ Drill Rig	8	0
Dump Trucks remove spoils from drilling	4	0.5

# P1 - Seventh Avenue - Temp Sewer

## STAGE 3 - Phase C

<b>Construction Equipment &amp; Labor</b>	<b>Units</b>	<b>Start Date</b>	<b>End Date</b>
<b>Equipment</b>			
Excavator	1	4/18/2011	5/13/2011
Dump Trucks	2	4/18/2011	5/13/2011
<b>Labor</b>			
Teamster	3	4/18/2011	5/13/2011
Operator	1	4/18/2011	5/13/2011
Oiler	1	4/18/2011	5/13/2011
Foreman	1	4/18/2011	5/13/2011
Laborers	4	4/18/2011	5/13/2011

<b>Construction Activity</b>	<b>Number of Hrs/day</b>	<b>Number of Truck Trips/hr</b>
Remove existing street vent	8	0.1
Install Temporary sewer	8	0.1
Install New Precast Manhole	8	0.1

# P1 - Seventh Avenue - Tunnel

## STAGE 3 - Phase D

<b>Construction Equipment &amp; Labor</b>	<b>Units</b>	<b>Start Date</b>	<b>End Date</b>
<b>Equipment</b>			
Mini - Excavator	1	6/14/2011	10/19/2011
Dump Trucks	1	6/14/2011	10/19/2011
<b>Labor</b>			
Teamster	1	6/14/2011	10/19/2011
Operator	1	6/14/2011	10/19/2011
Foreman	1	6/14/2011	10/19/2011
Sand Hogs	6	6/14/2011	10/19/2011
	<b>Number</b>	<b>Number</b>	
	<b>of</b>	<b>of</b>	
<b>Construction Activity</b>	<b>Hrs/day</b>	<b>Truck Trips/hr</b>	
Tunnel Under Subway	8	0.25	

# P1 - Seventh Avenue - Manifold

## STAGE 3 - Phase E

<b>Construction Equipment &amp; Labor</b>	<b>Units</b>	<b>Start Date</b>	<b>End Date</b>
<b>Equipment</b>			
Concrete Trucks	1	10/20/2011	7/11/2012
Pumping Trucks	1	10/20/2011	7/11/2012
<b>Labor</b>			
Operator	1	10/20/2011	7/11/2012
Oiler	1	10/20/2011	7/11/2012
Teamster	1	10/20/2011	7/11/2012
Carpenter	2	10/20/2011	7/11/2012
Lather	2	10/20/2011	7/11/2012
Foreman	3	10/20/2011	7/11/2012
Laborers	4	10/20/2011	7/11/2012
	<b>Number</b>	<b>Number</b>	
	<b>of</b>	<b>of</b>	
<b>Construction Activity</b>	<b>Hrs/day</b>	<b>Truck Trips/hr</b>	
Construct Tunnel Manifold & Connect into Existing Subway	8	0.25	

# P1 - Seventh Avenue - New Sewer

## STAGE 3 - Phase F

<b>Construction Equipment &amp; Labor</b>	<b>Units</b>	<b>Start Date</b>	<b>End Date</b>
<b>Equipment</b>			
Concrete Trucks	1	5/16/2011	5/27/2011
Excavator	1	5/16/2011	5/27/2011
Pumping Trucks	1	5/16/2011	5/27/2011
<b>Labor</b>			
Operator	1	5/16/2011	5/27/2011
Oiler	1	5/16/2011	5/27/2011
Teamster	1	5/16/2011	5/27/2011
Foreman	1	5/16/2011	5/27/2011
Laborers	4	5/16/2011	5/27/2011
	<b>Number</b>	<b>Number</b>	
	<b>of</b>	<b>of</b>	
<b>Construction Activity</b>	<b>Hrs/day</b>	<b>Truck Trips/hr</b>	
Construct New Sewer	8	0.25	

# P1 - Seventh Avenue - Reconstruct Avenue

## STAGE 3 - Phase G

<b>Construction Equipment &amp; Labor</b>	<b>Units</b>	<b>Start Date</b>	<b>End Date</b>
<b>Equipment</b>			
Excavator	1	5/31/2011	6/13/2011
Dump Trucks	3	5/31/2011	6/13/2011
Paver	1	5/31/2011	6/13/2011
Compactors	2	5/31/2011	6/13/2011
<b>Labor</b>			
Operators	2	5/31/2011	6/13/2011
Foreman	2	5/31/2011	6/13/2011
Laborers	12	5/31/2011	6/13/2011
Teamsters	3	5/31/2011	6/13/2011

<b>Construction Activity</b>	<b>Number of Hrs/day</b>	<b>Number of Truck Trips/hr</b>
Backfill over Plenum	8	0.1
Compact Soil	8	0.1
Concrete Base for Roadway - 9" thick	8	0.1
Asphalt Wearing Surface - 3" thick	8	0.1
Curbs and Sidewalks - 4" thick	8	0.1
Asphalt Deliveries	8	0.1

# P1 - Fan Facility - Construct Facility

## STAGE 4 - Phase A

<b>Construction Equipment &amp; Labor</b>	<b>Units</b>	<b>Start Date</b>	<b>End Date</b>
<b>Equipment</b>			
Cherry Picker	1	7/12/2012	1/17/2013
Flatbed Trailer	1	7/12/2012	1/17/2013
<b>Labor</b>			
Operator	1	7/12/2012	1/17/2013
Dock Builder	1	7/12/2012	1/17/2013
Foreman	4	7/12/2012	1/17/2013
Laborers	4	7/12/2012	1/17/2013
Lathers	3	7/12/2012	1/17/2013
Carpenters	2	7/12/2012	1/17/2013
Iron Workers	3	7/12/2012	1/17/2013

<b>Construction Activity</b>	<b>Number of Hrs/day</b>	<b>Number of Truck Trips/hr</b>
Construct shell for facility	8	0.1
Erect Steel Frame	8	0.1
Form and place 18" Concrete reinforced walls	8	0.1

# P1 - Fan Facility - Install Equipment

## STAGE 4 - Phase B

<b>Construction Equipment &amp; Labor</b>	<b>Units</b>	<b>Start Date</b>	<b>End Date</b>
<b>Equipment</b>			
Generator	1	3/1/2013	8/19/2013
Cherry Picker	3	3/1/2013	8/19/2013
Flatbed Trailer	1	3/1/2013	8/19/2013
Material Hoist	1	3/1/2013	8/19/2013
<b>Support</b>			
Operator	1	3/1/2013	8/19/2013
Oiler	1	3/1/2013	8/19/2013
Teamster	1	3/1/2013	8/19/2013
Foreman	2	3/1/2013	8/19/2013
Laborers	3	3/1/2013	8/19/2013
Electricians	3	3/1/2013	8/19/2013
Riggers	3	3/1/2013	8/19/2013
	<b>Number</b>	<b>Number</b>	
	<b>of</b>	<b>of</b>	
<b>Construction Activity</b>	<b>Hrs/day</b>	<b>Truck Trips/hr</b>	
Material Deliveries	1	1	
Install Fans			
Install Mechanical Dampers			
Install Main Power and Controls			

# P1 - Fan Facility - Interior Spaces

## STAGE 4 - Phase C

<b>Construction Equipment &amp; Labor</b>	<b>Units</b>	<b>Start Date</b>	<b>End Date</b>
<b>Equipment</b>			
Cherry Picker	1	1/18/2013	5/23/2013
Flatbed Trailer	3	1/18/2013	5/23/2013
Compressor	1	1/18/2013	5/23/2013
Generator	1	1/18/2013	5/23/2013
<b>Support</b>			
Operator	1	1/18/2013	5/23/2013
Oiler	1	1/18/2013	5/23/2013
Foreman	3	1/18/2013	5/23/2013
Laborers	4	1/18/2013	5/23/2013
Trade Mechanics	6	1/18/2013	5/23/2013
	<b>Number</b>	<b>Number</b>	
	<b>of</b>	<b>of</b>	
<b>Construction Activity</b>	<b>Hrs/day</b>	<b>Truck Trips/hr</b>	
Material Deliveries	1	1	
Build out interior spaces			



# Construction Activities

Site Alternative SB1



## SB1 - GENERAL

### ALL STAGES

<b>Construction Equipment &amp; Labor</b>	<b>Units</b>	<b>Start Date</b>	<b>End Date</b>
<b>Equipment</b>			
Front End Loaders	1	2/19/2010	8/26/2013
Trucks - Pick Up	2	2/1/2010	8/26/2013
Field Office	1	2/1/2010	8/26/2013
Job Boxes	3	2/1/2010	8/26/2013
<b>Labor</b>			
Super	1	2/1/2010	8/26/2013
Project Engineer	1	2/1/2010	8/26/2013
Office Engineer	1	2/1/2010	8/26/2013
Safety Engineer	1	2/1/2010	8/26/2013
QA Engineer	1	2/1/2010	8/26/2013
Operator	1	2/19/2010	8/26/2013
Laborers	2	2/19/2010	8/26/2013

# P1 - Fan Facility - Secure Site

## Stage 1 Phase A

<b>Construction Equipment &amp; Labor</b>	<b>Units</b>	<b>Start Date</b>	<b>End Date</b>
<b>Equipment</b>			
Flatbed Trailer	1	2/8/2010	2/12/2010
<b>Labor</b>			
Foreman	1	2/8/2010	2/12/2010
Laborers	4	2/8/2010	2/12/2010
	Number	Number	
	of	of	
<b>Construction Activity</b>	<b>Hrs/day</b>	<b>Truck Trips/hr</b>	
Install Fence and Gates	8	0.25	

# SB1 - Greenwich Ave - Excavate NB Lane

## Stage 1 - Phase B

<b>Construction Equipment &amp; Labor</b>	<b>Units</b>	<b>Start Date</b>	<b>End Date</b>
<b>Equipment</b>			
Excavators	1	2/26/2010	7/23/2010
Dump Trucks	3	2/26/2010	7/23/2010
Cherry Picker	1	2/26/2010	12/1/2010
Flatbed Trailer	1	2/26/2010	12/1/2010
Compressor	1	2/19/2010	2/25/2010
<b>Labor</b>			
Oiler	1	2/26/2010	12/1/2010
Teamster	3	2/26/2010	12/1/2010
Operator	2	2/26/2010	12/1/2010
Foreman	2	2/8/2010	12/1/2010
Laborers	3	2/8/2010	12/1/2010
Iron Workers	3	2/26/2010	12/1/2010
	Number	Number	
	of	of	
<b>Construction Activity</b>	<b>Hrs/day</b>	<b>Truck Trips/hr</b>	
Close off and excavate roadway	8	0.25	
Install Pile & Lagging	8	0.25	
Install Roadway Decking	8	0.1	
Flatbed for Steel and Wood deliveries	8	0.1	

# SB1 - Seventh Avenue - Install Mini-Piles

## Stage 1 - Phase C

Construction Equipment & Labor	Units	Start Date	End Date
<b>Equipment</b>			
Pile Rig	1	2/8/2010	4/30/2007
Work Train	2	2/8/2010	3/19/2010
<b>Labor</b>			
Operator	1	2/8/2010	4/30/2007
Foreman	1	2/8/2010	4/30/2007
Laborers	4	2/8/2010	4/30/2007
	Number	Number	
	of	of	
Construction Activity	Hrs/day	Truck Trips/hr	

Install Mini - Piles inside Subway Tunnel

8

0

Requires Track outages

# SB1 - Seventh Avenue - Jet Grout

## Stage 1 - Phase D

<b>Construction Equipment &amp; Labor</b>	<b>Units</b>	<b>Start Date</b>	<b>End Date</b>
<b>Equipment</b>			
Drill Rig	1	3/22/2010	9/7/2010
Jet Grout Rig	1	3/22/2010	9/7/2010
Work Train	2	3/22/2010	9/7/2010
<b>Labor</b>			
Operator	1	3/22/2010	9/7/2010
Foreman	1	3/22/2010	9/7/2010
Laborers	4	3/22/2010	9/7/2010

<b>Construction Activity</b>	<b>Number of Hrs/day</b>	<b>Number of Truck Trips/hr</b>
Install Jet Grout	8	0
Cut-off Walls inside Subway Tunnel		
Requires Track outages		

# SB1 - Greenwich Ave - Excavate SB Lane

## STAGE 2

<b>Construction Equipment &amp; Labor</b>	<b>Units</b>	<b>Start Date</b>	<b>End Date</b>
<b>Equipment</b>			
Excavators	1	12/6/2010	10/21/2011
Dump Trucks	3	12/6/2010	10/21/2011
Cherry Picker	1	12/14/2010	1/4/2011
Flatbed Trailer	1	12/14/2010	1/4/2011
Compressor	3	12/7/2010	12/13/2010
<b>Labor</b>			
Oiler	1	12/6/2010	10/21/2011
Teamster	3	12/6/2010	10/21/2011
Operator	3	12/6/2010	10/21/2011
Foreman	2	12/7/2010	10/21/2011
Laborers	3	12/7/2010	10/21/2011
Iron Workers	3	12/14/2010	1/4/2011

<b>Construction Activity</b>	<b>Number of Hrs/day</b>	<b>Number of Truck Trips/hr</b>
Install Pile & Lagging	8	0.1
Install Roadway Decking	2	0.5
Flatbed for Steel and Wood deliveries	1	1

# SB1 - Greenwich Ave - Construct Plenum

## STAGE 2

<b>Construction Equipment &amp; Labor</b>	<b>Units</b>	<b>Start Date</b>	<b>End Date</b>
<b>Equipment</b>			
Cherry Picker	1	10/24/2011	1/25/2012
Concrete Truck & Pump	1	1/26/2012	5/31/2012
<b>Labor</b>			
Operator	1	10/24/2011	5/31/2012
Carpenters	2	10/24/2011	5/31/2012
Lathers	3	10/24/2011	5/31/2012
Foreman	3	10/24/2011	5/31/2012
Laborers	10	10/24/2011	5/31/2012

<b>Construction Activity</b>	<b>Number of Hrs/day</b>	<b>Number of Truck Trips/hr</b>
Install Rebar & Formwork	8	0.1
Place Concrete	8	0.25
Remove Formwork	8	0.1

# SB1 - Excavation

## STAGE 3 - Phase A

<b>Construction Equipment &amp; Labor</b>	<b>Units</b>	<b>Start Date</b>	<b>End Date</b>
<b>Equipment</b>			
Excavators	1	6/1/2012	7/13/2012
Dump Trucks	3	6/1/2012	7/13/2012
Compressor	1	6/1/2012	7/13/2012
<b>Labor</b>			
Operator	1	6/1/2012	7/13/2012
Oiler	1	6/1/2012	7/13/2012
Teamster	3	6/1/2012	7/13/2012
Foreman	1	6/1/2012	7/13/2012
Laborers	4	6/1/2012	7/13/2012
	<b>Number</b>	<b>Number</b>	
	<b>of</b>	<b>of</b>	
<b>Construction Activity</b>	<b>Hrs/day</b>	<b>Truck Trips/hr</b>	
Excavation	8	0.25	

# SB1 - Seventh Avenue - Secant Piles

## STAGE 3 - Phase B

<b>Construction Equipment &amp; Labor</b>	<b>Units</b>	<b>Start Date</b>	<b>End Date</b>
<b>Equipment</b>			
Drill Rig	1	6/1/2012	7/27/2012
Dump Trucks	2	6/1/2012	7/27/2012
Compressor	1	6/1/2012	7/27/2012
Cherry Picker	1	6/1/2012	7/27/2012
<b>Labor</b>			
Teamster	2	6/1/2012	7/27/2012
Operator	3	6/1/2012	7/27/2012
Oiler	1	6/1/2012	7/27/2012
Foreman	1	6/1/2012	7/27/2012
Laborers	3	6/1/2012	7/27/2012

<b>Construction Activity</b>	<b>Number of Hrs/day</b>	<b>Number of Truck Trips/hr</b>
Install Secant Pile Walls w/ Drill Rig	8	0
Dump Trucks remove spoils from drilling	4	0.5

# SB1 - Seventh Avenue - Temp Sewer

## STAGE 3 - Phase C

<b>Construction Equipment &amp; Labor</b>	<b>Units</b>	<b>Start Date</b>	<b>End Date</b>
<b>Equipment</b>			
Excavator	1	7/30/2012	8/24/2012
Dump Trucks	2	7/30/2012	8/24/2012
<b>Labor</b>			
Teamster	3	7/30/2012	8/24/2012
Operator	1	7/30/2012	8/24/2012
Oiler	1	7/30/2012	8/24/2012
Foreman	1	7/30/2012	8/24/2012
Laborers	4	7/30/2012	8/24/2012

<b>Construction Activity</b>	<b>Number of Hrs/day</b>	<b>Number of Truck Trips/hr</b>
Remove existing street vent	8	0.1
Install Temporary sewer	8	0.1
Install New Precast Manhole	8	0.1

# SB1 - Seventh Avenue - Tunnel

## STAGE 3 - Phase D

<b>Construction Equipment &amp; Labor</b>	<b>Units</b>	<b>Start Date</b>	<b>End Date</b>
<b>Equipment</b>			
Mini - Excavator	1	10/23/2012	2/18/2013
Dump Trucks	1	10/23/2012	2/18/2013
<b>Labor</b>			
Teamster	1	10/23/2012	2/18/2013
Operator	1	10/23/2012	2/18/2013
Foreman	1	10/23/2012	2/18/2013
Sand Hogs	6	10/23/2012	2/18/2013
	<b>Number</b>	<b>Number</b>	
	<b>of</b>	<b>of</b>	
<b>Construction Activity</b>	<b>Hrs/day</b>	<b>Truck Trips/hr</b>	
Tunnel Under Subway	8	0.25	

# SB1 - Seventh Avenue - Manifold

## STAGE 3 - Phase E

<b>Construction Equipment &amp; Labor</b>	<b>Units</b>	<b>Start Date</b>	<b>End Date</b>
<b>Equipment</b>			
Concrete Trucks	1	2/19/2013	9/19/2013
Pumping Trucks	1	2/19/2013	9/19/2013
<b>Labor</b>			
Operator	1	2/19/2013	9/19/2013
Oiler	1	2/19/2013	9/19/2013
Teamster	1	2/19/2013	9/19/2013
Carpenter	2	2/19/2013	9/19/2013
Lather	2	2/19/2013	9/19/2013
Foreman	3	2/19/2013	9/19/2013
Laborers	4	2/19/2013	9/19/2013
	<b>Number</b>	<b>Number</b>	
	<b>of</b>	<b>of</b>	
<b>Construction Activity</b>	<b>Hrs/day</b>	<b>Truck Trips/hr</b>	
Construct Tunnel Manifold & Connect into Existing Subway	8	0.25	

# SB1 - Seventh Avenue - New Sewer

## STAGE 3 - Phase F

<b>Construction Equipment &amp; Labor</b>	<b>Units</b>	<b>Start Date</b>	<b>End Date</b>
<b>Equipment</b>			
Concrete Trucks	1	8/27/2012	9/10/2012
Excavator	1	8/27/2012	9/10/2012
Pumping Trucks	1	8/27/2012	9/10/2012
<b>Labor</b>			
Operator	1	8/27/2012	9/10/2012
Oiler	1	8/27/2012	9/10/2012
Teamster	1	8/27/2012	9/10/2012
Foreman	1	8/27/2012	9/10/2012
Laborers	4	8/27/2012	9/10/2012
	<b>Number</b>	<b>Number</b>	
	<b>of</b>	<b>of</b>	
<b>Construction Activity</b>	<b>Hrs/day</b>	<b>Truck Trips/hr</b>	
Construct New Sewer	8	0.25	

# SB1 - Seventh Avenue - Reconstruct Avenue

## STAGE 3 - Phase G

<b>Construction Equipment &amp; Labor</b>	<b>Units</b>	<b>Start Date</b>	<b>End Date</b>
<b>Equipment</b>			
Excavator	1	9/25/2012	10/22/2012
Dump Trucks	3	9/25/2012	10/22/2012
Paver	1	9/25/2012	10/22/2012
Compactors	2	9/25/2012	10/22/2012
<b>Labor</b>			
Operators	2	9/25/2012	10/22/2012
Foreman	2	9/25/2012	10/22/2012
Laborers	12	9/25/2012	10/22/2012
Teamsters	3	9/25/2012	10/22/2012

<b>Construction Activity</b>	<b>Number of Hrs/day</b>	<b>Number of Truck Trips/hr</b>
Backfill over Plenum	8	0.1
Compact Soil	8	0.1
Concrete Base for Roadway - 9" thick	8	0.1
Asphalt Wearing Surface - 3" thick	8	0.1
Curbs and Sidewalks - 4" thick	8	0.1
Asphalt Deliveries	8	0.1

# SB1 - Greenwich Ave - Backfill and Restore Traffic Lanes

## STAGE 4

<b>Construction Equipment &amp; Labor</b>	<b>Units</b>	<b>Start Date</b>	<b>End Date</b>
<b>Equipment</b>			
Excavator	1	3/26/2013	5/2/2013
Dump Trucks	3	3/26/2013	5/2/2013
Paver	1	3/26/2013	5/2/2013
Compactors	2	3/26/2013	5/2/2013
<b>Labor</b>			
Operators	2	3/26/2013	5/2/2013
Foreman	2	3/26/2013	5/2/2013
Laborers	12	3/26/2013	5/2/2013
Teamsters	3	3/26/2013	5/2/2013

<b>Construction Activity</b>	<b>Number of Hrs/day</b>	<b>Number of Truck Trips/hr</b>
Backfill over Plenum	8	0.1
Compact Soil	8	0.1
Concrete Base for Roadway - 9" thick	8	0.1
Asphalt Wearing Surface - 3" thick	8	0.1
Curbs and Sidewalks - 4" thick	8	0.1
Asphalt Deliveries	2	0.5

# SB1 - Fan Facility - Construct Facility

## STAGE 4 - Phase A

<b>Construction Equipment &amp; Labor</b>	<b>Units</b>	<b>Start Date</b>	<b>End Date</b>
<b>Equipment</b>			
Cherry Picker	1	10/23/2012	3/11/2013
Flatbed Trailer	1	10/23/2012	3/11/2013
<b>Labor</b>			
Operator	1	10/23/2012	3/11/2013
Dock Builder	1	10/23/2012	3/11/2013
Foreman	4	10/23/2012	3/11/2013
Laborers	4	10/23/2012	3/11/2013
Lathers	3	10/23/2012	3/11/2013
Carpenters	2	10/23/2012	3/11/2013
Iron Workers	3	10/23/2012	3/11/2013

<b>Construction Activity</b>	<b>Number of Hrs/day</b>	<b>Number of Truck Trips/hr</b>
Construct shell for facility	8	0.1
Erect Steel Frame	8	0.1
Form and place 18" Concrete reinforced walls	8	0.1

# SB1 - Fan Facility - Install Equipment

## STAGE 4 - Phase B

<b>Construction Equipment &amp; Labor</b>	<b>Units</b>	<b>Start Date</b>	<b>End Date</b>
<b>Equipment</b>			
Generator	1	11/1/2013	8/1/2014
Cherry Picker	3	11/1/2013	8/1/2014
Flatbed Trailer	1	11/1/2013	8/1/2014
Material Hoist	1	11/1/2013	8/1/2014
<b>Support</b>			
Operator	1	11/1/2013	8/1/2014
Oiler	1	11/1/2013	8/1/2014
Teamster	1	11/1/2013	8/1/2014
Foreman	2	11/1/2013	8/1/2014
Laborers	3	11/1/2013	8/1/2014
Electricians	3	11/1/2013	8/1/2014
Riggers	3	11/1/2013	8/1/2014
	<b>Number</b>	<b>Number</b>	
	<b>of</b>	<b>of</b>	
<b>Construction Activity</b>	<b>Hrs/day</b>	<b>Truck Trips/hr</b>	
Material Deliveries	1	1	
Install Fans			
Install Mechanical Dampers			
Install Main Power and Controls			

# SB1 - Fan Facility - Interior Spaces

## STAGE 4 - Phase C

<b>Construction Equipment &amp; Labor</b>	<b>Units</b>	<b>Start Date</b>	<b>End Date</b>
<b>Equipment</b>			
Cherry Picker	1	11/6/2012	3/25/2013
Flatbed Trailer	3	11/6/2012	3/25/2013
Compressor	1	11/6/2012	3/25/2013
Generator	1	11/6/2012	3/25/2013
<b>Support</b>			
Operator	1	11/6/2012	3/25/2013
Oiler	1	11/6/2012	3/25/2013
Foreman	3	11/6/2012	3/25/2013
Laborers	4	11/6/2012	3/25/2013
Trade Mechanics	6	11/6/2012	3/25/2013
	<b>Number</b>	<b>Number</b>	
	<b>of</b>	<b>of</b>	
<b>Construction Activity</b>	<b>Hrs/day</b>	<b>Truck Trips/hr</b>	
Material Deliveries	1	1	
Build out interior spaces			

# Construction Activities

Site Alternative SB5



NYCT 8<sup>th</sup> Ave Subway  
 Emergency Vent Plant  
 Construction & Operational Analysis  
OPTION SB5

1. See attached detailed Construction Schedule
2. See attached Stage drawings for proposed closures of traffic lanes, parking spaces and sidewalks for each construction phase.
3. We estimate there will be approximately 2 daily non-employee vehicle trips generated by the proposed construction.
4. We estimate 40 employees will be working on the construction site during the daytime shift.
5. Breakdown on Construction Site Activities follows this page.
6. 2 Acres, including staging and storage areas, will be under construction.
7. The quantities (cubic yards) of spoil and debris removed from excavation are as follows:

Cubic Yards of Debris (including 15% "fluff" factor)				
	Stage 1	Stage 2	Stage 3	Stage 4
Greenwich Ave	750	750	0	0
Fan Facility	0	0	0	10000
7 <sup>th</sup> Avenue	0	0	460	700

## SB5 - GENERAL

### ALL STAGES

<u>Construction Equipment &amp; Labor</u>	<u>Units</u>	<u>Start Date</u>	<u>End Date</u>
<b>Equipment</b>			
Front End Loaders	1	2/1/2010	11/13/2014
Trucks - Pick Up	2	2/1/2010	11/13/2014
Field Office	1	2/1/2010	11/13/2014
Job Boxes	3	2/1/2010	11/13/2014
<b>Labor</b>			
Super	1	2/1/2010	11/13/2014
Project Engineer	1	2/1/2010	11/13/2014
Office Engineer	1	2/1/2010	11/13/2014
Safety Engineer	1	2/1/2010	11/13/2014
QA Engineer	1	2/1/2010	11/13/2014
Operator	1	2/1/2010	11/13/2014
Laborers	2	2/1/2010	11/13/2014

# SB5 - Greenwich Ave - Excavate NB Lane

## Stage 1 - Phase A

<b>Construction Equipment &amp; Labor</b>	<b>Units</b>	<b>Start Date</b>	<b>End Date</b>
<b>Equipment</b>			
Excavators	1	2/15/2010	6/15/2010
Dump Trucks	3	2/15/2010	6/15/2010
Cherry Picker	1	2/15/2010	6/15/2010
Flatbed Trailer	1	2/15/2010	6/15/2010
Compressor	1	2/15/2010	6/15/2010
<b>Labor</b>			
Oiler	1	2/15/2010	6/15/2010
Teamster	3	2/15/2010	6/15/2010
Operator	2	2/15/2010	6/15/2010
Foreman	2	2/15/2010	6/15/2010
Laborers	3	2/15/2010	6/15/2010
Iron Workers	3	2/15/2010	6/15/2010
	Number	Number	
	of	of	
<b>Construction Activity</b>	<b>Hrs/day</b>	<b>Truck Trips/hr</b>	
Close off and excavate roadway	8	0.25	
Install Pile & Lagging	8	0.25	
Install Roadway Decking	8	0.1	
Flatbed for Steel and Wood deliveries	8	0.1	

# SB5 - Seventh Avenue - Install Mini-Piles

## Stage 1 - Phase B

<b>Construction Equipment &amp; Labor</b>	<b>Units</b>	<b>Start Date</b>	<b>End Date</b>
<b>Equipment</b>			
Pile Rig	1	2/15/2010	3/26/2010
Work Train	2	2/15/2010	3/26/2010
<b>Labor</b>			
Operator	1	2/15/2010	3/26/2010
Foreman	1	2/15/2010	3/26/2010
Laborers	4	2/15/2010	3/26/2010
	Number	Number	
	of	of	
<b>Construction Activity</b>	<b>Hrs/day</b>	<b>Truck Trips/hr</b>	
Install Mini - Piles inside Subway Tunnel	8	0	
Requires Track outages			

# SB5 - Seventh Avenue - Jet Grout

## Stage 1 - Phase C

Construction Equipment & Labor	Units	Start Date	End Date
<b>Equipment</b>			
Drill Rig	1	3/29/2010	5/7/2010
Jet Grout Rig	1	3/29/2010	5/7/2010
Work Train	2	3/29/2010	5/7/2010
<b>Labor</b>			
Operator	1	3/29/2010	5/7/2010
Foreman	1	3/29/2010	5/7/2010
Laborers	4	3/29/2010	5/7/2010

Construction Activity	Number of Hrs/day	Number of Truck Trips/hr
Install Jet Grout	8	0
Cut-off Walls inside Subway Tunnel		
Requires Track outages		

## SB5 - Greenwich Ave - Excavate SB Lane

### STAGE 2 - Phase A

<b>Construction Equipment &amp; Labor</b>	<b>Units</b>	<b>Start Date</b>	<b>End Date</b>
<b>Equipment</b>			
Excavators	1	6/10/2010	9/2/2010
Dump Trucks	3	6/10/2010	9/2/2010
Cherry Picker	1	6/17/2010	6/30/2010
Flatbed Trailer	1	6/17/2010	6/30/2010
Compressor	3	6/10/2010	9/2/2010
<b>Labor</b>			
Oiler	1	6/10/2010	9/2/2010
Teamster	3	6/10/2010	9/2/2010
Operator	3	6/10/2010	9/2/2010
Foreman	2	6/10/2010	9/2/2010
Laborers	3	6/10/2010	9/2/2010
Iron Workers	3	6/17/2010	6/30/2010

<b>Construction Activity</b>	<b>Number of Hrs/day</b>	<b>Number of Truck Trips/hr</b>
Install Pile & Lagging	8	0.1
Install Roadway Decking	2	0.5
Flatbed for Steel and Wood deliveries	1	1

# SB5 - Greenwich Ave - Construct Plenum

## STAGE 2 - Phase B

<b>Construction Equipment &amp; Labor</b>	<b>Units</b>	<b>Start Date</b>	<b>End Date</b>
<b>Equipment</b>			
Cherry Picker	1	9/13/2010	12/7/2010
<b>Labor</b>			
Operator	1	9/13/2010	12/7/2010
Carpenters	2	9/13/2010	12/7/2010
Lathers	3	9/13/2010	12/7/2010
Foreman	3	9/13/2010	12/7/2010
Laborers	3	9/13/2010	12/7/2010

<b>Construction Activity</b>	<b>Number of Hrs/day</b>	<b>Number of Truck Trips/hr</b>
Install Rebar & Formwork	8	0.1
Place Concrete	8	0.25
Remove Formwork	8	0.1

# SB5 - Greenwich Ave - Backfill and Restore Traffic Lanes

## STAGE 2 - Phase C

<b>Construction Equipment &amp; Labor</b>	<b>Units</b>	<b>Start Date</b>	<b>End Date</b>
<b>Equipment</b>			
Excavator	1	12/8/2010	1/25/2011
Dump Trucks	3	12/1/2010	1/25/2011
Paver	1	12/1/2010	1/25/2011
Compactors	2	12/8/2010	1/25/2011
<b>Labor</b>			
Operators	2	12/8/2010	1/25/2011
Foreman	2	12/8/2010	1/25/2011
Laborers	12	12/8/2010	1/25/2011
Teamsters	3	12/1/2010	1/25/2011

<b>Construction Activity</b>	<b>Number of Hrs/day</b>	<b>Number of Truck Trips/hr</b>
Backfill over Plenum	8	0.1
Compact Soil	8	0.1
Concrete Base for Roadway - 9" thick	8	0.1
Asphalt Wearing Surface - 3" thick	8	0.1
Curbs and Sidewalks - 4" thick	8	0.1
Asphalt Deliveries	2	0.5

# SB5 - Seventh Avenue - Secant Piles

## STAGE 3 - Phase A

<b>Construction Equipment &amp; Labor</b>	<b>Units</b>	<b>Start Date</b>	<b>End Date</b>
<b>Equipment</b>			
Drill Rig	1	1/26/2011	4/4/2011
Dump Trucks	2	1/26/2011	4/4/2011
Compressor	1	1/26/2011	4/4/2011
Cherry Picker	1	1/26/2011	4/4/2011
<b>Labor</b>			
Teamster	2	1/26/2011	4/4/2011
Operator	3	1/26/2011	4/4/2011
Oiler	1	1/26/2011	4/4/2011
Foreman	1	1/26/2011	4/4/2011
Laborers	3	1/26/2011	4/4/2011
	<b>Number</b>	<b>Number</b>	
	<b>of</b>	<b>of</b>	
<b>Construction Activity</b>	<b>Hrs/day</b>	<b>Truck Trips/hr</b>	
Install Secant Pile Walls w/ Drill Rig	8	0	
Dump Trucks remove spoils from drilling	4	0.5	

# SB5 - Seventh Avenue - Temp Sewer

## STAGE 3 - Phase B

<b>Construction Equipment &amp; Labor</b>	<b>Units</b>	<b>Start Date</b>	<b>End Date</b>
<b>Equipment</b>			
Excavator	1	4/5/2011	5/2/2011
Dump Trucks	2	4/5/2011	5/2/2011
<b>Labor</b>			
Teamster	3	4/5/2011	5/2/2011
Operator	1	4/5/2011	5/2/2011
Oiler	1	4/5/2011	5/2/2011
Foreman	1	4/5/2011	5/2/2011
Laborers	4	4/5/2011	5/2/2011

<b>Construction Activity</b>	<b>Number of Hrs/day</b>	<b>Number of Truck Trips/hr</b>
Remove existing street vent	8	0.1
Install Temporary sewer	8	0.1
Install New Precast Manhole	8	0.1

# SB5 - Seventh Avenue - New Sewer

## STAGE 3 - Phase C

<b>Construction Equipment &amp; Labor</b>	<b>Units</b>	<b>Start Date</b>	<b>End Date</b>
<b>Equipment</b>			
Concrete Trucks	1	5/3/2011	5/16/2011
Excavator	1	5/3/2011	5/16/2011
Pumping Trucks	1	5/3/2011	5/16/2011
<b>Labor</b>			
Operator	1	5/3/2011	5/16/2011
Oiler	1	5/3/2011	5/16/2011
Teamster	1	5/3/2011	5/16/2011
Foreman	1	5/3/2011	5/16/2011
Laborers	4	5/3/2011	5/16/2011
	<b>Number</b>	<b>Number</b>	
	<b>of</b>	<b>of</b>	
<b>Construction Activity</b>	<b>Hrs/day</b>	<b>Truck Trips/hr</b>	
Construct New Sewer	8	0.25	

# SB5 - Seventh Avenue - Reconstruct Avenue

## STAGE 3 - Phase D

<b>Construction Equipment &amp; Labor</b>	<b>Units</b>	<b>Start Date</b>	<b>End Date</b>
<b>Equipment</b>			
Excavator	1	5/17/2011	5/31/2011
Dump Trucks	3	5/17/2011	5/31/2011
Paver	1	5/17/2011	5/31/2011
Compactors	2	5/17/2011	5/31/2011
<b>Labor</b>			
Operators	2	5/17/2011	5/31/2011
Foreman	2	5/17/2011	5/31/2011
Laborers	12	5/17/2011	5/31/2011
Teamsters	3	5/17/2011	5/31/2011

<b>Construction Activity</b>	<b>Number of Hrs/day</b>	<b>Number of Truck Trips/hr</b>
Backfill over Plenum	8	0.1
Compact Soil	8	0.1
Concrete Base for Roadway - 9" thick	8	0.1
Asphalt Wearing Surface - 3" thick	8	0.1
Curbs and Sidewalks - 4" thick	8	0.1
Asphalt Deliveries	8	0.1

# SB5 - Fan Facility - Secure Street

## Stage 4 Phase A

<b>Construction Equipment &amp; Labor</b>	<b>Units</b>	<b>Start Date</b>	<b>End Date</b>
<b>Equipment</b>			
Flatbed Trailer	1	6/2/2011	6/12/2011
<b>Labor</b>			
Foreman	1	6/2/2011	6/12/2011
Laborers	4	6/2/2011	6/12/2011
	Number	Number	
	of	of	
<b>Construction Activity</b>	<b>Hrs/day</b>	<b>Truck Trips/hr</b>	
Install Fence and Gates	8	0.25	

# SB5 - Fan Facility - Install Secant Piles

## Stage 4 - Phase B

<b>Construction Equipment &amp; Labor</b>	<b>Units</b>	<b>Start Date</b>	<b>End Date</b>
<b>Equipment</b>			
Drill Rig	1	6/2/2011	3/21/2012
Dump Trucks	2	6/2/2011	3/21/2012
Compressor	1	6/2/2011	3/21/2012
Cherry Picker	1	6/2/2011	3/21/2012
<b>Labor</b>			
Teamster	2	6/2/2011	3/21/2012
Operator	3	6/2/2011	3/21/2012
Oiler	1	6/2/2011	3/21/2012
Foreman	1	6/2/2011	3/21/2012
Laborers	3	6/2/2011	3/21/2012
	Number	Number	
	of	of	
<b>Construction Activity</b>	<b>Hrs/day</b>	<b>Truck Trips/hr</b>	
Install Secant Pile Walls w/ Drill Rig	8	0	
Dump Trucks remove spoils from drilling	8	0.25	

# SB5 - Fan Facility - Excavation

## STAGE 4 - Phase C

<b>Construction Equipment &amp; Labor</b>	<b>Units</b>	<b>Start Date</b>	<b>End Date</b>
<b>Equipment</b>			
Excavators	1	7/15/2011	5/2/2012
Dump Trucks	3	7/15/2011	5/2/2012
Compressor	1	7/15/2011	5/2/2012
<b>Labor</b>			
Operator	1	7/15/2011	5/2/2012
Oiler	1	7/15/2011	5/2/2012
Teamster	3	7/15/2011	5/2/2012
Foreman	1	7/15/2011	5/2/2012
Laborers	4	7/15/2011	5/2/2012
	<b>Number</b>	<b>Number</b>	
	<b>of</b>	<b>of</b>	
<b>Construction Activity</b>	<b>Hrs/day</b>	<b>Truck Trips/hr</b>	
Excavate for Vent Fan Facility	8	0.25	

# SB5 - Seventh Avenue - Tunnel

## STAGE 4 - Phase D

<b>Construction Equipment &amp; Labor</b>	<b>Units</b>	<b>Start Date</b>	<b>End Date</b>
<b>Equipment</b>			
Mini - Excavator	1	5/3/2012	9/10/2012
Dump Trucks	1	5/3/2012	9/10/2012
<b>Labor</b>			
Teamster	1	5/3/2012	9/10/2012
Operator	1	5/3/2012	9/10/2012
Foreman	1	5/3/2012	9/10/2012
Sand Hogs	6	5/3/2012	9/10/2012
	<b>Number</b>	<b>Number</b>	
	<b>of</b>	<b>of</b>	
<b>Construction Activity</b>	<b>Hrs/day</b>	<b>Truck Trips/hr</b>	
Tunnel Under Subway	8	0.25	

# SB5 - Seventh Avenue - Manifold

## STAGE 4 - Phase E

<b>Construction Equipment &amp; Labor</b>	<b>Units</b>	<b>Start Date</b>	<b>End Date</b>
<b>Equipment</b>			
Concrete Trucks	1	9/11/2012	6/4/2013
Pumping Trucks	1	9/11/2012	6/4/2013
<b>Labor</b>			
Operator	1	9/11/2012	6/4/2013
Oiler	1	9/11/2012	6/4/2013
Teamster	1	9/11/2012	6/4/2013
Carpenter	2	9/11/2012	6/4/2013
Lather	2	9/11/2012	6/4/2013
Foreman	3	9/11/2012	6/4/2013
Laborers	4	9/11/2012	6/4/2013
	<b>Number</b>	<b>Number</b>	
	<b>of</b>	<b>of</b>	
<b>Construction Activity</b>	<b>Hrs/day</b>	<b>Truck Trips/hr</b>	
Construct Tunnel Manifold & Connect into Existing Subway	8	0.25	

# SB5 - Fan Facility - Construct Facility

## STAGE 4 - Phase F

<b>Construction Equipment &amp; Labor</b>	<b>Units</b>	<b>Start Date</b>	<b>End Date</b>
<b>Equipment</b>			
Cherry Picker	1	6/5/2013	3/27/2014
Flatbed Trailer	1	6/5/2013	3/27/2014
<b>Labor</b>			
Operator	1	6/5/2013	3/27/2014
Dock Builder	1	6/5/2013	3/27/2014
Foreman	4	6/5/2013	3/27/2014
Laborers	4	6/5/2013	3/27/2014
Lathers	3	6/5/2013	3/27/2014
Carpenters	2	6/5/2013	3/27/2014
Iron Workers	3	6/5/2013	3/27/2014
	<b>Number</b>	<b>Number</b>	
	<b>of</b>	<b>of</b>	
<b>Construction Activity</b>	<b>Hrs/day</b>	<b>Truck Trips/hr</b>	
Construct shell for facility	8	0.1	
Erect Steel Frame	8	0.1	
Form and place 18" Concrete reinforced walls	8	0.1	

# SB5 - Fan Facility - Interior Spaces

## STAGE 4 - Phase G

<b>Construction Equipment &amp; Labor</b>	<b>Units</b>	<b>Start Date</b>	<b>End Date</b>
<b>Equipment</b>			
Cherry Picker	1	10/11/2013	2/13/2014
Flatbed Trailer	3	10/11/2013	2/13/2014
Compressor	1	10/11/2013	2/13/2014
Generator	1	10/11/2013	2/13/2014
<b>Support</b>			
Operator	1	10/11/2013	2/13/2014
Oiler	1	10/11/2013	2/13/2014
Foreman	3	10/11/2013	2/13/2014
Laborers	4	10/11/2013	2/13/2014
Trade Mechanics	6	10/11/2013	2/13/2014
	<b>Number</b>	<b>Number</b>	
	<b>of</b>	<b>of</b>	
<b>Construction Activity</b>	<b>Hrs/day</b>	<b>Truck Trips/hr</b>	
Material Deliveries	1	1	
Build out interior spaces			

# SB5 - Fan Facility - Install Equipment

## STAGE 4 - Phase H

<b>Construction Equipment &amp; Labor</b>	<b>Units</b>	<b>Start Date</b>	<b>End Date</b>
<b>Equipment</b>			
Generator	1	1/3/2014	6/19/2014
Cherry Picker	3	1/3/2014	6/19/2014
Flatbed Trailer	1	1/3/2014	6/19/2014
Material Hoist	1	1/3/2014	6/19/2014
<b>Support</b>			
Operator	1	1/3/2014	6/19/2014
Oiler	1	1/3/2014	6/19/2014
Teamster	1	1/3/2014	6/19/2014
Foreman	2	1/3/2014	6/19/2014
Laborers	3	1/3/2014	6/19/2014
Electricians	3	1/3/2014	6/19/2014
Riggers	3	1/3/2014	6/19/2014
	<b>Number</b>	<b>Number</b>	
	<b>of</b>	<b>of</b>	
<b>Construction Activity</b>	<b>Hrs/day</b>	<b>Truck Trips/hr</b>	
Material Deliveries	1	1	
Install Fans			
Install Mechanical Dampers			
Install Main Power and Controls			

# Roadway Construction Noise Model Result

Site Alternative P1



Alternative P1  
 Stage 1  
 Land Use: Residential

Receptor Number	Receptor Description	Distance from the Site (ft)	Existing Noise Level (dBA)	Construction Phase	Construction Noise Level (dBA)	Impact (Yes/No)	Impact Start Date	Impact End Date
1	Two Boots to go West Pizza @ 201 West 11th St	189	73.0	A	65.9	No		
				B	69.8	No		
				C	74.0	No		
				D	77.0	No		
2	Rear of apartment bldg facing 7th Ave @ 227 Waverly Place	147	71.0	A	68.1	No		
				B	72.0	No		
				C	76.2	No		
				D	79.2	No		
3	Doma & Gallery @ 17 Perry St	253	69.0	A	63.4	No		
				B	67.3	No		
				C	71.5	No		
				D	74.5	No		
4	Apartment building @ 4 Perry St	158	67.0	A	67.5	No		
				B	71.4	No		
				C	75.6	No		
				D	78.5	No		
5	The Original Sandwich Shoppe of NY @ 58A Greenwich Ave	232	70.0	A	64.1	No		
				B	68.0	No		
				C	72.2	No		
				D	75.2	No		
6	West Village Florist @ 70 Greenwich Ave	105	71.0	A	71.0	No		
				B	74.9	No		
				C	79.1	No		
				D	<b>82.1</b>	<b>Yes</b>	3/22/2010	4/30/2010
7	St. Vincent's Hospital Reiss Pavilion @ 153 W.11th St	211	71.0	A	65.0	No		
				B	68.8	No		
				C	73.1	No		
				D	76.0	No		

Alternative P1  
 Stage 2  
 Land Use: Residential

Receptor Number	Receptor Description	Distance from the Site (ft)	Existing Noise Level (dBA)	Construction Phase	Construction Noise Level (dBA)	Impact (Yes/No)	Impact Start Date	Impact End Date
1	Two Boots to go West Pizza @ 201 West 11th St	189	73.0	A	69.7			
				B	<b>83.4*</b>	Yes	6/9/2010	12/17/2010
				C	70.5			
				D	66.3			
				E	71.0			
2	Rear of apartment bldg facing 7th Ave @ 227 Waverly Place	147	71.0	A	71.9			
				B	<b>85.5*</b>	Yes	6/9/2010	12/17/2010
				C	72.7			
				D	68.5			
				E	73.1			
3	Doma & Gallery @ 17 Perry St	253	69.0	A	67.2			
				B	<b>80.8*</b>	Yes	6/9/2010	12/17/2010
				C	68.0			
				D	63.8			
				E	68.4			
4	Apartment building @ 4 Perry St	158	67.0	A	71.3			
				B	<b>84.9*</b>	Yes	6/9/2010	12/17/2010
				C	72.0			
				D	67.9			
				E	72.5			
5	The Original Sandwich Shoppe of NY @ 58A Greenwich Ave	232	70.0	A	67.9			
				B	<b>81.6*</b>	Yes	6/9/2010	12/17/2010
				C	68.7			
				D	64.5			
				E	69.2			
6	West Village Florist @ 70 Greenwich Ave	105	71.0	A	74.8			
				B	<b>88.5*</b>	Yes	6/9/2010	12/17/2010
				C	75.6			
				D	71.4			
				E	76.1			
7	St. Vincent's Hospital Reiss Pavilion @ 153 W.11th St	211	71.0	A	68.7			
				B	<b>82.4*</b>	Yes	6/9/2010	12/17/2010
				C	69.5			
				D	65.4			
				E	70.0			

\*Major noise impact from secant piles installation

Alternative P1  
Stage 3  
Land Use: Residential

Receptor Number	Receptor Description	Distance from the Site (ft)	Existing Noise Level (dBA)	Construction Phase	Construction Noise Level (dBA)	Impact (Yes/No)	Impact Start Date	Impact End Date
1	Two Boots to go West Pizza @ 201 West 11th St	189	73.0	A	69.7	No		
				B	<b>83.4*</b>	Yes	2/10/2011	4/15/2011
				C	68.9	No		
				D	68.9	No		
				E	68.6	No		
				F	70.2	No		
				G	71.0	No		
2	Rear of apartment bldg facing 7th Ave @ 227 Waverly Place	147	71.0	A	71.9	No		
				B	<b>85.5*</b>	Yes	2/10/2011	4/15/2011
				C	71.0	No		
				D	71.0	No		
				E	70.8	No		
				F	72.4	No		
				G	73.1	No		
3	Doma & Gallery @ 17 Perry St	253	69.0	A	67.2	No		
				B	<b>80.8*</b>	Yes	2/10/2011	4/15/2011
				C	66.3	No		
				D	66.3	No		
				E	66.1	No		
				F	67.7	No		
				G	68.4	No		
4	Apartment building @ 4 Perry St	158	67.0	A	71.3	No		
				B	<b>84.9*</b>	Yes	2/10/2011	4/15/2011
				C	70.4	No		
				D	70.4	No		
				E	70.1	No		
				F	71.8	No		
				G	72.5	No		
5	The Original Sandwich Shoppe of NY @ 58A Greenwich Ave	232	70.0	A	67.9	No		
				B	<b>81.6*</b>	Yes	2/10/2011	4/15/2011
				C	67.1	No		
				D	67.1	No		
				E	66.8	No		
				F	68.4	No		
				G	69.2	No		
6	West Village Florist @ 70 Greenwich Ave	105	71.0	A	74.8	No		
				B	<b>88.5*</b>	Yes	2/10/2011	4/15/2011
				C	74.0	No		
				D	74.0	No		
				E	73.7	No		
				F	75.3	No		
				G	76.1	No		
7	St. Vincent's Hospital Reiss Pavilion @ 153 W.11th St	211	71.0	A	68.7	No		
				B	<b>82.4*</b>	Yes	2/10/2011	4/15/2011
				C	67.9	No		
				D	67.9	No		
				E	67.6	No		
				F	69.3	No		
				G	70.0	No		

\*Major noise impact from secant piles installation

Alternative P1  
 Stage 4  
 Land Use: Residential

Receptor Number	Receptor Description	Distance from the Site (ft)	Existing Noise Level (dBA)	Construction Phase	Construction Noise Level (dBA)	Impact (Yes/No)	Impact Start Date	Impact End Date
1	Two Boots to go West Pizza @ 201 West 11th St	189	73.0	A	67.0	No		
				B	71.0	No		
				C	70.3	No		
2	Rear of apartment bldg facing 7th Ave @ 227 Waverly Place	147	71.0	A	69.2	No		
				B	73.2	No		
				C	72.5	No		
3	Doma & Gallery @ 17 Perry St	253	69.0	A	64.5	No		
				B	68.5	No		
				C	67.8	No		
4	Apartment building @ 4 Perry St	158	67.0	A	68.6	No		
				B	72.6	No		
				C	71.9	No		
5	The Original Sandwich Shoppe of NY @ 58A Greenwich Ave	232	70.0	A	65.2	No		
				B	69.2	No		
				C	68.5	No		
6	West Village Florist @ 70 Greenwich Ave	105	71.0	A	72.1	No		
				B	76.1	No		
				C	75.4	No		
7	St. Vincent's Hospital Reiss Pavilion @ 153 W.11th St	211	71.0	A	66.1	No		
				B	70.0	No		
				C	75.4	No		

# Roadway Construction Noise Model Result

Site Alternative SB1



Alternative SB1  
 Stage 1  
 Land Use: Residential

Receptor Number	Receptor Description	Distance from the Site (ft)	Existing Noise Level (dBA)	Construction Phase	Construction Noise Level (dBA)	Impact (Yes/No)	Impact Start Date	Impact End Date
1	Two Boots to go West Pizza @ 201 West 11th St	316	73.0	A	64.8			
				B	69.4			
				C	72.9			
				D	75.9			
2	Rear of apartment bldg facing 7th Ave @ 227 Waverly Place	147	71.0	A	65.2			
				B	69.7			
				C	73.3			
				D	76.2			
3	Doma & Gallery @ 17 Perry St	211	69.0	A	79.2			
				B	<b>83.8</b>	Yes	2/8/2010	12/1/2010
				C	<b>87.3</b>	Yes	2/8/2010	4/30/2010
				D	<b>90.3</b>	Yes	3/22/2010	9/7/2010
4	Apartment building @ 4 Perry St	53	67.0	A	68.5			
				B	73.1			
				C	76.6			
				D	79.6			
5	The Original Sandwich Shoppe of NY @ 58A Greenwich Ave	168	70.0	A	68.3			
				B	72.9			
				C	76.4			
				D	79.3			
6	West Village Florist @ 70 Greenwich Ave	211	71.0	A	76.2			
				B	<b>80.8</b>	Yes	2/8/2010	12/1/2010
				C	<b>84.3</b>	Yes	2/8/2010	4/30/2010
				D	<b>87.2</b>	Yes	3/22/2010	9/7/2010
7	St. Vincent's Hospital Reiss Pavilion @ 153 W.11th St	305	71.0	A	66.7			
				B	71.3			
				C	74.8			
				D	77.8			

Alternative SB1  
 Stage 2  
 Land Use: Residential

Receptor Number	Receptor Description	Distance from the Site (ft)	Existing Noise Level (dBA)	Construction Phase	Construction Noise Level (dBA)	Impact (Yes/No)	Impact Start Date	Impact End Date
1	Two Boots to go West Pizza @ 201 West 11th St	316	73.0	A	66.9			
				B	69.4			
2	Rear of apartment bldg facing 7th Ave @ 227 Waverly Place	147	71.0	A	67.2			
				B	69.7			
3	Doma & Gallery @ 17 Perry St	211	69.0	A	<b>81.2</b>	Yes	10/24/2011	5/31/2012
				B	<b>83.8</b>	Yes	12/6/2010	1/4/2011
4	Apartment building @ 4 Perry St	53	67.0	A	70.5			
				B	73.1			
5	The Original Sandwich Shoppe of NY @ 58A Greenwich Ave	168	70.0	A	70.3			
				B	72.9			
6	West Village Florist @ 70 Greenwich Ave	211	71.0	A	78.2			
				B	<b>80.8</b>	Yes	12/6/2010	1/4/2011
7	St. Vincent's Hospital Reiss Pavilion @ 153 W.11th St	305	71.0	A	68.7			
				B	71.3			

Alternative SB1  
 Stage 3  
 Land Use: Residential

Receptor Number	Receptor Description	Distance from the Site (ft)	Existing Noise Level (dBA)	Construction Phase	Construction Noise Level (dBA)	Impact (Yes/No)	Impact Start Date	Impact End Date
1	Two Boots to go West Pizza @ 201 West 11th St	316	73.0	A	68.6			
				B	<b>82.3*</b>	Yes	6/1/2012	7/27/2012
				C	67.8			
				D	67.8			
				E	67.5			
				F	69.1			
				G	69.9			
2	Rear of apartment bldg facing 7th Ave @ 227 Waverly Place	147	71.0	A	69.0			
				B	<b>82.6*</b>	Yes	6/1/2012	7/27/2012
				C	68.1			
				D	68.1			
				E	67.8			
				F	69.5			
				G	70.2			
3	Doma & Gallery @ 17 Perry St	211	69.0	A	<b>83.0</b>	Yes	6/1/2012	7/13/2012
				B	<b>96.6*</b>	Yes	6/1/2012	7/27/2012
				C	<b>82.1</b>	Yes	7/30/2012	8/24/2012
				D	<b>82.1</b>	Yes	10/23/2012	2/18/2013
				E	<b>81.9</b>	Yes	2/19/2013	9/19/2013
				F	<b>83.5</b>	Yes	8/27/2012	9/10/2012
				G	<b>84.2</b>	Yes	9/25/2012	10/22/2012
4	Apartment building @ 4 Perry St	53	67.0	A	72.3			
				B	<b>86.0*</b>	Yes	6/1/2012	7/27/2012
				C	71.5			
				D	71.5			
				E	71.2			
				F	72.8			
				G	73.6			
5	The Original Sandwich Shoppe of NY @ 58A Greenwich Ave	168	70.0	A	72.1			
				B	<b>85.7*</b>	Yes	6/1/2012	7/27/2012
				C	71.2			
				D	71.2			
				E	70.9			
				F	72.6			
				G	73.3			

Alternative SB1  
 Stage 3  
 Land Use: Residential

Receptor Number	Receptor Description	Distance from the Site (ft)	Existing Noise Level (dBA)	Construction Phase	Construction Noise Level (dBA)	Impact (Yes/No)	Impact Start Date	Impact End Date
6	West Village Florist @ 70 Greenwich Ave	211	71.0	A	80.0	Yes	6/1/2012	7/13/2012
				B	93.6*	Yes	6/1/2012	7/27/2012
				C	79.1			
				D	79.1			
				E	78.8			
				F	80.5	Yes	8/27/2012	9/10/2012
				G	81.2	Yes	9/25/2012	10/22/2012
7	St. Vincent's Hospital Reiss Pavilion @ 153 W.11th St	305	71.0	A	70.5			
				B	84.1*	Yes	6/1/2012	7/27/2012
				C	69.6			
				D	69.6			
				E	69.4			
				F	71.0			
				G	71.7			

\*Major noise impact from secant piles installation

Alternative SB1  
 Stage 4  
 Land Use: Residential

Receptor Number	Receptor Description	Distance from the Site (ft)	Existing Noise Level (dBA)	Construction Phase	Construction Noise Level (dBA)	Impact (Yes/No)	Impact Start Date	Impact End Date
1	Two Boots to go West Pizza @ 201 West 11th St	316	73.0	A	70.5			
				B	69.9			
				C	69.2			
2	Rear of apartment bldg facing 7th Ave @ 227 Waverly Place	147	71.0	A	70.8			
				B	70.2			
				C	69.6			
3	Doma & Gallery @ 17 Perry St	211	69.0	A	<b>84.8</b>	<b>Yes</b>	10/23/2012	3/11/2013
				B	<b>84.3</b>	<b>Yes</b>	11/1/2013	8/1/2014
				C	<b>83.6</b>	<b>Yes</b>	11/6/2012	3/25/2013
4	Apartment building @ 4 Perry St	53	67.0	A	74.2			
				B	73.6			
				C	72.9			
5	The Original Sandwich Shoppe of NY @ 58A Greenwich Ave	168	70.0	A	73.9			
				B	73.4			
				C	72.7			
6	West Village Florist @ 70 Greenwich Ave	211	71.0	A	<b>81.8</b>	<b>Yes</b>	10/23/2012	3/11/2013
				B	<b>81.3</b>	<b>Yes</b>	11/1/2013	8/1/2014
				C	<b>80.6</b>	<b>Yes</b>	11/6/2012	3/25/2013
7	St. Vincent's Hospital Reiss Pavilion @ 153 W.11th St	305	71.0	A	72.3			
				B	71.8			
				C	71.1			



# Roadway Construction Noise Model Result

Site Alternative SB5



Alternative SB5  
 Stage 1  
 Land Use: Residential

Receptor Number	Receptor Description	Distance from the Site (ft)	Existing Noise Level (dBA)	Construction Phase	Construction Noise Level (dBA)	Impact (Yes/No)	Impact Start Date	Impact End Date
1	Two Boots to go West Pizza @ 201 West 11th St	316	73.0	A	66.0	No		
				B	69.6	No		
				C	72.5	No		
2	Rear of apartment bldg facing 7th Ave @ 227 Waverly Place	147	71.0	A	72.7	No		
				B	76.2	No		
				C	79.2	No		
3	Doma & Gallery @ 17 Perry St	211	69.0	A	69.5	No		
				B	73.1	No		
				C	76.0	No		
4	Apartment building @ 4 Perry St	53	67.0	A	<b>81.5</b>	<b>Yes</b>	6/10/2010	9/2/2010
				B	<b>85.1</b>	<b>Yes</b>	9/13/2010	12/7/2010
				C	<b>88.0</b>	<b>Yes</b>	12/1/2010	1/25/2011
5	The Original Sandwich Shoppe of NY @ 58A Greenwich Ave	168	70.0	A	71.5	No		
				B	75.0	No		
				C	78.0	No		
6	West Village Florist @ 70 Greenwich Ave	211	71.0	A	69.5	No		
				B	73.1	No		
				C	76.0	No		
7	St. Vincent's Hospital Reiss Pavilion @ 153 W.11th St	305	71.0	A	66.3	No		
				B	69.9	No		
				C	72.8	No		

Alternative SB5  
 Stage 2  
 Land Use: Residential

Receptor Number	Receptor Description	Distance from the Site (ft)	Existing Noise Level (dBA)	Construction Phase	Construction Noise Level (dBA)	Impact (Yes/No)	Impact Start Date	Impact End Date
1	Two Boots to go West Pizza @ 201 West 11th St	316	73.0	A	66.0	No		
				B	61.9	No		
				C	66.8	No		
2	Rear of apartment bldg facing 7th Ave @ 227 Waverly Place	147	71.0	A	72.7	No		
				B	68.5	No		
				C	73.4	No		
3	Doma & Gallery @ 17 Perry St	211	69.0	A	69.5	No		
				B	65.4	No		
				C	70.3	No		
4	Apartment building @ 4 Perry St	53	67.0	A	<b>81.5</b>	<b>Yes</b>	6/10/2010	9/2/2010
				B	77.4	No		
				C	<b>82.3</b>	<b>Yes</b>	12/1/2010	1/25/2011
5	The Original Sandwich Shoppe of NY @ 58A Greenwich Ave	168	70.0	A	71.5	No		
				B	67.3	No		
				C	72.2	No		
6	West Village Florist @ 70 Greenwich Ave	211	71.0	A	69.5	No		
				B	65.4	No		
				C	70.3	No		
7	St. Vincent's Hospital Reiss Pavilion @ 153 W.11th St	305	71.0	A	66.3	No		
				B	62.2	No		
				C	67.1	No		

Alternative SB5  
 Stage 3  
 Land Use: Residential

Receptor Number	Receptor Description	Distance from the Site (ft)	Existing Noise Level (dBA)	Construction Phase	Construction Noise Level (dBA)	Impact (Yes/No)	Impact Start Date	Impact End Date
1	Two Boots to go West Pizza @ 201 West 11th St	316	73.0	A	70.2	No		
				B	64.4	No		
				C	65.8	No		
				D	66.5	No		
2	Rear of apartment bldg facing 7th Ave @ 227 Waverly Place	147	71.0	A	76.9	No		
				B	71.0	No		
				C	72.4	No		
				D	73.1	No		
3	Doma & Gallery @ 17 Perry St	211	69.0	A	73.7	No		
				B	67.9	No		
				C	69.3	No		
				D	70.0	No		
4	Apartment building @ 4 Perry St	53	67.0	A	<b>85.7</b>	<b>Yes</b>	1/26/2011	4/4/2011
				B	79.9	No		
				C	<b>81.3</b>	<b>Yes</b>	5/3/2011	5/16/2011
				D	<b>82.0</b>	<b>Yes</b>	5/17/2011	5/31/2011
5	The Original Sandwich Shoppe of NY @ 58A Greenwich Ave	168	70.0	A	75.7	No		
				B	69.9	No		
				C	71.2	No		
				D	72.0	No		
6	West Village Florist @ 70 Greenwich Ave	211	71.0	A	73.7	No		
				B	67.9	No		
				C	69.3	No		
				D	70.0	No		
7	St. Vincent's Hospital Reiss Pavilion @ 153 W.11th St	305	71.0	A	70.5	No		
				B	64.7	No		
				C	66.1	No		
				D	66.8	No		

Alternative SB5  
 Stage 4  
 Land Use: Residential

Receptor Number	Receptor Description	Distance from the Site (ft)	Existing Noise Level (dBA)	Construction Phase	Construction Noise Level (dBA)	Impact (Yes/No)	Impact Start Date	Impact End Date
1	Two Boots to go West Pizza @ 201 West 11th St	316	73.0	A	61.5	No		
				B	78.9	No		
				C	65.2	No		
				D	64.4	No		
				E	64.1	No		
				F	62.6	No		
				G	65.8	No		
				H	66.5	No		
2	Rear of apartment bldg facing 7th Ave @ 227 Waverly Place	147	71.0	A	68.1	No		
				B	<b>85.5*</b>	<b>Yes</b>	6/2/2011	3/21/2012
				C	71.9	No		
				D	71.0	No		
				E	70.8	No		
				F	69.2	No		
				G	72.5	No		
				H	73.2	No		
3	Doma & Gallery @ 17 Perry St	211	69.0	A	65.0	No		
				B	<b>82.4*</b>	<b>Yes</b>	6/2/2011	3/21/2012
				C	68.7	No		
				D	67.9	No		
				E	67.6	No		
				F	66.1	No		
				G	69.3	No		
				H	70.0	No		
4	Apartment building @ 4 Perry St	53	67.0	A	77.0	No		
				B	<b>94.4*</b>	<b>Yes</b>	6/2/2011	3/21/2012
				C	<b>80.7</b>	<b>Yes</b>	7/15/2011	5/2/2012
				D	79.9	No		
				E	79.6	No		
				F	78.1	No		
				G	<b>81.3</b>	<b>Yes</b>	10/11/2013	2/13/2014
				H	<b>82.0</b>	<b>Yes</b>	1/3/2014	6/19/2014
5	The Original Sandwich Shoppe of NY @ 58A Greenwich Ave	168	70.0	A	66.9	No		
				B	<b>84.4*</b>	<b>Yes</b>	6/2/2011	3/21/2012
				C	70.7	No		
				D	69.9	No		
				E	69.6	No		
				F	68.0	No		
				G	71.3	No		
				H	72.0	No		

Alternative SB5  
 Stage 4  
 Land Use: Residential

Receptor Number	Receptor Description	Distance from the Site (ft)	Existing Noise Level (dBA)	Construction Phase	Construction Noise Level (dBA)	Impact (Yes/No)	Impact Start Date	Impact End Date
6	West Village Florist @ 70 Greenwich Ave	211	71.0	A	65.0	No		
				B	82.4*	Yes	6/2/2011	3/21/2012
				C	68.7	No		
				D	67.9	No		
				E	67.6	No		
				F	66.1	No		
				G	69.3	No		
				H	70.0	No		
7	St. Vincent's Hospital Reiss Pavilion @ 153 W.11th St	305	71.0	A	61.8	No		
				B	79.2	No		
				C	65.5	No		
				D	64.7	No		
				E	64.4	No		
				F	62.9	No		
				G	66.1	No		
				H	66.8	No		

\*Major noise impact from secant piles installation