

TECHNICAL MEMORANDUM No. 4
Pier 57 Redevelopment Project (CEQR No. 11HRP001M)
July 15, 2019

A. INTRODUCTION

The Hudson River Park Trust (HRPT) issued a Notice of Completion for the Pier 57 Redevelopment Project Final Environmental Impact Statement (FEIS) on February 22, 2013. The project was subsequently approved by the City Planning Commission (CPC) and City Council on March 6, 2013 and April 9, 2013, respectively, and later modified as analyzed in the Technical Memoranda dated December 8, 2015 (Technical Memorandum No. 1/TM1), February 8, 2017 (Technical Memorandum No. 2/TM2), and June 28, 2018 (Technical Memorandum No. 3/TM3). That project (the “previously approved project”), which is under construction, was anticipated to rehabilitate and redevelop the historic Pier 57 site within Hudson River Park (the “project site”) with approximately 466,400 gross square feet (gsf) of office, retail, restaurant, and other commercial uses and educational and cultural uses, as well as a marina and public open space.

As discussed below, the developers, Young Woo & Associates (YWA) and RXR Realty, are now proposing modifications to the previously approved project. The proposed modifications would require changes to the program and interior configuration of portions of the pier, but no changes to the exterior design. The anticipated first year of operation for the project is 2020, as previously assumed in TM3. The proposed modifications are being reviewed in this Technical Memorandum in conjunction with HRPT’s pending consent of the developer’s sublease to City Winery New York LLC (City Winery) as a Pier 57 tenant. No other discretionary approvals are required to implement the proposed modifications, because all such approvals, including permits from the New York State Department of Environmental Conservation and the Army Corps of Engineers, have already been obtained and do not need to be modified.

This Technical Memorandum describes the proposed modifications, and considers whether these changes would result in any significant adverse environmental impacts that were not previously identified and addressed in the FEIS or subsequent technical memoranda.

This memorandum concludes that the proposed modifications would not result in significant adverse impacts not previously identified and addressed in the FEIS.

B. DESCRIPTION OF PROPOSED MODIFICATIONS

The proposed modifications include a change to the program for the project. The program as previously analyzed and approved is primarily office use (290,100 square feet [sf], and approximately 13,300 sf of associated congregating space for the office use), with approximately 85,400 sf of public market encompassing both food market/restaurant use, and flexible retail use as well as roughly 24,600 sf of cultural uses and approximately 53,000 sf of circulation space. As detailed in **Table 1**, with the proposed modifications, the space allocated for the food and retail portions of the public market (including retail/restaurant storage) would decrease by a total of 5,600 sf, and the space allocated for office use (including associated congregating space) would

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decrease by 8,800 sf, while the amount of circulation space would increase by 7,500 sf. In addition, a portion of the space previously allocated for retail use within the public market, which was anticipated to include a mix of food markets and restaurants, would now house a specific tenant, the City Winery, which would include approximately 31,000 sf of multi-purpose space for dining, musical performances, wine production, and catered private events.

**Table 1
Totals by Use, Modified Program vs. TM3**

Use	Location within Pier	TM3 (gsf)	Modified Program (gsf) ¹	Change (gsf)
Office	Caisson, Levels 1-4	290,100	281,900	-8,200
Congregating Space ²	Level 1	13,300	12,700	-600
Total, Office & Related Use		303,400	294,200	-8,800
Public Market ³	Level 1	5,800	19,300	13,500
Storage ⁴	Caisson	10,000	8,700	-1,300
Retail ^{5, 6}	Caisson, Levels 1-2, Roof	69,600	51,800	-17,800
(City Winery)			(31,000)	
(Food Market/Restaurants)			(20,800)	
Total, Retail/Public Market & Related Use		85,400	79,800	-5,600
Circulation	Caisson, Levels 1-4	53,000	60,500	7,500
Cultural Use ⁶	Caisson, Level 1	24,600	24,500	-100
Total Commercial/Educational/Cultural		466,400	459,400	-7,000
Public Open Space	Level 1/Roof	110,000	114,500	4,500
Marina	Level 1	141 slips ⁷	141 slips	No change
Parking	Caisson	Approximately 75 spaces	Approximately 75 spaces	No change

Notes: MEP, loading, and building management square footage not included above.
¹ All square footages for the modified program have been rounded.
² Related to office use.
³ Referred to as Work/Sell Marketplace in FEIS, included in TM1/TM3 as Public Market.
⁴ The FEIS noted that if code concerns can be satisfied, ideas for the use of 40,000 sf caisson space included ancillary storage, art galleries, a spa, a wine cellar, and areas accessible to the public. TM1 and TM3 identified 7,467 gsf and 10,000 gsf of caisson space, respectively, to be used for retail/restaurant storage.
⁵ The space formerly characterized as Technical Art School and Ancillary Facilities in the FEIS was included in the more general Cultural Use category for TM1/TM3. The transportation analysis continues to assume a technical art school and a museum for trip generation purposes.
⁶ Includes restaurants and marina-related retail. TM1 identified food market/restaurants as a separate category; they are consolidated here.
⁷ The FEIS transportation analysis considered the effects of a 190-slip marina, rather than the 141-slip marina analyzed elsewhere in the FEIS.

City Winery is a winery, restaurant, and music and private event venue with a New York City location in Hudson Square, as well as other facilities in Atlanta, Boston, Chicago, Nashville, and Washington, D.C. Programming of the proposed City Winery use at Pier 57, which would be a relocation of the Hudson Square facility, would retain the same uses; however, wine making production is expected to be reduced, due in part to the recent opening by the organization of a production facility upstate.

The proposed program modification would require changes to the interior configuration of the pier structure, but no changes to the exterior design (see **Figures 1 through 7** for updated plans). Specifically, there would be more mezzanine-level (Level 2) interior space within the head house than previously designed; however, the total square footage of the project would be reduced by approximately 7,000 sf from TM3. There would be no changes to the design of the public open space at the roof level, the facades of the pier structure, or to the public open space surrounding

the pier structure at Level 1. The developer is still seeking historic preservation tax credits for the project, and thus the modifications to the proposed design must comply with the Secretary of the Interior's Standards for Rehabilitation. The project's Part 2 applications for the historic preservation tax credits are underway, with the most recent amendment submitted to SHPO and NPS in May 2019. Consistent with TM3, the anticipated first year of operation for the project would remain 2020. The other elements of the project remain the same as analyzed in TM3. There would be no new in-water or excavation work associated with the proposed changes to the project.

C. ANALYSIS FRAMEWORK

Absent the proposed modifications, the project is assumed to be completed consistent with the previous approvals. The build year for the project, with or without the proposed modifications, is 2020.

For the analysis of the proposed modifications, three scenarios were considered, as detailed below. The operational assumptions for the proposed City Winery use are based on the operations at the existing Hudson Square facility and a projection of the prospective tenant's anticipated operations at Pier 57.

MIXED-USE PERFORMANCE SPACE

The predominant use of the City Winery use under the proposed sublease is as a mixed use performance space. As such, the proposed City Winery at Pier 57 would function with up to two performance spaces, a restaurant/bar, coffee bar, an accessory office, and a wine production facility.

- **Performance Space:** the proposed City Winery would be designed to accommodate up to two performance spaces. The main stage would have a capacity of 350 attendees and the loft space would have a capacity of 140 attendees. Performances in these spaces could be staggered, but the spaces could also be combined for a 490 person-event that would have a single start time. Shows usually start at 8 PM, but since the venue serves dinner, 25 percent of attendees typically arrive two hours before the start of a show, 65 percent arrive the hour before a show, and the remaining 10 percent arrive after the show has begun. To be conservative, no-shows were not considered. It is assumed that the hour before a show would align with the Weekday Pre-Event and Saturday Pre-Event peak hours as analyzed in the FEIS and previous technical memoranda, which conservatively overlap peak arrivals to the performance space and rooftop events at Pier 57. It is also assumed for this study that the mode share for City Winery performances is the same as what was assumed for the Quality Restaurant use from the FEIS, and that vehicle occupancy is the same as what was assumed for the Rooftop events from the FEIS. The performance space would typically have 20 people on staff from 10 AM to 6 PM, and 45 people on staff from 4 PM to 12 AM.
- **Restaurant/Bar/Coffee Bar:** the restaurant/bar/coffee bar component of the proposed City Winery use is anticipated to have lunch and dinner seatings. Lunch would be served from 11:30 AM to 2:30 PM, and dinner would be served from 5:00 PM to 9:00 PM. Lunch seatings would be generally 40 minutes, whereas dinner seatings would range from 60 to 90 minutes. During the lunch service, there would be typically 50 guests per seating, Monday through Thursday, 75 guests per seating on Fridays, and 100 guests per seating on weekends. Dinner service is anticipated to include 75 guests per seating Sunday through Thursday, and 130 guests per seating on Fridays and Saturdays. Arrival patterns for the transportation analysis were determined assuming that the total number of guests served during a given seating were

evenly distributed over the course of the lunch and dinner periods. It is assumed that peak dinner hours would align with the Weekday Pre-Event and Saturday Pre-Event peak hours, which conservatively overlap peak arrivals to the restaurant/bar and rooftop events at Pier 57. The restaurant/bar/coffee bar component of the proposed City Winery use also would be available for private events, with a total capacity of 80 guests. It is assumed that the hour before a private event would align with the Weekday Pre-Event and Saturday Pre-Event peak hours, which conservatively overlap peak arrivals to the private events and rooftop events at Pier 57. Mode share and vehicle occupancy were assumed to be the same as assumed for the Quality Restaurant use from the FEIS. The same staff are assumed to support the performance spaces and the restaurant/bar.

- Accessory Office/Winery: The proposed City Winery use would have an office space for staff to manage the various uses on-site and a small wine production facility. The office/winery would be open from 9 AM to 9 PM, with a total of 16 staff per shift. The first shift would operate from 9 AM to 5 PM, and the second shift would operate from 1 PM to 9 PM. Mode share and vehicle occupancy were assumed to be the same as assumed for the Office use from TM3.

PRIVATE EVENT VENUE

As a private event venue, City Winery would function with an accessory office, a wine production facility, coffee bar and space available for private events. The office, coffee bar and wine production facility would continue to function as described previously in this scenario.

As a private event venue, the performance space area of the proposed City Winery use would be rented out for catered events. Based on historical operations at Hudson Square, approximately 80 percent of events would not exceed 430 guests, but the overall capacity would allow for up to 700 people. There would be up to 50 employees for an event of 700 people. Based again on the prospective tenant's current operations at Hudson Square, 80 percent of guests are assumed to arrive in the hour before the event starts. For the analysis, it is assumed that the hour before a private event would align with the Weekday Pre-Event and Saturday Pre-Event peak hours, which conservatively account for overlapping peak arrivals for both a City Winery event and a rooftop event at Pier 57. Mode share and vehicle occupancy were assumed to be the same as assumed for the Quality Restaurant use from the FEIS.

The frequency of private events is limited in the proposed sublease to no more than two evenings per week, except three evenings are permitted over a three week period in the month of December. To prevent conflicts, the sublease also restricts the capacity of certain events when private events at City Winery could overlap with large events at the pier's rooftop open space. Specifically, evening private events by City Winery and large rooftop events that start or end within two hours of each other would have caps on the number of persons that can attend such events as follows: (i) 600 persons at a private City Winery evening event and 1,000 persons at an evening rooftop event; (ii) 530 persons at a private City Winery evening event and 1,000 to 2,000 persons at a rooftop evening event; and (iii) 450 persons at a private City Winery evening event and 2,000 to 2,500 persons at rooftop evening event. No more than 2,500 persons can be accommodated on the rooftop in any circumstance.

For both the mixed-use and private event venue scenarios, the prospective tenant expects approximately 11 daily truck deliveries during the AM peak period. The analyses assume that half of those deliveries would be made during the AM peak hour.

Based on the anticipated capacity restrictions and programming assumptions described above, the following three scenarios were considered for this technical memorandum:

- Scenario 1: Operation of the proposed City Winery use as mixed-use performance space with a 490-person event, at the same time as a 2,500-person rooftop event.
- Scenario 2: Operation of the proposed City Winery use as a private event space with a 450-person event, at the same time as a 2,500-person rooftop event.
- Scenario 3: Operation of the proposed City Winery use as a private event space with a 600-person event, at the same time as a 1,000-person rooftop event.

D. ANALYSIS OF THE PROPOSED MODIFICATIONS

Compared to the previously approved project, the proposed modifications to the project would result in an increase in the visitor and worker populations associated with retail/public market operations and a decrease in the number of office workers. As with the previously approved project, it would not result in a residential population; and would not result in any changes to the exterior design of the project. As described below, the conclusions of previously completed technical analyses would not be significantly affected by the proposed modifications, and no new significant adverse impacts would occur.

The increase in the visitor and worker retail/public market populations compared to the previously approved project, coupled with the decrease in the office visitor and worker population, would not result in any significant adverse impacts related to socioeconomic conditions, community facilities, or open space.

The proposed modifications would not result in any alterations to the project's exterior design, which has been largely completed, and would not require any new land use actions. As noted above, there would be no changes to the design of the public open space at the roof level, the facades of the pier structure, or to the public open space surrounding the pier structure at Level 1. The developer is still seeking historic preservation tax credits for the project, and thus the modifications to the proposed design must comply with the Secretary of the Interior's Standards for Rehabilitation. As described above, the project's Part 2 applications for the historic preservation tax credits are underway, with the most recent amendment submitted to SHPO and NPS in May 2019. Therefore, as with the previously approved project, the proposed modifications would not result in any significant adverse impacts related to land use, historic and cultural resources, urban design and visual resources, or shadows.

There would be no new in-water or excavation work associated with the proposed modifications, and the modifications would not result in any significant changes to the construction means and methods. As with the previously approved project, renovation and rehabilitation of the project site, which is currently under construction, would be completed in accordance with applicable federal, state, and local regulatory requirements. Therefore, as with the previously approved project, the proposed modifications to the project would not result in any significant adverse impacts related to natural resources, hazardous materials, or construction.

The proposed program modification would result in minor changes to the project's projected demand for water and sewer infrastructure, solid waste and sanitation, or energy. Therefore, as with the previously approved project, the proposed changes to the project would not result in any significant adverse impacts related to water and sewer infrastructure, solid waste and sanitation services, or energy.

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Performances at the City Winery space would occur within the interior of the pier and thus would not have the potential to result in significant new impacts to sensitive receptors in the surrounding area. The modified project would cause no changes affecting noise or air quality that would have the potential to result in significant new impacts.

In regard to neighborhood character, the FEIS, TM1, TM2, and TM3 concluded that the previously approved project would not result in a significant adverse impact. As the proposed program modification would not have the potential to result in any unmitigated significant adverse impacts in any of the technical areas that contribute to neighborhood character (land use, urban design, visual resources, historic and cultural resources, socioeconomic conditions, shadows, open space, transportation [see below], and noise), the proposed modifications, as with the previously approved project, would not result in any significant adverse impacts related to neighborhood character.

The proposed modifications also would not result in any unmitigated significant adverse impacts in the areas of transportation (see below), air quality, water quality, hazardous materials, or noise, and therefore as with the previously approved project would not result in any significant adverse impacts related to public health.

The increase and change in public market/retail uses and reduction in office use would increase the number of daily visitors and overall transportation demand at the site and thus transportation is analyzed below.

TRANSPORTATION

SCREENING ANALYSIS

A screening analysis was conducted to consider the comparative trip generation of the proposed program modification for each analysis scenario.

Trip Generation and Assignment Comparison

The same methods and assumptions described in TM3 were used to develop the trip generation and trip distribution characteristics of the land uses that were considered as part of the previously approved project. The details of the City Winery trip generation assumptions are described above.

A comparison of the trip generation estimates for the previously approved project and the three analysis scenarios for the proposed program modification is summarized in **Table 2**. Complete travel demand factors for the proposed program modification are shown in **Tables 3 through 8**, and detailed trip generation estimates are shown in **Tables 9 through 11**. As indicated in these tables for the peak analysis hours:

- For all three scenarios considered, the proposed program modification would generate fewer vehicle, transit, and pedestrian trips for the weekday AM, MD, PM, and Saturday MD peak hours compared to the previously approved project.
- Under Scenarios 1 and 2, the proposed program modification would generate a greater number of vehicle, transit, and pedestrian trips during the weekday evening and Saturday evening peak hours compared to the previously approved project.
- Under Scenario 3, the proposed program modification would generate fewer transit and pedestrian trips during the weekday evening and Saturday evening peak hours compared to the previously approved project, but would generate a greater number of vehicle trips during the same two peak hours.

In each case where the transit and pedestrian increment would be positive—i.e., an increase—compared to the previously approved project, the total increment is fewer than 50 additional subway or bus trips and fewer than 200 total pedestrian trips. Since these increments do not exceed the typical analysis thresholds outlined in the *CEQR Technical Manual*, additional transit and pedestrian analysis were not performed.

During the weekday and Saturday evening pre-event peak hours, all three scenarios of the proposed program modification would result in a positive vehicle increment compared to the previously approved project, and in some cases, would exceed the 50-trip threshold outlined in the *CEQR Technical Manual* that requires further screening. Therefore, the screening analysis for the weekday evening and Saturday Evening pre-event peak hour for all three scenarios was evaluated further to determine if the increase in trips generated by the proposed program modification would result in additional impacts compared to TM3.

Based on the same vehicle distribution assumptions applied for TM3, the vehicle increment for the weekday evening and Saturday evening pre-event peak hours would not exceed 50 new trips at any given study intersection. A maximum of 32, 46, and 42 additional vehicle trips would be generated at any given study intersection under Scenario 1, 2, and 3, respectively. Therefore, additional vehicular analyses were not performed. Additional details of vehicle increments by intersection and peak hour are provided in the Appendix.

Screening Analysis Conclusions

Based on a review of the comparative trip generation and assignment and the guidance in the *CEQR Technical Manual*, additional traffic, parking, transit, pedestrian, and safety analyses were not performed, as it is expected that the proposed program modification would not result in additional impacts compared to the previously approved project.

Curbside demands due to additional pick-up/drop-off activity associated with the proposed City Winery use may be greater than previously analyzed in the FEIS and subsequent technical memoranda. Therefore, an analysis was performed of the frontage operations and queues within the southbound right-turn lane that provides access to the site at the intersection of Route 9A and West 16th Street.

FRONTAGE OPERATIONS

Frontage road operations at Pier 57 between West 14th and West 16th Streets were evaluated to determine if the curbside frontage would be sufficient to accommodate loading and pick-up/drop-off operations in the future with the proposed program modification. The frontage is separated in to three sections and can accommodate 14 vehicles along the curb:

- Section A is located between West 16th Street and the north crosswalk at West 15th Street. Within this section of the frontage are the on-site parking garage exit and the loading dock driveway. The remaining curbside frontage within this section could accommodate up to four vehicles along the curb for pick-up/drop-off operations.
- Section B is located between the north and south crosswalks at West 15th Street. This section of the frontage provides continuous space for pick-up/drop-off operations with a capacity for five vehicles.
- Section C is located south of the south crosswalk at West 15th Street to West 14th Street. Within this section of the frontage is the entrance to the on-site parking garage. The remaining frontage within this section could accommodate up to five vehicles along the curb for pick-up/drop-off operations.

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Peak pick-up and drop-off operations would be expected to be heaviest during the weekday and Saturday pre-event peak hours. To account for surged arrivals during the hour before an event on the rooftop and/or at City Winery, the curbside frontage analysis assumed that 90 percent of the hourly arrivals would arrive within a 30-minute period.

Based on conservative private auto and taxi/for-hire-vehicle dwell times and the expected demand for the curbside for pick-up/drop-off operations during the weekday and Saturday evening pre-event peak hours, it is expected that the demand for the frontage would not exceed 11 spaces at any given time during the 30-minute surge period. Since the frontage has capacity to accommodate up to 14 vehicles at a given time, none of the scenarios considered for the proposed program modification are expected to result in curbside capacity shortfalls along the Pier 57 frontage.

QUEUING ANALYSIS

All vehicle traffic generated by Pier 57 would access the site via a southbound right-turn at the intersection of Route 9A and West 16th Street. Given the additional vehicle trips generated by the proposed program modification, an analysis was conducted for this right-turn movement to determine if there would be queue spillback from the frontage onto Route 9A.

The latest approved site plan for the Pier 57 development includes two southbound right-turn lanes with a capacity of 5.5 vehicles each (approximately 110 feet of available storage). Based on a review of the 95th percentile queues for this movement during the weekday and Saturday evening pre-event peak hours, the greatest queue expected would be 5.7 vehicles, which is generally within the available storage of the turn bays. Therefore, the proposed program modification is not expected to affect operations on Route 9A.

Additionally, the operator of Pier 57 is required as a condition of New York City's approval of the project and in the lease to develop a detailed traffic management plan and traffic monitoring plan (which must be shared with New York City Department of Transportation), to manage traffic entering the site such that it will not affect operations on Route 9A. Such plan would also provide measures to protect pedestrians and bicyclists crossing into Pier 57 or traveling on the Route 9A bikeway/Greenway or pedestrian esplanade, such as having flag persons stationed at key cross walks and the Route 9A intersections when events are scheduled at the project site. Measures to control dwell time along curbs, particularly during peak periods, will also be defined in the traffic management plan. Further, the City Winery sublease would also require City Winery to use commercially reasonable efforts to schedule deliveries between the hours of 1:00 am and 7:00 am in order to ensure deliveries do not impede pedestrian, bicycle or vehicle ingress or egress onto the project site.

E. CONCLUSION

As with the previously approved project, the proposed modifications would not result in significant adverse impacts.

**Table 2
Trip Generation Comparison**

	Peak Hour	Vehicle Trips (auto/taxi/truck)	Subway Trips	Bus Trips	Pedestrian Trips	Total Walk Trips (includes transit)
TM3	Weekday AM	206	474	82	215	771
	Weekday MD	205	343	87	842	1273
	Weekday PM	291	662	114	370	1146
	Saturday MD	236	303	59	444	806
	Weekday Evening	257	1122	93	843	2059
	Saturday Evening	251	1030	85	767	1882
SCENARIO 1	Weekday AM	190	429	76	183	688
	Weekday MD	165	264	77	775	1116
	Weekday PM	251	578	104	304	986
	Saturday MD	184	213	48	364	625
	Weekday Evening	310	1148	102	861	2111
	Saturday Evening	324	1105	99	828	2031
COMPARISON: TM3 vs Scenario 1	Weekday AM	-16	-45	-6	-32	-83
	Weekday MD	-40	-79	-10	-68	-157
	Weekday PM	-40	-84	-10	-66	-161
	Saturday MD	-52	-89	-11	-80	-180
	Weekday Evening	53	25	9	18	52
	Saturday Evening	73	75	14	61	149
SCENARIO 2	Weekday AM	190	427	75	181	683
	Weekday MD	164	258	77	768	1102
	Weekday PM	258	579	104	302	984
	Saturday MD	181	207	47	354	608
	Weekday Evening	302	1124	98	843	2065
	Saturday Evening	308	1077	94	809	1980
COMPARISON: TM3 vs Scenario 2	Weekday AM	-16	-47	-6	-34	-88
	Weekday MD	-41	-86	-10	-74	-171
	Weekday PM	-33	-83	-10	-68	-162
	Saturday MD	-55	-96	-12	-89	-198
	Weekday Evening	45	1	5	-1	6
	Saturday Evening	57	47	10	42	99
SCENARIO 3	Weekday AM	190	427	75	181	683
	Weekday MD	164	258	77	768	1102
	Weekday PM	258	579	104	302	984
	Saturday MD	181	207	47	354	608
	Weekday Evening	290	655	73	486	1215
	Saturday Evening	296	609	70	452	1130
COMPARISON: TM3 vs Scenario 3	Weekday AM	-16	-47	-6	-34	-88
	Weekday MD	-41	-86	-10	-74	-171
	Weekday PM	-33	-83	-10	-68	-162
	Saturday MD	-55	-96	-12	-89	-198
	Weekday Evening	33	-467	-20	-357	-844
	Saturday Evening	45	-421	-15	-315	-751

Table 3
Transportation Demand Factors: Scenario 1, Pier 57 Uses

Project Component	Size Unit	Destination Retail (Market)	Quality Restaurant	Food Counter	Theatre	Museum/Exhibit Space (Caissons)	Technical Arts School	Marina	Rooftop Open Space	Rooftop Exhibit (Museum)	Office	Rooftop Event
		19,338 gsf	15,090 gsf	5,671 gsf	0 Seats	0 gsf	24,518 gsf	141 slips	2.63 acres	14,454 gsf	281,868 gsf	2,500 people
Person Trip Generation Rate	Weekday	(1)	Weekday (3)	(16)	(6)	(1)	(11)	Weekday (6), Saturday (12)	(1)	(1)	(19)	(6)
	Saturday	78.2	Saturday (5)	173	2.68	27.0	30.51	6.23	139	27.0	18.00	2.68
	Unit	per 1,000 gsf	per 1,000 gsf	per 1,000 gsf	per seat	per 1,000 gsf	per 1,000 gsf	per slip	per acre	per 1,000 gsf	per 1,000 gsf	per person
Truck Generation Rate	Weekday	(14)	(12)	(12)	(6)	(13)	(8)	(7)	(13)	(19)	(6)	(6)
	Saturday	0.35	3.60	3.60	0.01	0.05	0.03	0.02	0.00	0.05	0.32	0.01
	Unit	per 1,000 gsf	per 1,000 gsf	per 1,000 gsf	per seat	per 1,000 gsf	per 1,000 gsf	per slip	per acre	per 1,000 gsf	per 1,000 gsf	per person

Modal Split		Weekday	Saturday	Weekday	Saturday	Weekday	Saturday	Weekday	Saturday	Weekday	Saturday	Weekday	Saturday	Weekday	Saturday	Weekday	Saturday	AM/PM	MD/SAT	Weekday	Saturday		
		(2)	(18)	(18)	(18)	(9)	(9)	(4)	(8)	(12)	(7)	(4)	(19)	(9)	(9)	(9)	(9)	(19)	(19)	(9)	(9)		
Auto	Auto	9.2%	10.5%	25.0%	25.0%	25.0%	25.0%	9.0%	9.0%	19.5%	19.5%	7.5%	2.4%	75.0%	75.0%	5.0%	5.0%	19.5%	19.5%	18.6%	2.0%	9.0%	9.0%
	Taxi	5.0%	14.2%	20.0%	20.0%	15.0%	15.0%	2.0%	2.0%	10.0%	10.0%	6.3%	3.6%	10.0%	10.0%	1.0%	1.0%	10.0%	10.0%	2.2%	3.0%	2.0%	2.0%
	Subway	40.0%	29.6%	30.0%	30.0%	35.0%	35.0%	49.0%	49.0%	33.0%	33.0%	61.6%	59.9%	5.0%	5.0%	3.0%	3.0%	33.0%	33.0%	50.2%	6.0%	49.0%	49.0%
	Bus	4.2%	3.7%	5.0%	5.0%	5.0%	5.0%	3.0%	3.0%	7.0%	7.0%	7.5%	8.6%	5.0%	5.0%	4.0%	4.0%	7.0%	7.0%	9.6%	6.0%	3.0%	3.0%
	Walk/Other	41.6%	42.0%	20.0%	20.0%	20.0%	20.0%	37.0%	37.0%	30.5%	30.5%	17.1%	25.6%	5.0%	5.0%	87.0%	87.0%	30.5%	30.5%	19.4%	83.0%	37.0%	37.0%
		100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Vehicle Occupancy		(2)	(15)	(15)	(15)	Auto (9), Taxi (6)	(4)	(8)	(12)	(7)	(4)	(19)	(9)										
		Auto	Taxi	Auto	Taxi	Auto	Taxi	Auto	Taxi	Auto	Taxi	Auto	Taxi	Auto	Taxi								
Auto	Auto	1.86	2.63	2.20	2.20	2.20	2.20	2.90	2.90	2.67	2.67	1.11	1.11	2.00	2.00	2.80	2.80	2.67	2.67	1.22	1.22	2.90	2.90
	Taxi	1.42	2.13	2.30	2.30	2.30	2.30	2.08	2.08	1.23	1.23	2.00	2.00	2.80	2.80	2.08	2.08	1.40	1.40	2.30	2.30	2.30	2.30

Linked Trips (10)		20%	20%	20%	20%	25%	25%	20%	20%	20%	20%	0%	0%	20%	20%	20%	20%	0%	0%	20%	20%
		Auto	20%	20%	20%	20%	25%	25%	20%	20%	20%	20%	0%	0%	20%	20%	20%	20%	0%	0%	20%

Temporal Distribution		(14)	(5)	(16)	(9)	(1)	(8)	(12)	(1)	(1)	(19)	(9)
		AM	MD (12-1)	PM (5-6)	EVE (7-8)	Sat MD (1-2)	Sat EVE (7-8)	MD and PM (6), EVE	AM	MD (12-1)	PM (5-6)	EVE (7-8)
Auto	AM	3.0%	0.9%	8.5%	0.0%	1.0%	20.0%	2.7%	3.0%	3.0%	12%	0.0%
	MD (12-1)	9.0%	6.2%	10.6%	0.0%	16.0%	20.0%	4.6%	5.0%	16.0%	15%	0.0%
	PM (5-6)	9.0%	8.3%	8.8%	10.0%	13.0%	20.0%	6.4%	6.0%	13.0%	14%	0.0%
	EVE (7-8)	8.4%	10.0%	14.5%	32.0%	13.0%	5.0%	6.4%	3.0%	13.0%	0%	32.0%
	Sat MD (1-2)	11.0%	11.0%	11.0%	10.0%	17.0%	5.0%	4.8%	6.0%	17.0%	17%	0.0%
	Sat EVE (7-8)	1.7%	11.5%	8.9%	32.0%	13.0%	5.0%	4.8%	3.0%	13.0%	0%	32.0%

Truck Temporal Distribution		(14)	(12)	(12)	(6)	(13)	(12)	(12)	(7)	(13)	(19)	(6)
		AM	MD (12-1)	PM (5-6)	EVE (7-8)	Sat MD (1-2)	Sat EVE (7-8)	AM	MD (12-1)	PM (5-6)	EVE (7-8)	Sat MD (1-2)
Auto	AM	7.7%	6.0%	6.0%	6.0%	9.6%	6.0%	6.0%	0.0%	9.6%	10.0%	6.0%
	MD (12-1)	11.0%	6.0%	6.0%	6.0%	11.0%	6.0%	6.0%	0.0%	11.0%	11.0%	6.0%
	PM (5-6)	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	0.0%	1.0%	2.0%	1.0%
	EVE (7-8)	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	1.0%	0.0%	0.0%	0.0%	0.0%
	Sat MD (1-2)	11.0%	6.0%	6.0%	0.0%	1.0%	6.0%	1.0%	0.0%	1.0%	11.0%	0.0%
	Sat EVE (7-8)	1.0%	0.0%	0.0%	0.0%	0.0%	0.0%	1.0%	0.0%	0.0%	0.0%	0.0%

Directional Distribution		IN	OUT	IN	OUT	IN	OUT	IN	OUT	IN	OUT	IN	OUT	IN	OUT	IN	OUT	IN	OUT	IN	OUT		
		(14)	(5)	(16)	(7,9)	(13)	(17)	(12)	(7)	(13)	(19)	(7,9)											
Auto	AM	50.0%	50.0%	82.0%	18.0%	55.0%	45.0%	50.0%	50.0%	50.0%	50.0%	33.3%	66.7%	55.0%	45.0%	50.0%	50.0%	96.0%	4.0%	50.0%	50.0%		
	MD (12-1)	55.0%	45.0%	50.0%	50.0%	50.0%	50.0%	63.0%	37.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	63.0%	37.0%	48.0%	52.0%	50.0%	50.0%		
	PM (5-6)	48.0%	52.0%	67.0%	33.0%	59.0%	41.0%	75.0%	25.0%	52.0%	48.0%	50.0%	50.0%	60.0%	40.0%	45.0%	55.0%	52.0%	48.0%	5.0%	95.0%	75.0%	25.0%
	EVE (7-8)	55.0%	45.0%	62.0%	38.0%	54.0%	46.0%	75.0%	25.0%	34.0%	66.0%	50.0%	50.0%	60.0%	40.0%	45.0%	55.0%	34.0%	66.0%	0.0%	0.0%	75.0%	25.0%
	Sat MD (1-2)	71.0%	29.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	57.0%	43.0%	50.0%	50.0%
	Sat EVE (7-8)	40.0%	60.0%	59.0%	41.0%	53.0%	47.0%	75.0%	25.0%	34.0%	66.0%	50.0%	50.0%	50.0%	50.0%	45.0%	55.0%	34.0%	66.0%	0.0%	0.0%	75.0%	25.0%

Truck Directional Distribution		(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(19)	(1)
		AM	MD (12-1)	PM (5-6)	EVE (7-8)	Sat MD (1-2)	Sat EVE (7-8)	AM	MD (12-1)	PM (5-6)	EVE (7-8)	Sat MD (1-2)	Sat EVE (7-8)
Auto	AM	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%
	MD (12-1)	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%
	PM (5-6)	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%
	EVE (7-8)	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%
	Sat MD (1-2)	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%
	Sat EVE (7-8)	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%

Notes

- CEQR Technical Manual 2012, Table 16-2. For open space, Active Park Space was used; temporal distribution for Weekday EVE assumed to be half of Weekday PM and Sat EVE assumed to be half of Sat MD. For Rooftop Exhibit (Museum), Weekday EVE and Saturday EVE temporal distribution assumed to be same as Weekday PM temporal distribution.
- Sam Schwartz Engineering survey at Chelsea Market, February 2011.
- Weekday person trip rate based on Urban Space for Pedestrians (Pushkarev & Zupan, 1975), Table 2.3.
- PHA Survey of temporary art installation/exhibit at Pier 54, May 2005.
- ITE Trip Generation, 8th Edition, Land Use Code 931, Quality Restaurant. Weekday PM is same as weekday peak of Adjacent Street Traffic, Weekday EVE is same as weekday PM Peak of Generator, Saturday EVE is same proportion as Saturday Peak of Generator and Daily Saturday trip rate. Saturday MD trip rate based on ITE ratio of Saturday to weekday daily trip generation (see note 3). Temporal and directional distributions based on ITE as follows: Weekday MD assumed to be same as weekday AM peak hour of generator; Weekday PM temporal distribution based on rate of PM Peak Hour of Adjacent Street Traffic; Weekday EVE temporal distribution based on rate of PM Peak of Generator; Saturday MD assumed to be same as Destination Retail Sat MD; Sat EVE is assumed to be based on Saturday Peak of Generator. Directional distributions for midday assumed to be 50/50.
- Brooklyn Bridge Park FEIS (2005), Table 14-6, Multi-use (Theater) land use. Truck temporal distribution for EVE and Sat EVE assumed to be 0%. Restaurant vehicle occupancies were used for taxi. Marina land use used weekday trip generation rates for Marina.
- Special West Chelsea District Rezoning and High Line Open Space FEIS, May 2010, Table 16-6, High Line Open Space land use. Saturday mode share and vehicle occupancy assumed to be same as weekday. Weekday EVE temporal distribution assumed to be half of Weekday PM; Sat EVE temporal assumed to be half of Sat MD. Weekday EVE and Sat EVE directional distribution is assumed to be same as Weekday PM. Saturday MD directional assumed 50/50.
- Fordham University Lincoln Center Master Plan FEIS, 2009, Table 15-2, for Graduate Students Day/Full-Time. Dorm-based mode share redistributed proportionally among auto, taxi, bus and subway. Shuttle mode share redistributed proportionally among bus and subway. SSE determined Weekday MD and PM temporal distribution based on published class schedules for the Institute of Culinary Education. Weekday EVE temporal distribution assumed to be half of Weekday PM. Assumed 50/50 directional distribution for all peak periods. Table 15-11 for truck trip generation rates, assumed same rates for weekday and Saturday.
- Based on Pier 54 movie event survey on 7/8/2009 performed by AKRF. Saturday EVE and Weekday PM temporal distribution and directional distribution assumed to be same as weekday EVE. Assumed no rooftop events for weekday MD and Saturday MD. During these times, open space assumptions were used. Taxi vehicle occupancy did not have good data from the AKRF survey; therefore, the restaurant assumption was used. (see note 6)
- Assumed 20% linked trips for all uses except Marina, which assumes 0% linked trips.
- ITE 8th Edition, Land Use Code 540, Junior/Community College
- Hudson River Park FEIS (1998), Table 11-25. For Marina, Weekday EVE temporal distribution and directional distribution assumed to be same as weekday PM. For Marina, Sat EVE temporal distribution and directional distribution assumed to be same as Sat MD. For Restaurant, assume Saturday MD is the same as Weekday MD and assume Weekday EVE and Saturday EVE are zero.
- Hudson Yards FGEIS (2004) App S-1, Table 1, "Museum Trip Generation Transportation Planning Assumptions" Memorandum. Saturday EVE directional distribution assumed to be same as Weekday EVE. Saturday MD directional distribution assumed to be 50/50. Saturday EVE temporal distribution assumed to be 0.
- CEQR Technical Manual 2012, Table 16-2, for MD, PM, Saturday midday. Hudson Yards FGEIS (2004) App S-1, Table 1 and 2, "Destination Retail Trip Generation Transportation Planning Assumptions" Memorandum for Weekday EVE and Saturday EVE. Truck distribution for Sat MD assumed to be same as Weekday MD.
- Chelsea Piers, FEIS (1993), Table II.F.7. Saturday mode share and vehicle occupancy assumed to be same as weekday.
- ITE Trip Generation, 8th Edition, Land Use Code 932, High-Turnover (Sit Down) Restaurant. Saturday MD temporal distribution assumed to be same as Destination Retail for Saturday MD.
- SSE assumptions based on review of class schedules at several technical art schools, including the Institute of Culinary Education in NYC.
- SSE and NYCDOT Assumptions
- Person and truck trip generation rates and temporal distribution based on CEQR Technical Manual 2012. Weekday modal split and vehicle occupancy based on 2010 Census Reverse Journey-to-Work data (tracts 83, 79, 99). Directional split and Saturday modal split and vehicle occupancy based on Chelsea Market Expansion (2005), Table H-1. Assumes Saturday modal split same as MD. Assumes Saturday auto occupancy the same as Weekday. Saturday directional distribution from Western Rail Yards Project FEIS (2009).
- Manhattan retail mode choice outside of the transit zone for 314 Eleventh Avenue data provided by NYCDOT.

**Table 4
Transportation Demand Factors: Scenario 1, City Winery Uses**

Performance Space			Restaurant/Bar			Private Event			Office/Winery			Deliveries		
Event Time	8:00 PM	10:00 PM	Lunch	11:30 AM	2:30 PM	Event Time	7:00 PM	10:00 PM	Office Hours	9:00 AM	9:00 PM	Kitchen	8	
			Duration	0:40			8:00 PM	11:00 PM	Staff	32		Hours	7:00 AM 9:00 AM	
People	490		Customers	50	Mon - Th	Rooms	4		Assume two shifts	9:00 AM	5:00 PM	Beverage	3	
Before 7 PM	25%	123		75	Fri	People/Room	20		Shift duration	1:00 PM	9:00 PM	Hours	7:00 AM 10:00 AM	
7-8 PM	65%	319		100	Sat/Sun	Total patrons	80			8:00	8:00			
After 8 PM	10%	49				Staff/Room	2							
			Dinner	5:00 PM	9:00 PM	Use Restaurant factors			AM	All Inbound		In/Out		
Staff			Duration	1:00	1:30	Patron arrivals in EVE	80%	64	MD/Sat MD	All Inbound		AM	5.5	
10 AM - 6 PM	20		Customers	75	Sun - Th	Assume staff arrive earlier (in PM hr)		8	PM	All Outbound				
4 PM - 12 AM	45			130	Fri/Sat									
			Staff is same people for performance space											
				Inbound	Outbound									
			MD (12-1)	33%	33%									
			PM (5-6)	25%										
			EVE (7-8)	25%	25%									
			Sat MD (1-2)	33%	33%									
			Sat EVE (7-8)	25%	25%									

Modal Splits

	Weekday	Saturday		Weekday	Saturday		Weekday	Saturday		AM/PM	MD/SAT	
	(18)	(18)		(18)	(18)		(18)	(18)		(19)	(19)	
Auto	25.0%	25.0%	Auto	25.0%	25.0%	Auto	25.0%	25.0%	Auto	18.6%	2.0%	
Taxi	20.0%	20.0%	Taxi	20.0%	20.0%	Taxi	20.0%	20.0%	Taxi	2.2%	3.0%	
Subway	30.0%	30.0%	Subway	30.0%	30.0%	Subway	30.0%	30.0%	Subway	50.2%	6.0%	
Bus	5.0%	5.0%	Bus	5.0%	5.0%	Bus	5.0%	5.0%	Bus	9.6%	6.0%	
Walk/Other	20.0%	20.0%	Walk/Other	20.0%	20.0%	Walk/Other	20.0%	20.0%	Walk/Other	19.4%	83.0%	
	100.0%	100.0%		100.0%	100.0%		100.0%	100.0%		100.0%	100.0%	

Vehicle Occupancy

	Weekday	Saturday		Weekday	Saturday		Weekday	Saturday		AM/PM	MD/SAT	
	Auto (9), Taxi (6)	(6)		(15)	(15)		(15)	(15)		(19)	(19)	
Auto	2.90	2.90	Auto	2.20	2.20	Auto	2.20	2.20	Auto	1.22	1.22	
Taxi	2.30	2.30	Taxi	2.30	2.30	Taxi	2.30	2.30	Taxi	1.40	1.40	

Sources:

- 6. Brooklyn Bridge Park FEIS (2005), Table 14-6, Multi-use (Theater) land use. Truck temporal distribution for EVE and Sat EVE assumed to be 0%. Restaurant vehicle occupancies were used for taxi. Marina land use used weekday trip generation rates for Marina.
- 9. Based on Pier 54 movie event survey on 7/8/2009 performed by AKRF. Saturday EVE and Weekday PM temporal distribution and directional distribution assumed to be same as weekday EVE. Assumed no rooftop events for weekday MD and Saturday MD. During these times, open space assumptions were used. Taxi vehicle occupancy did not have good data from the AKRF survey; therefore, the restaurant assumption was used. (see note 6)
- 15. Chelsea Piers, FEIS (1993), Table II.F.7. Saturday mode share and vehicle occupancy assumed to be same as weekday.
- 18. SSE and NYCDOT Assumptions.
- 19. Person and truck trip generation rates and temporal distribution based on CEQR Technical Manual 2012. Weekday modal split and vehicle occupancy based on 2010 Census Reverse Journey-to-Work data (tracts 83, 79, 99). Directional split and Saturday modal split and vehicle occupancy based on Chelsea Market Expansion (2005), Table H-1. Assumes Saturday modal split same as MD. Assumes Saturday auto occupancy the same as Weekday. Saturday directional distribution from Western Rail Yards Project FEIS (2009).

**Table 5
Transportation Demand Factors: Scenario 2, Pier 57 Uses**

Project Component	Size Unit	Destination Retail (Market)	Quality Restaurant	Food Counter	Theatre	Museum/Exhibit Space (Caissons)	Technical Arts School	Marina	Rooftop Open Space	Rooftop Exhibit (Museum)	Office	Rooftop Event
		19,338 gsf	15,090 gsf	5,671 gsf	0 Seats	0 gsf	24,518 gsf	141 slips	2.83 acres	14,454 gsf	281,868 gsf	2,500 people
Person Trip Generation Rate	Weekday	(1) 78.2	Weekday (3) 173	(16) 181	(6) 2.68	(1) 27.0	(11) 30.51	Weekday (6) 6.23	(1) 139	(1) 27.0	(19) 18.00	(6) 2.68
	Saturday	92.5	181	181	2.68	20.6	12.47	12.80	196	20.6	3.90	2.68
	Unit	per 1,000 gsf	per 1,000 gsf	per 1,000 gsf	per seat	per 1,000 gsf	per 1,000 gsf	per slip	per acre	per 1,000 gsf	per 1,000 gsf	per person
Truck Generation Rate	Weekday	(14) 0.35	(12) 3.60	(12) 3.60	(6) 0.01	(13) 0.05	(8) 0.03	(12) 0.02	(7) 0.00	(13) 0.00	(19) 0.01	(6) 0.01
	Saturday	0.02	3.60	3.60	0.01	0.00	0.03	0.02	0.00	0.00	0.01	0.01
	Unit	per 1,000 gsf	per 1,000 gsf	per 1,000 gsf	per seat	per 1,000 gsf	per 1,000 gsf	per slip	per acre	per 1,000 gsf	per 1,000 gsf	per person

Modal Split		Weekday	Saturday	Weekday	Saturday	Weekday	Saturday	Weekday	Saturday	Weekday	Saturday	Weekday	Saturday	Weekday	Saturday	AM/PM	MD/SAT	Weekday	Saturday				
		(2)	(18)	(18)	(9)	(4)	(8)	(12)	(7)	(4)	(19)	(9)	(9)	(9)	(9)	(9)	(9)	(9)	(9)	(9)			
Vehicle Occupancy	Auto	9.2%	10.5%	25.0%	25.0%	25.0%	25.0%	9.0%	9.0%	19.5%	19.5%	7.5%	2.4%	75.0%	75.0%	5.0%	5.0%	19.5%	19.5%	18.6%	2.0%	9.0%	9.0%
	Taxi	5.0%	14.2%	20.0%	20.0%	15.0%	15.0%	2.0%	2.0%	10.0%	10.0%	6.3%	3.6%	10.0%	10.0%	1.0%	1.0%	10.0%	10.0%	2.2%	3.0%	2.0%	2.0%
	Subway	40.0%	29.6%	30.0%	30.0%	35.0%	35.0%	49.0%	49.0%	33.0%	33.0%	61.6%	59.9%	5.0%	5.0%	3.0%	3.0%	33.0%	33.0%	50.2%	6.0%	49.0%	49.0%
	Bus	4.2%	3.7%	5.0%	5.0%	5.0%	5.0%	3.0%	3.0%	7.0%	7.0%	7.5%	8.6%	5.0%	5.0%	4.0%	4.0%	7.0%	7.0%	9.6%	6.0%	3.0%	3.0%
	Walk/Other	41.6%	42.0%	20.0%	20.0%	20.0%	20.0%	37.0%	37.0%	30.5%	30.5%	17.1%	25.6%	5.0%	5.0%	87.0%	87.0%	30.5%	30.5%	19.4%	83.0%	37.0%	37.0%
Linked Trips (10)		100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
	Auto	1.86	2.63	2.20	2.20	2.20	2.20	2.90	2.90	2.67	2.67	1.11	1.11	2.00	2.00	2.80	2.80	2.67	2.67	1.22	1.22	2.90	2.90
Temporal Distribution	AM	3.0%	0.9%	8.5%	0.0%	1.0%	20.0%	2.7%	3.0%	1.0%	1.0%	12%	0.0%										
	MD (12-1)	9.0%	6.2%	10.6%	0.0%	16.0%	20.0%	4.6%	5.0%	16.0%	15%	0.0%											
	PM (5-6)	9.0%	8.3%	8.8%	10.0%	13.0%	20.0%	6.4%	6.0%	13.0%	14%	0.0%											
	EVE (7-8)	8.4%	10.0%	14.5%	32.0%	13.0%	5.0%	6.4%	3.0%	13.0%	0%	32.0%											
	Sat MD (1-2)	11.0%	11.0%	11.0%	17.0%	10.0%	5.0%	4.8%	6.0%	17.0%	17%	0.0%											
	Sat EVE (7-8)	1.7%	11.5%	8.9%	32.0%	13.0%	5.0%	4.8%	3.0%	13.0%	0%	32.0%											
Truck Temporal Distribution	AM	7.7%	6.0%	6.0%	6.0%	9.6%	6.0%	6.0%	0.0%	9.6%	10.0%	6.0%											
	MD (12-1)	11.0%	6.0%	6.0%	6.0%	11.0%	6.0%	6.0%	0.0%	11.0%	11.0%	6.0%											
	PM (5-6)	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	0.0%	1.0%	2.0%	1.0%											
	EVE (7-8)	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	1.0%	0.0%	0.0%	0.0%	0.0%											
	Sat MD (1-2)	11.0%	6.0%	6.0%	0.0%	1.0%	6.0%	1.0%	0.0%	1.0%	11.0%	0.0%											
	Sat EVE (7-8)	1.0%	0.0%	0.0%	0.0%	0.0%	0.0%	1.0%	0.0%	0.0%	0.0%	0.0%											
Directional Distribution	AM	50.0%	50.0%	82.0%	18.0%	55.0%	45.0%	50.0%	50.0%	50.0%	50.0%	33.3%	66.7%	55.0%	45.0%	50.0%	50.0%	96.0%	4.0%	50.0%	50.0%		
	MD (12-1)	55.0%	45.0%	50.0%	50.0%	50.0%	50.0%	63.0%	37.0%	50.0%	50.0%	50.0%	50.0%	63.0%	37.0%	48.0%	52.0%	50.0%	50.0%				
	PM (5-6)	49.0%	52.0%	67.0%	33.0%	59.0%	41.0%	75.0%	25.0%	52.0%	48.0%	50.0%	50.0%	80.0%	40.0%	45.0%	55.0%	52.0%	48.0%	5.0%	95.0%	75.0%	
	EVE (7-8)	55.0%	45.0%	62.0%	38.0%	54.0%	46.0%	75.0%	25.0%	34.0%	66.0%	50.0%	50.0%	80.0%	40.0%	45.0%	55.0%	34.0%	66.0%	0.0%	0.0%	75.0%	
	Sat MD (1-2)	71.0%	29.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	
	Sat EVE (7-8)	40.0%	60.0%	59.0%	41.0%	53.0%	47.0%	75.0%	25.0%	34.0%	66.0%	50.0%	50.0%	50.0%	50.0%	45.0%	55.0%	34.0%	66.0%	0.0%	0.0%	75.0%	
Truck Directional Distribution	AM	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	
	MD (12-1)	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	
	PM (5-6)	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	
	EVE (7-8)	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	
	Sat MD (1-2)	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	
	Sat EVE (7-8)	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	

Notes

- CEQR Technical Manual 2012, Table 16-2. For open space, Active Park Space was used; temporal distribution for Weekday EVE assumed to be half of Weekday PM and Sat EVE assumed to be half of Sat MD. For Rooftop Exhibit (Museum), Weekday EVE and Saturday EVE temporal distribution assumed to be same as Weekday PM temporal distribution.
- Sam Schwartz Engineering survey at Chelsea Market, February 2011.
- Weekday person trip rate based on Urban Space for Pedestrians (Pushkarev & Zupan, 1975), Table 2.3.
- PHA Survey of temporary art installation/exhibit at Pier 54, May 2005.
- ITE Trip Generation, 8th Edition, Land Use Code 931, Quality Restaurant. Weekday PM is same as weekday peak of Adjacent Street Traffic. Weekday EVE is same as weekday PM Peak of Generator. Saturday EVE is same proportion as Saturday Peak of Generator and Daily Saturday trip rate. Saturday MD trip rate based on ITE ratio of Saturday to weekday daily trip generation (see note 3). Temporal and directional distributions based on ITE as follows: Weekday MD assumed to be same as weekday AM peak hour of generator; Weekday PM temporal distribution based on rate of PM Peak Hour of Adjacent Street Traffic; Weekday EVE temporal distribution based on rate of PM Peak of Generator; Saturday MD assumed to be same as Destination Retail Sat MD; Sat EVE is assumed to be based on Saturday Peak of Generator. Directional distributions for midday assumed to be 50/50.
- Brooklyn Bridge Park FEIS (2005), Table 14-6, Multi-use (Theater) land use. Truck temporal distribution for EVE and Sat EVE assumed to be 0%. Restaurant vehicle occupancies were used for taxi. Marina land use used weekday trip generation rates for Marina.
- Special West Chelsea District Rezoning and High Line Open Space FEIS, May 2010, Table 16-6, High Line Open Space land use. Saturday mode share and vehicle occupancy assumed to be same as weekday. Weekday EVE temporal distribution assumed to be half of Weekday PM; Sat EVE temporal distribution assumed to be half of Sat MD. Weekday EVE and Sat EVE directional distribution is assumed to be same as Weekday PM. Saturday MD directional distribution assumed 50/50.
- Fordham University Lincoln Center Master Plan FEIS, 2009, Table 15-2, for Graduate Students Day/Full-Time. Dorm-based mode share redistributed proportionally among auto, taxi, bus and subway. Shuttle mode share redistributed proportionally among bus and subway. SSE determined Weekday MD and PM temporal distribution based on published class schedules for the Institute of Culinary Education. Weekday EVE temporal distribution assumed be half of weekday PM. Assumed 50/50 directional distribution for all peak periods. Table 15-11 for truck trip generation rates, assumed same rates for weekday and Saturday.
- Based on Pier 54 movie event survey on 7/8/2009 performed by AKRF. Saturday EVE and Weekday PM temporal distribution and directional distribution assumed to be same as weekday EVE. Assumed no rooftop events for weekday MD and Saturday MD. During these times, open space assumptions were used. Taxi vehicle occupancy did not have good data from the AKRF survey; therefore, the restaurant assumption was used. (see note 6)
- Assumed 20% linked trips for all uses except Marina, which assumes 0% linked trips.
- ITE 8th Edition, Land Use Code 540, Junior/Community College
- Hudson River Park FEIS (1998), Table 11-25. For Marina, Weekday EVE temporal distribution and directional distribution assumed to be same as weekday PM. For Marina, Sat EVE temporal distribution and directional distribution assumed to be same as Sat MD. For Restaurant, assume Saturday MD is the same as Weekday MD and assume Weekday EVE and Saturday EVE are zero.
- Hudson Yards FGEIS (2004) App S-1, Table 1, "Museum Trip Generation Transportation Planning Assumptions" Memorandum. Saturday EVE directional distribution assumed to be same as Weekday EVE. Saturday MD directional distribution assumed to be 50/50. Saturday EVE temporal distribution assumed to be 0.
- CEQR Technical Manual 2012, Table 16-2, for MD, PM, Saturday midday. Hudson Yards FGEIS (2004) App S-1, Table 1 and 2, "Destination Retail Trip Generation Transportation Planning Assumptions" Memorandum for Weekday EVE and Saturday EVE. Truck distribution for Sat MD assumed to be same as Weekday MD.
- Chelsea Piers, FEIS (1993), Table II.F.7. Saturday mode share and vehicle occupancy assumed to be same as weekday.
- ITE Trip Generation, 8th Edition, Land Use Code 932, High-Turnover (Sit Down) Restaurant. Saturday MD temporal distribution assumed to be same as Destination Retail for Saturday MD.
- SSE assumptions based on review of class schedules at several technical art schools, including the Institute of Culinary Education in NYC.
- SSE and NYCDOT Assumptions.
- Person and truck trip generation rates and temporal distribution based on CEQR Technical Manual 2012. Weekday modal split and vehicle occupancy based on 2010 Census Reverse Journey-to-Work data (tracts 83, 79, 99). Directional split and Saturday modal split and vehicle occupancy based on Chelsea Market Expansion (2005), Table H-1. Assumes Saturday modal split same as MD. Assumes Saturday auto occupancy the same as Weekday. Saturday directional distribution from Western Rail Yards Project FEIS (2009).
- Manhattan retail mode choice outside of the transit zone for 314 Eleventh Avenue data provided by NYCDOT.

**Table 6
Transportation Demand Factors: Scenario 2, City Winery Uses**

Performance Space			Restaurant/Bar			Private Event			Office/Winery			Deliveries		
Event Time	8:00 PM	10:00 PM	Lunch	11:30 AM	2:30 PM	Event Time	7:00 PM	10:00 PM	Office Hours	9:00 AM	9:00 PM	Kitchen	8	
			Duration	0:40			8:00 PM	11:00 PM	Staff	32		Hours	7:00 AM 9:00 AM	
People	0		Customers	50	Mon - Th	Rooms	4		Assume two shifts	9:00 AM	5:00 PM	Beverage	3	
Before 7 PM	25%	0		75	Fri	People/Room	20		Shift duration	1:00 PM	9:00 PM	Hours	7:00 AM 10:00 AM	
7-8 PM	65%	0		100	Sat/Sun	Total patrons	450			8:00	8:00			
After 8 PM	10%	0				Staff/Room	2							
			Dinner	5:00 PM	9:00 PM	Use Restaurant factors			AM	All Inbound			In/Out	
Staff			Duration	1:00	1:30	Patron arrivals in EVE	80%	360	MD/Sat MD	All Inbound		AM	5.5	
10 AM - 6 PM	20		Customers	0	Sun - Th	Assume staff arrive earlier (in PM hr)		50	PM	All Outbound				
4 PM - 12 AM	45			0	Fri/Sat									
			Staff is same people for performance space											
				Inbound	Outbound									
			MD (12-1)	33%	33%									
			PM (5-6)	25%										
			EVE (7-8)	25%	25%									
			Sat MD (1-2)	33%	33%									
			Sat EVE (7-8)	25%	25%									

Modal Splits

	Weekday	Saturday		Weekday	Saturday		Weekday	Saturday		AM/PM	MD/SAT
	(18)	(18)		(18)	(18)		(18)	(18)		(19)	(19)
Auto	25.0%	25.0%	Auto	25.0%	25.0%	Auto	25.0%	25.0%	Auto	18.6%	2.0%
Taxi	20.0%	20.0%	Taxi	20.0%	20.0%	Taxi	20.0%	20.0%	Taxi	2.2%	3.0%
Subway	30.0%	30.0%	Subway	30.0%	30.0%	Subway	30.0%	30.0%	Subway	50.2%	6.0%
Bus	5.0%	5.0%	Bus	5.0%	5.0%	Bus	5.0%	5.0%	Bus	9.6%	6.0%
Walk/Other	20.0%	20.0%	Walk/Other	20.0%	20.0%	Walk/Other	20.0%	20.0%	Walk/Other	19.4%	83.0%
	100.0%	100.0%		100.0%	100.0%		100.0%	100.0%		100.0%	100.0%

Vehicle Occupancy

	Weekday	Saturday		Weekday	Saturday		Weekday	Saturday		AM/PM	MD/SAT
	Auto (9), Taxi (6)	(6)		(15)	(15)		(15)	(15)		(19)	(19)
Auto	2.90	2.90	Auto	2.20	2.20	Auto	2.20	2.20	Auto	1.22	1.22
Taxi	2.30	2.30	Taxi	2.30	2.30	Taxi	2.30	2.30	Taxi	1.40	1.40

Sources:

- 6. Brooklyn Bridge Park FEIS (2005), Table 14-6, Multi-use (Theater) land use. Truck temporal distribution for EVE and Sat EVE assumed to be 0%. Restaurant vehicle occupancies were used for taxi. Marina land use used weekday trip generation rates for Marina.
- 9. Based on Pier 54 movie event survey on 7/8/2009 performed by AKRF. Saturday EVE and Weekday PM temporal distribution and directional distribution assumed to be same as weekday EVE. Assumed no rooftop events for weekday MD and Saturday MD. During these times, open space assumptions were used. Taxi vehicle occupancy did not have good data from the AKRF survey; therefore, the restaurant assumption was used. (see note 6)
- 15. Chelsea Piers, FEIS (1993), Table II.F.7. Saturday mode share and vehicle occupancy assumed to be same as weekday.
- 18. SSE and NYCDOT Assumptions.
- 19. Person and truck trip generation rates and temporal distribution based on CEQR Technical Manual 2012. Weekday modal split and vehicle occupancy based on 2010 Census Reverse Journey-to-Work data (tracts 83, 79, 99). Directional split and Saturday modal split and vehicle occupancy based on Chelsea Market Expansion (2005), Table H-1. Assumes Saturday modal split same as MD. Assumes Saturday auto occupancy the same as Weekday. Saturday directional distribution from Western Rail Yards Project FEIS (2009).

**Table 7
Transportation Demand Factors: Scenario 3, Pier 57 Uses**

Project Component	Size Unit	Destination Retail (Market)	Quality Restaurant	Food Counter	Theatre	Museum/Exhibit Space (Calissons)	Technical Arts School	Marina	Rooftop Open Space	Rooftop Exhibit (Museum)	Office	Rooftop Event
		19,338 gsf	15,090 gsf	5,671 gsf	0 Seats	0 gsf	24,518 gsf	141 slips	2.63 acres	14,454 gsf	281,868 gsf	1,000 people
Person Trip Generation Rate	Weekday	(1)	Weekday (3)	(16)	(6)	(1)	(11)	Weekday (6)	(1)	(1)	(19)	(6)
	Saturday	78.2	Saturday (5)	173	2.68	27.0	30.51	Saturday (12)	139	27.0	18.00	2.68
	Unit	per 1,000 gsf	per 1,000 gsf	per 1,000 gsf	per seat	per 1,000 gsf	per 1,000 gsf	per slip	per acre	per 1,000 gsf	per 1,000 gsf	per person
Truck Generation Rate	Weekday	(14)	(12)	(12)	(6)	(13)	(8)	(12)	(7)	(13)	(19)	(6)
	Saturday	0.35	3.60	3.60	0.01	0.05	0.03	0.02	0.00	0.05	0.32	0.01
	Unit	per 1,000 gsf	per 1,000 gsf	per 1,000 gsf	per seat	per 1,000 gsf	per 1,000 gsf	per slip	per acre	per 1,000 gsf	per 1,000 gsf	per person

Modal Split		Weekday	Saturday	Weekday	Saturday	Weekday	Saturday	Weekday	Saturday	Weekday	Weekday	Weekday	Saturday	Weekday	Saturday	Weekday	Saturday	AM/PM	MD/SAT	Weekday	Saturday		
		(2)	(2)	(18)	(18)	(18)	(18)	(9)	(9)	(4)	(4)	(8)	(8)	(12)	(7)	(7)	(4)	(19)	(19)	(9)	(9)		
Vehicle Occupancy	Auto	9.2%	10.5%	25.0%	25.0%	25.0%	25.0%	9.0%	9.0%	19.5%	19.5%	7.5%	2.4%	75.0%	75.0%	5.0%	5.0%	19.5%	19.5%	18.6%	2.0%	9.0%	9.0%
	Taxi	5.0%	14.2%	20.0%	20.0%	15.0%	15.0%	2.0%	2.0%	10.0%	10.0%	6.3%	3.6%	10.0%	10.0%	1.0%	1.0%	10.0%	10.0%	2.2%	3.0%	2.0%	2.0%
	Subway	40.0%	29.6%	30.0%	30.0%	35.0%	35.0%	49.0%	49.0%	33.0%	33.0%	61.6%	59.9%	5.0%	5.0%	3.0%	3.0%	33.0%	33.0%	50.2%	6.0%	49.0%	49.0%
	Bus	4.2%	3.7%	5.0%	5.0%	5.0%	5.0%	3.0%	3.0%	7.0%	7.0%	7.5%	8.6%	5.0%	5.0%	4.0%	4.0%	7.0%	7.0%	9.6%	6.0%	3.0%	3.0%
	Walk/Other	41.6%	42.0%	20.0%	20.0%	20.0%	20.0%	37.0%	37.0%	30.5%	30.5%	17.1%	25.6%	5.0%	5.0%	87.0%	87.0%	30.5%	30.5%	19.4%	83.0%	37.0%	37.0%
Linked Trips (10)	Auto	20%	20%	20%	20%	25%	25%	20%	20%	20%	20%	20%	20%	0%	0%	20%	20%	20%	20%	0%	0%	20%	20%
	Taxi	1.42	2.13	2.20	2.20	2.20	2.20	2.90	2.90	2.67	2.67	1.11	1.11	2.00	2.00	2.80	2.80	2.67	2.67	1.22	1.22	2.90	2.90
Temporal Distribution	AM	(14)	(5)	(16)	(9)	(1)	(8)	(12)	(1)	(1)	(19)	(9)											
	MD (12-1)	3.0%	0.9%	8.5%	0.0%	1.0%	20.0%	2.7%	3.0%	5.0%	12%	0.0%											
	PM (5-6)	9.0%	6.2%	10.6%	0.0%	16.0%	20.0%	4.6%	5.0%	16.0%	15%	0.0%											
	EVE (7-8)	8.4%	8.3%	8.8%	10.0%	13.0%	20.0%	6.4%	6.0%	13.0%	14%	0.0%											
	Sat MD (1-2)	11.0%	10.0%	14.5%	32.0%	13.0%	5.0%	6.4%	3.0%	13.0%	0%	32.0%											
	Sat MD (1-2)	11.0%	11.0%	11.0%	17.0%	17.0%	5.0%	4.8%	6.0%	17.0%	17%	0.0%											
	Sat EVE (7-8)	1.7%	11.5%	8.9%	32.0%	13.0%	5.0%	4.8%	3.0%	13.0%	0%	32.0%											
Truck Temporal Distribution	AM	(14)	(12)	(12)	(6)	(13)	(12)	(12)	(7)	(13)	(19)	(6)											
	MD (12-1)	7.7%	6.0%	6.0%	6.0%	9.6%	6.0%	6.0%	0.0%	9.6%	10.0%	6.0%											
	PM (5-6)	11.0%	6.0%	11.0%	6.0%	11.0%	6.0%	6.0%	0.0%	11.0%	11.0%	6.0%											
	EVE (7-8)	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	0.0%	1.0%	2.0%	1.0%											
	Sat MD (1-2)	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%											
	Sat MD (1-2)	11.0%	6.0%	6.0%	0.0%	6.0%	1.0%	1.0%	0.0%	1.0%	11.0%	0.0%											
	Sat EVE (7-8)	1.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%											
Directional Distribution	IN	(14)	(5)	(16)	(9)	(1)	(8)	(12)	(1)	(1)	(19)	(9)											
	OUT	(14)	(5)	(16)	(9)	(1)	(8)	(12)	(1)	(1)	(19)	(9)											
	AM	50.0%	50.0%	82.0%	18.0%	55.0%	45.0%	50.0%	50.0%	33.3%	66.7%	55.0%	45.0%	50.0%	50.0%	96.0%	4.0%	50.0%	50.0%	50.0%	50.0%		
	MD (12-1)	55.0%	45.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	63.0%	37.0%	50.0%	50.0%	48.0%	52.0%	50.0%	50.0%	50.0%	50.0%		
	PM (5-6)	48.0%	52.0%	67.0%	33.0%	59.0%	41.0%	75.0%	25.0%	52.0%	48.0%	50.0%	50.0%	60.0%	40.0%	5.0%	95.0%	75.0%	25.0%	50.0%	50.0%		
	EVE (7-8)	55.0%	45.0%	62.0%	38.0%	54.0%	46.0%	75.0%	25.0%	34.0%	66.0%	50.0%	50.0%	60.0%	40.0%	0.0%	0.0%	75.0%	25.0%	50.0%	50.0%		
	Sat MD (1-2)	71.0%	29.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	57.0%	43.0%	50.0%	50.0%	50.0%	50.0%		
Sat EVE (7-8)	40.0%	60.0%	59.0%	41.0%	53.0%	47.0%	75.0%	25.0%	34.0%	66.0%	50.0%	50.0%	50.0%	50.0%	0.0%	0.0%	75.0%	25.0%	50.0%	50.0%			
Truck Directional Distribution	IN	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(19)	(1)											
	OUT	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(19)	(1)											
	AM	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%											
	MD (12-1)	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%											
	PM (5-6)	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%											
	EVE (7-8)	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%											
	Sat MD (1-2)	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%											
Sat EVE (7-8)	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%												

Notes

- CEQR Technical Manual 2012, Table 16-2. For open space, Active Park Space was used; temporal distribution for Weekday EVE assumed to be half of Weekday PM and Sat EVE assumed to be half of Sat MD. For Rooftop Exhibit (Museum), Weekday EVE and Saturday EVE temporal distribution assumed to be same as Weekday PM temporal distribution.
- Sam Schwartz Engineering survey at Chelsea Market, February 2011.
- Weekday person trip rate based on Urban Space for Pedestrians (Pushkarev & Zupan, 1975), Table 2.3.
- PHA Survey of temporary art installation/exhibit at Pier 54, May 2005.
- ITE Trip Generation, 8th Edition, Land Use Code 931, Quality Restaurant. Weekday PM is same as weekday peak of Adjacent Street Traffic, Weekday EVE is same as weekday PM Peak of Generator, Saturday EVE is same proportion as Saturday Peak of Generator and Daily Saturday trip rate. Saturday MD trip rate based on ITE ratio of Saturday to weekday daily trip generation (see note 3). Temporal and directional distributions based on ITE as follows: Weekday MD assumed to be same as weekday AM peak hour of generator; Weekday PM temporal distribution based on rate of PM Peak Hour of Adjacent Street Traffic; Weekday EVE temporal distribution based on rate of PM Peak of Generator, Saturday MD assumed to be same as Destination Retail Sat MD, Sat EVE is assumed to be based on Saturday Peak of Generator. Directional distributions for midday assumed to be 50/50.
- Brooklyn Bridge Park FEIS (2005), Table 14-6, Multi-use (Theater) land use. Truck temporal distribution for EVE and Sat EVE assumed to be 0%. Restaurant vehicle occupancies were used for taxi. Marina land use used weekday trip generation rates for Marina.
- Special West Chelsea District Rezoning and High Line Open Space FEIS, May 2010, Table 16-6, High Line Open Space land use. Saturday mode share and vehicle occupancy assumed to be same as weekday. Weekday EVE temporal distribution assumed to be half of Weekday PM; Sat EVE temporal assumed to be half of Sat MD. Weekday EVE and Sat EVE directional distribution is assumed to be same as Weekday PM. Saturday MD directional assumed 50/50.
- Fordham University Lincoln Center Master Plan FEIS, 2009, Table 15-2, for Graduate Students Day/Full-Time. Dorm-based mode share redistributed proportionally among auto, taxi, bus and subway. Shuttle mode share redistributed proportionally among bus and subway. SSE determined Weekday MD and PM temporal distribution based on published class schedules for the Institute of Culinary Education. Weekday EVE temporal distribution assumed be half of weekday PM. Assumed 50/50 directional distribution for all peak periods. Table 15-11 for truck trip generation rates, assumed same rates for weekday and Saturday.
- Based on Pier 54 movie event survey on 7/8/2009 performed by AKRF. Saturday EVE and Weekday PM temporal distribution and directional distribution assumed to be same as weekday EVE. Assumed no rooftop events for weekday MD and Saturday MD. During these times, open space assumptions were used. Taxi vehicle occupancy did not have good data from the AKRF survey; therefore, the restaurant assumption was used. (see note 6)
- Assumed 20% linked trips for all uses except Marina, which assumes 0% linked trips.
- ITE 8th Edition, Land Use Code 540, Junior/Community College
- Hudson River Park FEIS (1998), Table 11-25. For Marina, Weekday EVE temporal distribution and directional distribution assumed to be same as weekday PM. For Marina, Sat EVE temporal distribution and directional distribution assumed to be same as Sat MD. For Restaurant, assume Saturday MD is the same as Weekday MD and assume Weekday EVE and Saturday EVE are zero.
- Hudson Yards FGEIS (2004) App S-1, Table 1, "Museum Trip Generation Transportation Planning Assumptions" Memorandum. Saturday EVE directional distribution assumed to be same as Weekday EVE. Saturday MD directional distribution assumed to be 50/50. Saturday EVE temporal distribution assumed to be 0.
- CEQR Technical Manual 2012, Table 16-2, for MD, PM, Saturday midday. Hudson Yards FGEIS (2004) App S-1, Table 1 and 2, "Destination Retail Trip Generation Transportation Planning Assumptions" Memorandum for Weekday EVE and Saturday EVE. Truck distribution for Sat MD assumed to be same as Weekday MD.
- Chelsea Piers, FEIS (1993), Table II.F.7. Saturday mode share and vehicle occupancy assumed to be same as weekday.
- ITE Trip Generation, 8th Edition, Land Use Code 932, High-Turnover (Sit Down) Restaurant. Saturday MD temporal distribution assumed to be same as Destination Retail for Saturday MD.
- SSE assumptions based on review of class schedules at several technical art schools, including the Institute of Culinary Education in NYC.
- SSE and NYCDOT Assumptions.
- Person and truck trip generation rates and temporal distribution based on CEQR Technical Manual 2012. Weekday modal split and vehicle occupancy based on 2010 Census Reverse Journey-to-Work data (tracts 83, 79, 99). Directional split and Saturday modal split and vehicle occupancy based on Chelsea Market Expansion (2005), Table H-1. Assumes Saturday modal split same as MD. Assumes Saturday auto occupancy the same as Weekday. Saturday directional distribution from Western Rail Yards Project FEIS (2009).
- Manhattan retail mode choice outside of the transit zone for 314 Eleventh Avenue data provided by NYCDOT.

**Table 8
Transportation Demand Factors: Scenario 3, City Winery Uses**

Performance Space			Restaurant/Bar			Private Event			Office/Winery			Deliveries		
Event Time	8:00 PM	10:00 PM	Lunch	11:30 AM	2:30 PM	Event Time	7:00 PM	10:00 PM	Office Hours	9:00 AM	9:00 PM	Kitchen	8	
			Duration	0:40			8:00 PM	11:00 PM	Staff	32		Hours	7:00 AM	9:00 AM
People	0		Customers	50	Mon - Th	Rooms	4		Assume two shifts	9:00 AM	5:00 PM	Beverage	3	
Before 7 PM	25%	0		75	Fri	People/Room	20		Shift duration	1:00 PM	9:00 PM	Hours	7:00 AM	10:00 AM
7-8 PM	65%	0		100	Sat/Sun	Total patrons	600			8:00	8:00			
After 8 PM	10%	0				Staff/Room	2							
			Dinner	5:00 PM	9:00 PM	Use Restaurant factors			AM	All Inbound			In/Out	
Staff			Duration	1:00 1:30		Patron arrivals in EVE	80%	480	MD/Sat MD	All Inbound		AM	5.5	
10 AM - 6 PM	20		Customers	0	Sun - Th	Assume staff arrive earlier (in PM hr)	50		PM	All Outbound				
4 PM - 12 AM	45			0	Fri/Sat									
			Staff is same people for performance space											
				Inbound	Outbound									
			MD (12-1)	33%	33%									
			PM (5-6)	25%										
			EVE (7-8)	25%	25%									
			Sat MD (1-2)	33%	33%									
			Sat EVE (7-8)	25%	25%									

Modal Splits

	Weekday (18)	Saturday (18)		Weekday (18)	Saturday (18)		Weekday (18)	Saturday (18)		AM/PM (19)	MD/SAT (19)
Auto	25.0%	25.0%	Auto	25.0%	25.0%	Auto	25.0%	25.0%	Auto	18.6%	2.0%
Taxi	20.0%	20.0%	Taxi	20.0%	20.0%	Taxi	20.0%	20.0%	Taxi	2.2%	3.0%
Subway	30.0%	30.0%	Subway	30.0%	30.0%	Subway	30.0%	30.0%	Subway	50.2%	6.0%
Bus	5.0%	5.0%	Bus	5.0%	5.0%	Bus	5.0%	5.0%	Bus	9.6%	6.0%
Walk/Other	20.0%	20.0%	Walk/Other	20.0%	20.0%	Walk/Other	20.0%	20.0%	Walk/Other	19.4%	83.0%
	100.0%	100.0%		100.0%	100.0%		100.0%	100.0%		100.0%	100.0%

Vehicle Occupancy

	Weekday (9), Taxi (6)	Saturday (15)		Weekday (15)	Saturday (15)		Weekday (15)	Saturday (15)		AM/PM (19)	MD/SAT (19)
Auto	2.90	2.90	Auto	2.20	2.20	Auto	2.20	2.20	Auto	1.22	1.22
Taxi	2.30	2.30	Taxi	2.30	2.30	Taxi	2.30	2.30	Taxi	1.40	1.40

Sources:

- 6. Brooklyn Bridge Park FEIS (2005), Table 14-6, Multi-use (Theater) land use. Truck temporal distribution for EVE and Sat EVE assumed to be 0%. Restaurant vehicle occupancies were used for taxi. Marina land use used weekday trip generation rates for Marina.
- 9. Based on Pier 54 movie event survey on 7/8/2009 performed by AKRF. Saturday EVE and Weekday PM temporal distribution and directional distribution assumed to be same as weekday EVE. Assumed no rooftop events for weekday MD and Saturday MD. During these times, open space assumptions were used. Taxi vehicle occupancy did not have good data from the AKRF survey; therefore, the restaurant assumption was used. (see note 6)
- 15. Chelsea Piers, FEIS (1993), Table II.F.7. Saturday mode share and vehicle occupancy assumed to be same as weekday.
- 18. SSE and NYCDOT Assumptions.
- 19. Person and truck trip generation rates and temporal distribution based on CEQR Technical Manual 2012. Weekday modal split and vehicle occupancy based on 2010 Census Reverse Journey-to-Work data (tracts 83, 79, 99). Directional split and Saturday modal split and vehicle occupancy based on Chelsea Market Expansion (2005), Table H-1. Assumes Saturday modal split same as MD. Assumes Saturday auto occupancy the same as Weekday. Saturday directional distribution from Western Rail Yards Project FEIS (2009).

