

**SECOND AMENDED  
MEMORANDUM OF ENVIRONMENTAL COMMITMENTS  
FOR THE ATLANTIC YARDS PROJECT**

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**A. PURPOSE OF MEMORANDUM**

This second amended memorandum of environmental commitments dated as of June 10, 2014 (the “MEC”) documents the commitments made by Forest City Ratner Companies and its affiliates including Atlantic Yards Development Company, LLC and Brooklyn Arena, LLC (collectively, “FCRC”) to: (i) incorporate measures into the Atlantic Yards Project (the “Project”) to avoid adverse environmental impacts, as described in the Final Environmental Impact Statement issued by the Empire State Development Corporation (“ESD”) on November 27, 2006 (the “FEIS”), the Technical Memorandum prepared with respect to the Project in June 2009 (the “Technical Memorandum”), and the Final Supplemental Environmental Impact Statement issued by ESD on June 12, 2014 (the “FSEIS”); and (ii) implement measures to mitigate, to the maximum extent practicable, the significant adverse impacts identified in the FEIS and FSEIS. ESD and FCRC anticipate that the measures set forth in this memorandum will be included in appropriate Project documentation, with measures associated with, or the responsibility of, individual buildings or building parcels included in the applicable ground leases, and measures associated with the Project site as a whole or not specific to any one building parcel included in other Project documentation (any such lease or other Project documentation, a “Project Document” and such documentation collectively, the “Project Documentation”). Modifications to the obligations herein described may be granted by ESD (not to be unreasonably withheld) or as otherwise provided for in this memorandum, and in the event of any such modification, the Project Document imposing the affected obligation shall be deemed to be revised to incorporate such modification. The Project Documentation shall provide that the commitments set forth herein shall run with the land and be binding upon FCRC’s successors and assigns for the period of time any such party holds a property interest in the relevant portion of the Project or the Project site or until such earlier time as the relevant obligation is satisfied or fully discharged, with respect to those obligations that do not exist in perpetuity.

**B. SOCIOECONOMICS**

The Project (including Phase I and Phase II) shall generate at least 2,250 units of affordable housing on site for low-, moderate-, and middle-income persons and families. At least 30% of the units built on the arena block in Phase I (but no less than 300 units) shall be affordable to such households. The remainder of the affordable units shall be built in Phase II or on Site 5; however, not more than 50% of the Phase II units shall be built without completion of at least 50% of the Phase II affordable units. The affordable units are anticipated to be built as part of the Mayor’s New Housing Marketplace Plan and are expected to be financed through tax-exempt bonds provided under existing and proposed City of New York (“City”) and State of New York (“State”) housing programs such as the City’s 50-30-20 program. Based on currently available information, the parties anticipate that the affordable housing units will be made available to households with incomes falling within the income bands set forth in the FEIS and

FSEIS. However, the income bands may be adjusted to accommodate the requirements of any City, State or federal housing program utilized for the construction of the affordable housing, subject to City approval.

### **C. COMMUNITY FACILITIES**

1. FCRC shall provide 24 parking spaces on the Project site for police vehicles assigned to the 78<sup>th</sup> Precinct House. Such parking shall be provided without charge and at a location that is proximate and convenient to the Precinct House. FCRC shall have the right to modify the location of such spaces from time to time in order to address construction logistics and operational matters, provided that the location remains proximate and convenient to the Precinct House.

2. As mitigation for the projected significant adverse impact to the supply of elementary and intermediate school seats, FCRC shall, if requested by the New York City Department of Education (“DOE”) or the New York City School Construction Authority (“SCA”) prior to the date that is 18-months prior to the anticipated commencement of construction of the first Phase II residential building constructed after completion or substantial completion of each of the Phase I residential buildings (or such other date agreed to in writing by FCRC, DOE and ESD), convey or lease to DOE, space within a development parcel sufficient in size to allow for the development of an approximately 100,000 gross square foot elementary and intermediate public school of contiguous space, a portion of which shall be located on the ground floor of the building (the “School”). As soon as practicable after receipt of the request from DOE or SCA, FCRC shall consult and cooperate with SCA in its public review process for site selection, thereafter cooperate with DOE and SCA in their design process in accordance with SCA/DOE practice, and construct the building containing the School as soon as practicable after SCA approves the design of the School, completes its public review process, and authorizes commencement of construction of the core and shell of the School and the financing of the School. FCRC shall also provide to DOE, by lease, easement or other conveyance acceptable to DOE, access to suitable outdoor space for use as a playground for the School’s students. It is likely that the School will be located in the lower floors of Building 15; therefore, FCRC shall provide notice to DOE, SCA and ESD that it intends to begin architectural design of Building 15 prior to the commencement of such design. In the event that an alternative location is selected, the School site shall be one of the other residential parcels located east of 6<sup>th</sup> Avenue as determined by FCRC and DOE. If leased to DOE, such lease shall be on a triple net basis and with a rent of \$1.00, and if conveyed, shall be conveyed for consideration of \$1.00. DOE shall be responsible for all costs of constructing, fitting out, and operating the School (excluding the cost of land, infrastructure, site remediation and if applicable the platform over the rail yard), and FCRC shall undertake the construction of the School on DOE’s behalf and at DOE’s expense. The space provided for the School shall be in addition to the Atlantic Yards program described in Table S-1 of the FEIS and shall not replace or result in a reduction of any part thereof. In the event that DOE elects to locate the School on the Project site, DOE and FCRC shall enter into appropriate arrangements providing for the construction and operation of the School, which agreements shall among other things provide FCRC with the right to locate residential units and other

compatible uses within the same building as the School, and to coordinate the construction of the School with FCRC's construction of the remainder of the building in which the School is to be located. The School shall be constructed to provide adequate noise attenuation so that noise in the vicinity of the School (including Project-related traffic, general construction and the School playground) will not result in interior noise levels within the School in excess of 45 dBA L<sub>10</sub>.

3. In order to avoid a significant adverse impact to day care services as a result of the Project, FCRC shall: (i) construct on the Project site and arrange for the long-term operation of a duly licensed day care center that shall accommodate at least 100 children with publicly funded vouchers available to income-eligible households (or with some alternate form of publicly funded day care for income-eligible households); and (ii) assess day care enrollment and capacity in the study area identified in the FEIS as construction of the Project progresses, and, as and to the extent necessary to avoid a significant adverse impact (following the methodology of the *CEQR Technical Manual*, as of the date of the FSEIS), make arrangements with one or more duly licensed day care providers for the long-term operation of a duly licensed day care center (or centers) that shall accommodate approximately 250 additional children, either on or in the vicinity of the Project site. FCRC shall place into operation the day care center specified in clause (C)(3)(i) above by the date that certificates of occupancy have been issued for 620 of the Phase II affordable housing units targeted to households earning up to 80% AMI, or as soon thereafter as is practicable, provided, however, that the operation of the day care center may be delayed to a later point in the Project as determined by ESD based on information provided by FCRC and the City that there are adequate day care facilities in the area to accommodate children requiring subsidized day care services from the existing and immediately anticipated Project buildings.

#### **D. OPEN SPACE AND RECREATIONAL FACILITIES**

1. FCRC shall design and construct the Open Space as described in the FEIS, Technical Memorandum and FSEIS and in accordance with the Design Guidelines. Such Open Space shall be placed into operation pursuant to a phased schedule (which schedule shall call for the construction of a portion of such Open Space as each building in Phase II is constructed) as specified in the Design Guidelines.

2. The permanent Open Space shall be owned by a Conservancy or other not-for-profit entity established by FCRC, which shall be responsible for the maintenance, operation, and security of this public amenity. The Conservancy or other not-for-profit entity shall be funded in the first instance by FCRC, and when the surrounding parcels are developed, by the owners of the surrounding buildings pursuant to restrictive declarations recorded against the surrounding Project properties. The Conservancy or other not-for-profit entity shall be governed by a board, which shall include representatives of FCRC, civic group(s) active in park matters, representatives of surrounding properties on the project site, and, on an *ex officio* basis, Brooklyn Community Boards 2, 6 and 8, and the New York City Department of Parks and Recreation (the "Parks Department"). The initial program and plans for the Open Space shall be subject to the reasonable approval of ESD, consistent with the Design

Guidelines, and any material modifications to the program and plans for the Open Space shall also be subject to the reasonable approval of ESD, consistent with the Design Guidelines. The permanent Open Space shall be, at a minimum, accessible to the public as specified in the Design Guidelines.

3. Subject to the review and approval of the New York City Department of Transportation (“NYCDOT”) and, if applicable, the New York City Public Design Commission (“PDC”), FCRC shall promptly plan, design, implement and fully fund improvements at Times Plaza, which will consist of the addition of seating, plantings and other open space amenities approved by NYCDOT and, if applicable, PDC. If practicable, FCRC shall implement these improvements in coordination with restoration of the adjoining segment of Atlantic Avenue affected by the construction of the portal between the LIRR rail yard and Atlantic Terminal.

#### **E. CULTURAL RESOURCES**

1. FCRC shall comply with the requirements of the Letter of Resolution (“LOR”) dated November 9, 2006 among Atlantic Yards Development Company, LLC, ESD and the Office of Parks, Recreation and Historic Preservation. The LOR is included in Appendix B to the FEIS and requires certain mitigation or other measures to be taken with respect to architectural and archeological resources.

2. If the LOR is duly amended, FCRC shall comply with the terms of such amended LOR.

#### **F. SHADOWS**

1. As set forth in the FEIS and LOR, prior to the time when the Project casts shadows on the stained glass windows of the Church of the Redeemer (the “Church”), FCRC shall develop and implement measures to offset the impacts of the shadows comprised of: (i) removing the existing protective coverings from all of the stained glass windows, including any patching and repair associated with the removal; (ii) cleaning both the interior and exterior of the windows; and (iii) installation of new transparent protective coverings of similar or greater durability, or other measures agreed to by FCRC and the Church pursuant to the letter between FCRC and the Bishop of Long Island dated October 31, 2006 included in Appendix I to the FEIS.

2. Prior to the time when the Project casts shadows on the Atlantic Terminal Houses open space, FCRC, in consultation with the New York City Housing Authority (“NYCHA”), shall develop and implement measures to ameliorate the significant adverse shadow impacts, comprised of one or more amenities from the following list: (i) new landscaping and shade resistant plantings within the Atlantic Avenue open space; (ii) additional play equipment within the Atlantic Avenue or Carlton Avenue open spaces; (iii) upgrade of the Carlton Avenue children’s play area, including possible spray shower; and (iv) replacement of benches and other fixtures in the Atlantic Avenue or Carlton Avenue open spaces, subject to and in accordance with a letter dated

October 23, 2006 from FCRC to Douglas Apple of NYCHA, and accepted on November 3, 2006 by NYCHA included in Appendix I of the FEIS.

## **G. HAZARDOUS MATERIALS**

1. FCRC shall design and construct the Project so as to prevent volatile organic compounds (“VOCs”) from infiltrating the interior of the Project buildings. To address this concern, residential and community facility uses shall (i) be located above ventilated underground parking or other facilities or above the platform over the ventilated rail yard and/or (ii) incorporate equivalently effective engineering controls, such as a vapor barrier and/or sub-slab depressurization system. FCRC shall submit engineering plans demonstrating compliance with the requirements of this paragraph to ESD (or, if applicable, the Mayor’s Office of Environmental Remediation) with respect to each of the Project buildings prior to the commencement of the construction thereof.

2. FCRC shall implement the investigation and remediation measures specified in the FEIS and FSEIS to protect workers and the general public from adverse impacts associated with environmental conditions at the Project site during the period of construction. In particular:

- (a) FCRC shall develop and implement procedures for pre-demolition removal of asbestos in accordance with applicable federal, State and City regulations which shall be monitored by an independent contractor as required by such regulations.
- (b) FCRC shall develop and implement procedures for pre-demolition removal of PCB-containing equipment in accordance with applicable federal, State and City laws and regulations.
- (c) FCRC shall implement dust suppression techniques reflecting best construction practices during the demolition of Project buildings and any excavation, grading or earth-moving activities at the Project site in connection with the construction of the Project or any related excavation or remediation.
- (d) FCRC shall conduct additional subsurface investigations as needed to refine and supplement data presented in the Phase 1 and Phase 2 reports heretofore prepared by Roux Associates, and shall provide the results of such investigations to ESD; upon review of such Phase 2 reports, ESD may require additional sampling as necessary to determine whether remediation is appropriate. Remediation Plans, which shall include protocols for any remedial activities (and associated additional sampling and investigation), and Health and Safety Plans, shall be prepared with respect to any remedial activities to be undertaken by FCRC, and shall be submitted to

ESD for review and approval prior to the commencement of such activities.

- (e) In the event that the New York City Department of Environmental Protection (“NYCDEP”) or the Mayor’s Office of Environmental Remediation (“OER”) exercises jurisdiction over any portion of the environmental remediation at the Project site, FCRC shall (in lieu of the remedial plan called for under Subparagraph G.2(d) above) submit to NYCDEP or OER a remedial action plan with respect to such portion of the environmental remediation, for review and approval in accordance with NYCDEP or OER requirements, as applicable, prior to or in connection with excavation activities at the Project site. FCRC shall simultaneously submit such remedial action plan to ESD for its review and consultation with NYCDEP or OER, as applicable.
- (f) Prior to remediation and excavation at the site, FCRC shall develop a Construction Health and Safety Plan (“CHASP”) which shall be approved by ESD (or, for any portion of the environmental remediation under the supervision of the New York State Department of Environmental Conservation (“NYSDEC”), NYCDEP or OER, approved by the relevant agency, as applicable) and implemented by FCRC in connection with the remediation or excavation work at the Project site. The CHASP shall include a Community Air Monitoring Plan for PM<sub>10</sub> and VOCs conforming to guidance published by the New York State Department of Health to be implemented during the excavation of site soils (or other activities that involve moving existing site soils around or off the site) in connection with the construction of the Project or any related excavation or remediation. If the CHASP is modified, such modifications shall be submitted for approval to ESD or, for any portion of the site subject to supervision of NYCDEP, OER or NYSDEC, approval by such agency. FCRC shall implement the CHASP in accordance with its terms during all remediation or excavation work at the site and during the performance of any other activities that involve moving existing site soils around or off the site.
- (g) FCRC shall remediate or cause the remediation of the spills to the extent required by NYSDEC and close the spill numbers at the gasoline station on Block 1127, Lot 1, and the U-Haul facility on Block 1119, Lots 1 and 64, both of which have active petroleum spill numbers on file with the NYSDEC. Remediation of these spills shall be completed under the direction of NYSDEC.

## **H. INFRASTRUCTURE**

1. FCRC shall construct new water mains in and around the Project site in accordance with a water main plan to be approved by NYCDEP, as same may be modified and/or approved by NYCDEP.

2. FCRC shall construct new sewer improvements in and around the Project site as specified in an amended drainage plan RH-103 prepared by Vollmuth and Brush Environmental Engineers dated October 26, 2006, as same may be modified and/or approved by NYCDEP.

## **I. STORMWATER AND SEWAGE MINIMIZATION MEASURES**

1. As part of the Project, FCRC shall implement the stormwater management measures set forth in the FEIS as designed by Judith Nitsch Engineering and the Olin Partnership, which formed one basis of a report prepared by HydroQual Environmental Engineers and Scientists, P.C. (“HydroQual”) entitled “Impact of the Atlantic Yards Project on Local Sewer Infrastructure” dated November 8, 2006 (the “HydroQual Report”) and included as Appendix H to the FEIS, as modified by the measures described in the Technical Memorandum, which modifications were analyzed in supplemental reports by HydroQual dated October 17, 2007 and June 25, 2008. (These three HydroQual reports are referred to collectively as the “HydroQual Reports”). Such measures shall include installation or implementation of the following facilities or alternative detention/retention facilities providing the same or greater combined retention and detention capacity:

- (a) Two 100,000 gallon tanks in the Project site (one for the runoff from Buildings 5, 6 and 7 and one for the runoff from Buildings 8, 9, and 14);
- (b) Storage tanks in the area of the Long Island Rail Road yard, with an aggregate capacity of 124,000 gallons;
- (c) Storage tanks within the Arena Block having an aggregate capacity of 388,568 gallons upon completion of the Arena and a total of 636,000 gallons upon the build out of the Arena and Buildings 2, 3 and 4 on the Arena Block; and
- (d) Two 12,000 gallon storage tanks at Site 5.

2. The stormwater storage tanks set forth above (and any tanks installed in lieu of such tanks as allowed by subparagraph I.8) shall be designed and built to have two outlets, with a smaller outlet at the base and another larger outlet at a higher elevation in the tank wall.

3. FCRC shall landscape the Open Space at the Project in accordance with the landscaping plan developed by Olin Partnership (the “Landscaping Plan”), in a

manner that accommodates the use of recycled stormwater for irrigation and the cultivation of native plants that have minimal irrigation needs.

4. The Project shall be designed to utilize recycled stormwater in the cooling towers of the Project buildings for make-up water, and also for cultivation of vegetation planted pursuant to the Landscaping Plan.

5. The Open Space shall include a surface water feature with a capacity of at least 279,000 gallons in the area identified in the Open Space Design Guidelines.

6. FCRC shall equip sinks, toilets and showers in the Project buildings with high-efficiency, low-flow fixtures. All leases and condominium documents shall require the continued maintenance and use of these fixtures.

7. FCRC shall equip the arena with waterless urinals.

8. FCRC (and FCRC's successors and assigns) shall have the right to modify any and all of the measures set forth in subparagraphs I.1 through I.7 above, provided that FCRC demonstrates to ESD through appropriate analysis that such modification results in a level of stormwater management equivalent or superior to that described in the FEIS, the Technical Memorandum and the HydroQual Reports.

9. FCRC and its successors in interest shall maintain the equipment and fixtures described in this section of the memorandum in a proper and well functioning condition.

## **J. SUSTAINABLE DESIGN, MINIMIZATION OF AIR EMISSIONS AND NOISE ATTENUATION**

1. FCRC shall design and construct the Project so that each building meets, at a minimum, the requirements for Leadership in Energy and Environmental Design ("LEED") certification, as established by the non-profit U.S. Green Building Council, with the goal of attaining a silver rating where feasible and practicable. LEED certification provides independent, third-party verification that a project meets advanced performance standards relating to environmental stewardship, including the conservation of energy and water, the reduction of waste sent to landfills, and protection of the health of building occupants and neighbors.

2. All Project boilers shall operate exclusively on natural gas and shall be equipped with low nitrogen oxide burners (achieving an emissions level less than or equal to 20 ppm), provided that FCRC may substitute an alternative fuel or technology upon a demonstration to ESD through appropriate analysis that such alternative fuel and/or technology would achieve equivalent or superior emission levels for nitrogen oxides and particulate matter. The previous sentence does not preclude the use of standby or emergency generators, as set forth in the FEIS.

3. The Project boilers shall have emission rate specifications that do not exceed the emission rates specified in Table 14-3 and pages 14-16 and 14-17 of the FEIS.

4. The heating and hot water equipment exhaust stack(s) on Building 3 will extend at least 259 feet above grade and will be located at least 69 feet away from the lot line facing 6th Avenue and no more than 70 feet away from the lot line facing Dean Street. This requirement may be adjusted if an air dispersion analysis is prepared confirming that such adjustments would not result in any significant adverse air quality impacts.

5. The School described in C.2 above shall be served solely by electric Heating, Ventilation and Air Conditioning (“HVAC”) equipment, with no fossil fuel-fired boilers. In the event the SCA proposes installation of a fossil fuel-fired boiler for the School, such proposal shall not be accepted and no such boiler shall be installed unless an air dispersion analysis is prepared confirming that such boiler would not result in any significant adverse air quality impacts.

6. The HVAC intake vents for the Project buildings shall not be located in areas that have a modeled aggregate impact from Project buildings that would exceed 0.3 micrograms of PM<sub>2.5</sub> per cubic meter (annual average) using the dispersion modeling assumptions (including boiler load) used for the FEIS. Based on the design of the buildings used to prepare the air dispersion modeling for the FEIS, such locations are identified in the memorandum from Henry M. Kearney, P.E. of AKRF dated November 30, 2006.

7. FCRC and its successors in interest shall maintain the equipment and fixtures described in this section of the memorandum (or installed in obtaining LEED certification) in a proper and well functioning condition.

8. The 16 non-Arena Project buildings (a) shall have double-glazed windows and alternative ventilation (air conditioning) and (b) in order to conform to the 45 dBA L<sub>10(1)</sub> interior noise level recommended by the *CEQR Technical Manual* shall achieve the building noise attenuation as specified for (i) the Phase I buildings in Table 15-12 on page 15-21 of the FEIS and (ii) the Phase II buildings in Table 4G-8 on page 4G-14 of the FSEIS. However, with respect to a particular building, FCRC may request an adjustment to these requirements upon an adequate demonstration that the design would achieve a level of window wall attenuation sufficient to result in a 45 dBA L<sub>10(1)</sub> interior noise level for residential and community use and 50 dBA L<sub>10(1)</sub> for other uses during operation and construction based on methodologies in the then current *CEQR Technical Manual*.

9. FCRC shall demonstrate that the buildings are designed to comply with the requirements of this section in drawings or other appropriate documents submitted to ESD prior to commencement of construction of the affected buildings.

## **K. PHYSICAL ROADWAY AND TRANSIT IMPROVEMENTS**

1. FCRC shall fund NYCDOT in completing the roadway modifications and installation of traffic signals set forth in the conceptual design set forth in Figure 19-1 of the FEIS and shall cooperate in implementing the operational changes (including street closures, changes in street direction, signal timing modifications, restriping, and parking regulation modifications) described in the FEIS and FSEIS; however, it is understood that actions such as signal timing modifications at existing traffic signals, changes to travel direction, and changing parking regulation signs will be implemented by NYCDOT staff. The roadway modifications, signal installations and operational changes and the timing thereof shall be subject to the approval of the NYCDOT. FCRC shall prepare and submit all drawings and designs (which shall meet AASHTO and NYCDOT specifications) required for implementation of such measures identified in the FEIS and FSEIS to NYCDOT for review and approval.

2. Among the roadway improvements FCRC shall fund and/or implement are the following:

- (a) Reconfiguration of the Atlantic Avenue/Flatbush Avenue/4th Avenue intersection and complementary operational changes to the adjacent streets, including physical changes relating to the following:
  - i. elimination of northbound traffic operations on 4th Avenue between Atlantic and Flatbush Avenues;
  - ii. modifications to 4th Avenue lane designations between Dean Street and Atlantic Avenue;
  - iii. construction of expanded pedestrian spaces at Times Plaza along with crosswalk changes; and
  - iv. re-striping at various locations to accommodate new lane configurations as indicated in Table 19-1 of the FEIS, except as such re-striping is undertaken directly by NYCDOT.
- (b) widening of portions of Pacific Street adjacent to the project site and related re-striping, except as such re-striping is undertaken by NYCDOT;
- (c) installation of a new traffic signal and crosswalk (south approach) at the intersection of Pacific Street and Flatbush Avenue;
- (d) physical changes associated with the introduction of an eastbound left-turn lane on Atlantic Avenue at Fort Greene Place;

- (e) re-striping a westbound right-turn lane on Atlantic Avenue for 100 feet approaching 3rd Avenue and re-striping and physical modifications at various other locations in the street network adjacent to the Project site as shown in Figure 19-1 and Tables 19-1 and 19-2 of the FEIS and Tables 5-1 and 5-9 of the FSEIS, except as such re-striping is undertaken directly by NYCDOT;
- (f) physical improvements to enhance vehicle flow and pedestrian safety at the intersection of Atlantic and Vanderbilt Avenues, including:
  - i. elimination of the eastbound Atlantic Avenue left-turn movement to Vanderbilt Avenue;
  - ii. widening of the existing median on this approach to 15 feet to provide additional pedestrian refuge space;
  - iii. re-striping the approach to accommodate an exclusive right-turn-only lane, except as such re-striping is undertaken directly by NYCDOT;
  - iv. re-striping Vanderbilt Avenue between Atlantic Avenue and Pacific Street to provide for four northbound travel lanes and two southbound travel lanes, except as such re-striping is undertaken directly by NYCDOT; and
  - v. reconfiguration of the west sidewalk along Vanderbilt Avenue between Atlantic Avenue and Pacific Street from 20 feet to 12.5 feet in width to accommodate a new lay-by lane along the west curb.

3. It is expected that NYCDOT will implement areawide signal coordination, timing changes, curbside parking regulation changes, changes in travel direction and other operational changes, as described in the FEIS and FSEIS. FCRC shall cooperate with NYCDOT in the implementation of such changes including keeping NYCDOT apprised of the progress of the Project's construction.

4. FCRC shall construct a new entrance to the Atlantic Avenue/Pacific Street subway station complex on Block 1118 at the southeast corner of Atlantic and Flatbush Avenues consistent with the conceptual drawings included in the FEIS or Technical Memorandum, and pursuant to a final design approved by New York City Transit ("NYCT"). FCRC's construction contract schedules shall require substantial completion of the new subway entrance prior to or simultaneously with the opening of the arena. For purposes of the foregoing, substantial completion shall mean that construction of the new subway entrance is sufficiently complete to be operational.

5. Promptly after the issuance of certificates of occupancy for 1,500 Project dwelling units, FCRC shall undertake a traffic monitoring study pursuant to a

scope to be approved by NYCDOT to: (i) refine the signal timing and other traffic mitigation measures described in the FEIS and FSEIS as necessary to reflect then existing traffic conditions; (ii) provide further information as to the implementation date for the signal timing and other traffic mitigation measures specified in the FEIS and FSEIS; and (iii) identify potential additional measures to address unmitigated significant adverse impacts identified in the FEIS and FSEIS based on then existing traffic conditions. FCRC shall undertake a second traffic monitoring study with the same objectives following substantial completion of Project construction. Both traffic monitoring studies shall conform to the requirements specified in the letter from NYCDOT to ESD dated May 30, 2014 (the “2014 DOT Letter”), and shall include the evaluation of additional measures to enhance overall safety at the Atlantic Avenue/Vanderbilt Avenue intersection as specified in the FSEIS. FCRC shall fund and/or implement any identified safety improvements at this intersection at the direction of DOT. FCRC shall also comply with all other requirements of the 2014 DOT Letter (and the DOT letter dated November 22, 2006 (the “2006 DOT Letter”) to the extent not superseded by the 2014 DOT Letter), including those pertaining to the funding of mitigation measures. The traffic monitoring study required after the issuance of certificates of occupancy for 1,500 Project dwelling units shall be in lieu of the traffic monitoring study at the completion of Phase I discussed in the FEIS.

6. FCRC shall enter into discussions with NYCDOT to determine the extent of FCRC’s financial responsibility for the traffic enforcement agents (“TEAs”) required to manage traffic flow for major arena events and shall comply with the terms of any such agreement with NYCDOT as required by the 2006 DOT Letter. If necessary to ensure that the TEAs are deployed for major arena events as described in the FEIS, and only in the event that FCRC and NYCDOT do not reach a funding agreement, FCRC shall provide such funding for TEAs as ESD shall reasonably direct, considering funding arrangements at other sports and entertainment venues in New York City.

7. FCRC shall reconstruct the Carlton Avenue Bridge so as to be functional as of the opening date of the arena.

#### **L. TRANSPORTATION DEMAND MANAGEMENT**

1. FCRC shall implement incentives to reduce traffic demand associated with the operation of the Arena to reduce the overall number of vehicles coming to the Arena for a Nets game within one-half mile of the Arena by 30% of the initially projected demand presented in the FEIS. In connection with this requirement for a transportation demand management (“TDM”) plan, FCRC shall:

- (a) promote transit (including rail) travel to the Arena on the Barclays Center web site, event ads and event tickets;
- (b) arrange for the Atlantic Avenue/Pacific Street subway station to be renamed the Atlantic Ave-Barclays Center subway station;
- (c) post transit schedules on Arena monitors;

- (d) make arrangements for a Full-Time Arena Traffic Manager to manage transportation plans for each Arena event, in coordination with NYCT, LIRR, NYPD, NYCDOT, TLC, Traffic Enforcement Agents, and pedestrian traffic managers assigned by FCRC to facilitate pedestrian crossing and circulation in the pre-and post-event periods and provide wayfinding assistance to arena patrons seeking mass transit and rail facilities;
- (e) make arrangements for vehicles with 3 or more arena ticket holders to receive a minimum discount of 20 percent or \$5.00, whichever is greater, from the event rates charged for other vehicles parking on the Project site;
- (f) implement an on-line parking reservation system for event-goers to reduce the need for those who elect to drive to circulate in search of parking;
- (g) if determined to be effective and needed to achieve the TDM goals specified in the FEIS, and subject to the review and approval of NYCT and changes in technology that would allow Metrocards to be used only for certain dates, provide a free round-trip subway fare to Nets basketball game ticketholders who would otherwise drive;
- (h) cross-market with area businesses to encourage ticketholders to patronize local restaurants and stores before and after games;
- (i) provide any ticketholder traveling to the arena by bicycle with free indoor bicycle storage in a secure, manned facility designed to accommodate at least 400 bicycles on the arena block;
- (j) provide expected attendance data to, and otherwise cooperate with, NYCT as necessary to assist NYCT in determining the appropriate increase in subway service to the Atlantic Avenue/Pacific Street subway station on selected subway lines immediately following basketball games and other major arena events as necessary to alleviate potential platform crowding at that subway station and to encourage transit use; and
- (k) provide expected attendance data to, and otherwise cooperate with, LIRR as necessary to assist LIRR in determining the appropriate increase in train service to Atlantic Terminal immediately following basketball games and other major arena events.

2. FCRC shall collect data midway through the first basketball season from Nets patrons documenting the travel mode of such patrons to evaluate the effectiveness of the demand management program, and shall provide such data to NYCT and ESD. Subject to ESD approval, which approval shall not be unreasonably withheld,

FCRC may adjust the elements of the program to achieve the goal of reducing the auto share by a minimum of 30% of the number of vehicle trips projected for the Build Condition in the FEIS (as specified in FEIS Table 12-30 and page 63 of ESD's SEQRA Findings Statement dated December 8, 2006) within one-half mile of the Arena, provided that all practicable and effective demand management measures are maintained. FCRC shall annually provide ESD with documentation demonstrating its diligent implementation of the TDM plan. FCRC shall conduct follow-up studies documenting the travel mode of Nets patrons to evaluate the continued effectiveness of the TDM plan midway through the 10th and 20th basketball seasons at the Arena.

3. For major Arena events other than Nets games, FCRC shall make available to event promoters practicable TDM measures described above and encourage such promoters to implement such measures.

#### **M. PEDESTRIAN IMPROVEMENTS**

FCRC shall fund and cooperate with NYCDOT in the design and construction of the following crosswalk and sidewalk improvements to improve pedestrian circulation in the vicinity of the arena, subject to NYCDOT approval:

1. Widening of cross-walks adjoining the Project site as specified in Table 5-7 of the FSEIS;

2. Provision of a new sidewalk extension at the northeast corner of Atlantic Avenue at Fort Greene Place;

3. Provision of a new crosswalk on the south leg of the intersection of Flatbush Avenue and Pacific Street where the new traffic signal is to be installed;

4. Installation of fencing (consistent in design with NYCDOT-installed fencing throughout the City or as otherwise proposed by FCRC and approved by NYCDOT) on the northwest corner of the Flatbush Avenue/Pacific Street intersection to discourage pedestrians from crossing on the north side of the intersection where no crosswalk exists;

5. Installation of fencing (consistent in design with NYCDOT-installed fencing throughout the City or as otherwise proposed by FCRC and approved by NYCDOT) at the northwest and southwest corners of the Atlantic Avenue/Flatbush Avenue/4th Avenue intersection; and

6. Extension of the sidewalk at the northeast corner of Atlantic and Flatbush Avenues.

#### **N. CONSTRUCTION**

1. FCRC shall provide ESD with "six month look aheads" that will describe, in general terms, the activities anticipated on the Project site for the next six months (including major milestones for areas of new construction activity, excavation,

construction, anticipated maintenance and protection of traffic (“MPT”) measures, soil and groundwater remediation work and soil characterization). The six month look aheads shall be provided to ESD one month prior to the beginning of the six-month period.

2. FCRC shall promptly seek to retain the services of a qualified engineering firm to serve as the on-site environmental monitor (“OEM”) pursuant to a scope to be reviewed by ESD, and shall use commercially reasonable efforts to retain the engineering firm to serve as the OEM on or before September 15, 2014. FCRC shall make arrangements for the engineering firm to assign one or more engineers with substantial construction management experience in New York City to monitor compliance with the construction-related requirements of the MEC (the “OEM Engineers”). The OEM Engineers may be assisted by qualified staff members (Monitoring Engineers, or “ME’s”). FCRC shall not engage a different engineering firm as the OEM, or move the OEM function in-house, without the prior reasonable approval of ESD. In the event FCRC proposes to change the OEM, it shall submit the following information to ESD: (i) the qualifications of the proposed staff establishing that it would consist of one or more engineers with substantial construction management experience in New York City; (ii) a description of what job duties, if any, such staff members would have apart from serving as the OEM for the Atlantic Yards Project; and (iii) the proposed reporting and documentation procedures to be put into place for the OEM work.

3. During periods of active construction activity, an OEM Engineer shall be assigned to work primarily from a construction trailer or other on-site location to facilitate daily monitoring of the contractors’ compliance with MEC requirements.

4. During periods of active construction work, FCRC shall submit to ESD a report (the “FCRC Quarterly Report”) summarizing its contractors’ compliance with the requirements of the MEC during the previous three months, non-compliance issues that have been identified, steps taken to address any instances of non-compliance and plans to prevent the reoccurrence of any such instances of non-compliance. The FCRC Quarterly Report shall be submitted to ESD within 45 days of the end of the 3-month period to which it relates.

5. During the construction of the Project, FCRC shall undertake, fund and/or cooperate in the undertaking of the measures set forth below in order to minimize, avoid and/or mitigate, as applicable, the effects of Project construction on traffic conditions, noise and air quality in the surrounding area. FCRC shall require its contractors to adhere to these construction measures (to the extent such measures are relevant to the contractor’s activities) by including appropriate provisions in its contractor agreements and enforcing such provisions as necessary to assure compliance. FCRC shall provide ESD documentation demonstrating same.

6. Traffic

(a) FCRC shall coordinate with the NYCDOT Office of Construction and Mitigation Coordination (“OCMC”) to develop, implement and fund the implementation of MPT plans developed by OCMC.

Construction shall proceed in accordance with the requirements set forth in such MPT plans.

- (b) As set forth at pages 19-78 and 19-79 of the FEIS and Table 5-9 of the FSEIS, certain of the roadway modifications, traffic installations and operational improvements shall be put into place at or about the time that significant construction activity begins at the Project site in order to minimize construction-related traffic impacts, or as otherwise directed by NYCDOT. FCRC shall fund and cooperate with NYCDOT to implement these measures; however, it is understood that changes in signal timing at existing traffic signals, installation of signage, implementation of parking regulations, and changes in traffic direction will be implemented by NYCDOT staff.
- (c) FCRC shall make arrangements for security guards and flaggers to be deployed to manage vehicle access to the construction site. To the extent feasible, curbside deliveries shall occur within delineated closed-off areas.
- (d) Truck deliveries shall be scheduled, and untimely deliveries shall, in general, be turned away or reassigned with different delivery times. Trucks shall be required to use NYCDOT-designated truck routes for traveling to and from the construction site, which include primarily Atlantic Avenue, Flatbush Avenue, 4th Avenue, and the Brooklyn-Queens Expressway except as required for movement between staging and construction areas.

7. Truck Protocol.

- i. FCRC shall maintain sufficient staff to patrol the Project site regularly to check for non-compliance with the truck protocol requirements concerning idling and/or queuing. The staff devoted to monitoring compliance with the truck protocol will be adjusted based upon the level of construction activity at the site. Staffing for overseeing compliance with truck protocol requirements will be assessed in the six month look aheads, and discussed at weekly meetings with the ESD Environmental Monitoring Firm (defined below).
- ii. Staff assigned to oversee compliance with the truck protocol shall be properly trained in the truck protocol and will direct drivers to comply with MEC requirements.
- iii. FCRC shall put into place a system to facilitate the reporting of truck protocol violations to FCRC. Material

violations of the truck protocol will be reported by staff to FCRC management representatives, and FCRC shall keep a record of such reported incidents.

- iv. FCRC shall advise the ESD Environmental Monitoring Firm at the weekly meetings of any circumstance where a company or driver has been found to be a repeat violator of the truck protocols. FCRC and ESD will agree, on a case-by-case basis, on the steps to be taken to deal with such repeat violators. Those measures may include, without limitation, providing warnings, invoking contract sanctions and/or banning from the site such companies and/or drivers in the event that violations continue after reasonable warning has been given.
  - v. FCRC shall ensure that contractor logistics plans maximize the utilization of the Pacific Street Queue Area or other designated location for truck marshalling and queuing to the extent practicable and appropriate so long as such areas are available. FCRC shall provide ESD and the ESD Environmental Monitoring Firm with copies of the logistics plans for review and comment.
  - vi. Maps that identify acceptable routing of trucks to and from the Project site shall be provided to all contractors as part of the MEC training program. FCRC or its contractors shall take measures to ensure that the trucks follow such routes. Among other things, contractors shall be directed to provide those maps to their subcontractors, and require that the maps be distributed to drivers and kept available for reference in the cabs at all times. The Pacific Street Queue Area (if part of the then currently effective logistics plan) will be incorporated into these truck routing maps so long as this area is available.
- (b) On-site designated staging areas shall be maintained throughout the construction period to store materials and to accommodate construction vehicles that require early arrival and marshalling for immediate material delivery to high-demand construction areas. Wherever practicable, FCRC shall establish dedicated queuing areas instead of using streets for queuing.
  - (c) To avoid overtaxing the nearby on-street and off-street parking facilities, FCRC shall make available to construction workers the 300 on-site spaces typically used to accommodate Arena demand. If practicable, additional spaces shall be made available on the project site during any phase of construction if more than 500

construction workers are at the site and there is a shortfall of parking spaces at the Atlantic Center parking garage. The on-site spaces to be utilized by construction workers shall be made available at a fee comparable to other parking facilities in the area. Any lighting on any interim construction staging and parking area shall be equipped with directional lighting angled to limit light intrusion beyond the site, and shall employ controls to reduce lighting during periods when the facility is not in active use, consistent with site security. The screening measures required herein shall be properly maintained so long as such facility remains in operation. No more than 1100 vehicles, in the aggregate, shall be parked in any surface parking lot(s) on Block 1129 at any one time.

- (d) NYCT shall be given at least four weeks notice prior to the date on which a bus stop is to be relocated. Any change in a temporary location from that identified in the MPT plans shall be subject to the reasonable approval of NYCT.
- (e) FCRC shall fund physical improvements associated with and cooperate with NYCDOT in the early implementation of certain of the roadway modifications and mitigation measures specified in Sections K.1 and K.2 above, and in the further implementation of temporary construction measures pursuant to the MPT. Unless otherwise directed by NYCDOT, after consultation with ESD, such additional construction period traffic measures shall include the following:
  - i. converting 6th Avenue to two-way operation during the period that Carlton Avenue bridge is closed for reconstruction;
  - ii. prohibiting left turns along Atlantic Avenue at locations where roadways are expected to be narrowed during the Carlton Avenue bridge reconstruction work, the LIRR West Portal reconfiguration, and utility relocation;
  - iii. providing temporary left-turn bays or channelized lanes for traffic detours and added capacity;
  - iv. reconfiguring the Flatbush/Atlantic/4th Avenue intersection complex, entailing terminating northbound 4th Avenue traffic at Atlantic Avenue, converting Pacific Street between Flatbush Avenue and 4th Avenue to one-way eastbound, and creating a new eastbound left-turn bay at Fort Greene Place, to optimize traffic movements;

- v. prohibiting parking during peak periods or at all times, where needed, to provide added lane capacity; and,
  - vi. changing signal phasing and/or timing.
8. Noise and Vibration
- (a) FCRC shall comply with the City’s Noise Control Code (Chapter 2 of Title 24 of the City Administrative Code) (the “Noise Code”). Prior to commencement of construction of each building or other major element of the Project, FCRC or its contractors shall develop a construction noise mitigation plan in accordance with the Noise Code which shall be subject to NYCDEP review and approval procedures. All FCRC contractors shall follow the construction noise mitigation plan in combination with the noise protocols described below and adhere to the noise reduction measures described below and set forth in the FEIS and FSEIS. During construction, FCRC and its contractors shall implement the construction noise mitigation plan.
  - (b) FCRC shall develop a written protocol for confirming that its contractors utilize equipment that meets the noise levels set forth in the Noise Code or Table 3J-1 of the FSEIS, whichever is lower (the “MEC Noise Levels”). Such protocol will focus on construction equipment that generates noise at levels that would materially affect off-site ambient noise. The protocol shall provide for the following alternative means of demonstrating compliance: (i) documentation may be provided acceptable to FCRC and ESD that the equipment has been tested previously and found to meet the MEC Noise Levels; or (ii) in the event compliance is not established pursuant to alternative (i) the OEM will perform noise monitoring pursuant to procedures set forth in the protocol, utilizing monitoring equipment that downloads testing results. In the event that noise monitoring indicates an exceedance of the MEC Noise Level, FCRC shall so advise ESD and the ESD Environmental Monitoring Firm, and require the involved contractor to replace the equipment with equipment that complies with the MEC Noise Level or institute pathway controls that effectively reduce equipment noise to acceptable levels. ESD acknowledges that it has determined that FCRC has satisfied the requirement to develop the aforementioned protocol by development of the document annexed to the letter signed on behalf of certain FCRC affiliates dated January 28, 2014. The approved protocol may be amended by FCRC with the approval of ESD.

- (c) Pursuant to the protocol described above, the OEM staff shall check applicable equipment for compliance with the MEC Noise Requirements when the equipment is first mobilized. The OEM staff also shall regularly check equipment in use on-site against the construction noise mitigation plan or the alternative construction noise mitigation plan (as applicable under the Noise Code) posted for the site to confirm that there are no discrepancies, or revise such plans as necessary.
- (d) FCRC shall employ the following measures in the construction of the Project:
  - i. Using equipment that meets the MEC Noise Levels;
  - ii. Scheduling work that would generate high noise levels during weekday daytime hours to extent feasible, rather than during weekday nighttime or weekend hours, unless required as a result of safety or other agency requirements;
  - iii. To the extent feasible, scheduling equipment and material deliveries during weekday daytime hours, rather than during weekday nighttime or weekend hours;
  - iv. Where practicable and feasible, configuring sites to minimize back-up alarm noise;
  - v. Where practicable and feasible, using sound-mitigated backup alarms such as backup alarms that lower backup alarm noise in response to more quiet ambient conditions (such as night-time work) or backup alarms that use white noise or other mitigating technologies for trucks and equipment expected to operate at or make deliveries to the Project site during any phase of extended night-time work or night-time module deliveries;
  - vi. Requiring that pre-cast decking or plates on roadways be stable;
  - vii. Prohibiting the idling of trucks for more than three minutes at the construction site per New York City law, except when operation of the engine is required to operate ancillary truck-mounted equipment (e.g., concrete trucks);
  - viii. As early as practicable in the construction period and wherever feasible, using electrical-powered equipment, such as electric scissor lifts and electric articulating boom lifts, rather than diesel-powered equipment for construction activities;

- ix. Situating noisier equipment, such as generators, cranes, tractor trailers, concrete pumps, concrete trucks and dump trucks at locations that are removed from sensitive receptor locations and are shielded from sensitive receptor locations wherever feasible. For example, during the early construction phases of the Project, delivery trucks and dump trucks are to be located approximately 20 feet below grade to take advantage of the shielding benefits of grade differences. Once building foundations are completed, delivery trucks are to be located adjacent to noisy streets (i.e., Atlantic Avenue, Flatbush Avenue and 6th Avenue) rather than at quieter streets, such as Dean Street and Pacific Street, where there are residences;
  - x. Erecting and maintaining a minimum 8 foot high perimeter barrier (constructed of 3/4" thick plywood), with a 16 foot high barrier (of 3/4" thick plywood) adjacent to sensitive locations where practicable and feasible;
  - xi. Where 16-foot barriers are not practicable and feasible adjacent to sensitive receptors, installing the best feasible and practicable additional noise path controls, which may include noise curtains or other barriers within the site between the noise sources and sensitive receptors, angled/cantilevered fences, and/or other practicable pathway controls;
  - xii. Operating delivery trucks behind the noise barriers where practicable;
  - xiii. Where practicable, using quiet construction procedures and equipment, including, where practicable, the use of a bed liner made of thick rubber, spray-on liner, plywood, sand or gravel on dump trucks to mitigate the noise of the first load being dropped into the dump truck;
  - xiv. Requiring all contractors and subcontractors to properly maintain their equipment and have quality mufflers installed; and
  - xv. Where practicable, utilizing noise curtains and equipment enclosures to provide shielding from significant noise-generating equipment to sensitive receptor locations.
- (e) In an effort to avoid delays occasioned by Con Edison scheduling constraints, FCRC shall submit electrification requests as early in the construction sequence as practicable, and follow up with Con

Edison on a regular basis until electrification has been timely accomplished, subject to scheduling restraints of other entities not under FCRC control.

- (f) FCRC shall assure that construction fencing, where required, meets the requirements of the MEC and the applicable Sound Transmission Class specifications of the Noise Code.
- (g) Where construction staging areas used in connection with nighttime work are located within 200 feet of a sensitive receptor, such areas shall be shielded on the side facing those sensitive receptor(s) by Noise Code/MEC-compliant noise mitigating fencing and/or blanketing, where practicable, unless ESD determines that such shielding is not required due to the nature of the activities anticipated in such area, and the duration of such activities.
- (h) FCRC shall make available double-glazed or storm windows and alternative ventilation (e.g., air conditioning, through the provision of one air conditioner per bedroom or main living room with a window along a façade predicted to experience significant adverse construction noise impacts) for those residential locations where the FEIS or FSEIS identified significant noise impacts and such windows and air conditioning are not currently installed, subject to the consent of the owners and tenants of such residences, and subject to applicable laws, rules and regulations. All such windows and alternative ventilation shall be provided without charge and with free installation. In the event that an air conditioning unit required to be provided pursuant to this paragraph requires replacement, FCRC shall replace the unit if Project-related construction activities in the vicinity of such residential location have not yet been completed such that the location would be subject to continued construction-related significant adverse noise impacts.
- (i) As described in the FEIS, and subject to the consent of the respective property owners, FCRC shall make available and install, free of charge (i) interior-fitted storm windows (or suitable alternative windows) for the Pacific Street side of the Pacific Branch of the Brooklyn Public Library and (ii) storm windows for the second floor of the Temple of Restoration windows facing Dean Street (if such windows do not already have storm windows).
- (j) FCRC shall work with the Parks Department to supplement its planned improvements to the Dean Playground with a comfort station open to the general public.

- (k) Noise mitigation measures shall be implemented – where such measures have been accepted by building owners and their tenants – in a timely manner so as to avoid the significant adverse noise impacts identified in the FEIS and FSEIS where practicable.
- (l) FCRC shall implement a monitoring program to ensure that vibration levels at the Swedish Baptist Church and the town houses along Dean Street immediately adjacent to the Project’s Building 15 site are kept below 0.50 inches/second.

9. Air Quality

- (a) Prior to the commencement of construction activities for each major work phase, FCRC or its contractor(s) shall prepare a Dust Management Plan that identifies: the location of the fixtures to be used in controlling dust at the site (including without limitation hydrants or other points of water supply), any wheel washing stations, gravel placement locations, hoses, dust suppression agents and any other equipment and material to be used in complying with the dust suppression requirements of the MEC. FCRC shall require its contractors to adhere to such plans. ESD and the ESD Environmental Monitoring Firm shall be provided with the opportunity to comment on the Dust Management Plan and require revisions if warranted, prior to its implementation in the field.
- (b) FCRC and its contractors shall assign sufficient staff to allow for careful monitoring of contractor compliance with MEC dust control measures, and staffing will be keyed to the level of dust-generating construction activities at the site. Staffing levels will be assessed in the six month look aheads and discussed at the weekly meetings with the ESD Environmental Monitoring Firm.
- (c) OEM personnel will follow the manufacturer’s recommendations for operation and maintenance of the air monitoring equipment, and routine inspections of the equipment will be performed to ensure functionality. OEM personnel will follow the best management practices previously recommended by the ESD Environmental Monitoring Firm in operating this equipment, or equally effective procedures.
- (d) FCRC shall require its contractors to implement dust suppression measures, including the following:
  - i. Limiting on-site speed to five miles per hour. Signage of the 5-mile per hour limit shall be posted at all site entrances and along routes within the sites.

- ii. Using sleeves and wetting during demolition activities, and wetting equipment. All demolition activities, including but not limited to building, roadway, and pavement demolition, shall utilize dust suppression. All drop transfer operations shall be via closed sleeves and into sealed bins. Sleeves shall have no openings other than the loading chute. During all breaking up of material such as concrete, an employee shall be assigned to wet the surface while the activity is taking place.
- iii. Watering unpaved surfaces, including haul roads and excavation faces. Gravel cover shall be applied to unpaved surfaces which are regularly traveled. Unless gravel cover is applied, unpaved haul roads and excavation surfaces shall be adequately watered by watering trucks or misting, so that surfaces remain damp when in use during construction. If watering activities are not practicable due to below-freezing conditions or other safety considerations, alternate dust suppression techniques may be utilized such as broom sweeping of truck tires and the use of other dust suppression agents. The Dust Management Plan shall address such alternate dust suppression techniques.
- iv. Adequately moistening or covering by a tarp, dust suppression agent or other effective means any soil stockpiled on site. This requirement will be specifically incorporated into the training materials for the relevant contractors. Stockpiles of contaminated material shall be managed in accordance with the HASP approved by NYSDEC, NYCDEP or OER, as applicable.
- v. Accompanying the loading of dry material that may release dust from trucks with manual water spraying of the material, when feasible.
- vi. Covering all trucks carrying loose material such as debris, excavate or fill, and verifying that covers on all such trucks have been properly sealed. Outgoing trucks shall be inspected by the contractor at the gate, and not allowed to exit if covers are not properly sealed.
- vii. Washing the wheels of all trucks as they exit from the site. A washing station shall be constructed at each truck exit, whereby truck wheels shall be washed, and the water shall be contained and recycled to avoid tracking mud out of the site. If construction of a wheel washing station is not practicable at a construction site exit due to site conditions,

the circumstances giving rise to any claim of impracticability shall be set forth in the relevant Dust Management Plan, and in such circumstances, the Dust Management Plan prepared by FCRC or its contractor shall include a substitute program for wheel cleaning that will achieve equivalent results, taking into account weather conditions, space availability, site pitch, catch basin location and other relevant factors.

- (e) FCRC shall implement a diesel emissions reduction program, which shall include minimizing the use of diesel engines and maximizing the use of electric engines in lieu of diesel. In particular, FCRC shall:
  - i. ensure sufficient grid power is available to each site as early as practicable;
  - ii. ensure the distribution of power throughout the Project at all locations where electric engines are to be used, in order to avoid the use of portable or stationary generators where practicable;
  - iii. use only electric engines where practicable (e.g., welders, compressors, electric saws, forklifts, etc.);
  - iv. ensure that all contractors plug into the grid where available and do not use portable generators (diesel or gasoline, small or large); and
  - v. ensure that generators will not be used for tasks where grid power is available, and that diesel engines will not be used for tasks that can be performed with electric engines.
- (f) FCRC shall require its contractors to limit all unnecessary idling of vehicles and non-road engines, ensure that engines are shut off when not in use, and enforce idling limits on queuing trucks.
- (g) FCRC shall require the use of ultra-low sulfur diesel (“ULSD”) fuel (i.e., fuel having less than 15 parts per million (15 ppm) sulfur content) for all equipment having diesel engines.
- (h) FCRC shall employ best available tailpipe emissions reduction technologies, including utilization of diesel particulate filters (“DPF”) (or, subject to ESD approval, improved technologies verified by EPA or the California Air Resources Board to reduce particle emissions by at least 90%) on all nonroad engines of 50 hp or greater and on all concrete trucks and concrete pump trucks. All nonroad engines used for the construction work shall be inspected

and labeled where practicable to confirm that DPF (or approved alternative technology) is installed and functioning and that the engine is to be fueled only with ULSD.

- (i) All non-road construction equipment with a power rating of 50 hp or greater shall meet at least the Tier 3 emission standard. All non-road diesel engines rated less than 50 hp shall meet at least the Tier 2 emission standard. This paragraph shall not apply to the construction of Building 2, Building 3 or rail yard construction.
- (j) All non-road construction equipment with a power rating of 50 hp or greater shall meet the Tier 4 emissions standard beginning in 2022.
- (k) FCRC shall bar any non-complying equipment from the work site or expeditiously bring into compliance any equipment found to not be in compliance. Notwithstanding the foregoing:
  - i. with respect to a specific nonroad engine of 50 hp or greater, the requirement to use a DPF (or other technology proven to achieve equivalent emissions reduction) may be waived by the OEM upon notice to ESD where the equipment is: (a) determined on very short notice to be necessary to complete a critical path item; (b) to remain on site for a very brief period of time; or (c) not practicable to retrofit with a DPF (or other technology proven to achieve equivalent emissions reduction) and DPF-compliant equipment of that type is not practicably available;
  - ii. if with respect to any equipment subject to the Tier 3 or Tier 4 requirement, it is determined that such equipment is not practicably available for the type of equipment required for construction, equipment otherwise in compliance with MEC requirements may be used.
- (l) As one element of the MEC training program, contractors will be instructed on how to complete and submit the documentation needed to confirm compliance with the diesel particulate matter reduction technology requirements of the MEC. Such instruction will be provided at a level of detail commensurate with the training needs of the contractors on the site.
- (m) Where practicable, all equipment subject to the DPF (or equivalent) emission control requirements of the MEC shall be prominently labeled with a label prepared by FCRC that indicates that the equipment has a DPF (or equivalent emission control technology) that complies with the MEC emission control

requirement. ESD and the ESD Environmental Monitoring Firm shall be given the opportunity to review the form of label before it is used in the field. Information on how to label compliant equipment will be provided as part of contractor training. Additional labels are not required for equipment with USEPA labels indicating that the emission controls on such equipment satisfy requirements that are at least as stringent as those required by the MEC

- (n) To the extent practicable, FCRC shall require that all stationary engines be located at least 50 feet from locations such as sidewalks, residential or school windows, and building air intakes.

10. Construction Air Quality Measures Compliance Plan

- (a) FCRC shall submit to ESD for review and approval, not to be unreasonably withheld, a written plan to adequately and reasonably demonstrate compliance with the foregoing construction air quality measures (the “CAQM”) during construction. The CAQM shall be submitted before intensive construction work at the Project site begins and, if not approved by ESD as submitted, there shall be a consultation between FCRC and ESD with respect to the submission and, after such consultation, the CAQM shall be revised as required to conform to reasonable ESD revisions. Elements of the CAQM shall include: (i) incorporation into construction contracts appropriate terms requiring the contractors to implement the air quality measures contemplated by the FEIS and FSEIS; (ii) periodic meetings between FCRC’s construction manager and the relevant contractors to discuss implementation of the air quality measures; (iii) practicable documentation requirements; (iv) recordkeeping with respect to the equipment and vehicles used during construction; and (v) compliance monitoring by the OEM. If deemed appropriate as construction proceeds, the CAQM may be revised from time-to-time with the written approval of FCRC and ESD.

- (b) The CAQM shall be updated in 2014, and as necessary, thereafter, to reference the contractors and personnel currently working at the project site and to reflect current OEM protocols and procedures. Exhibits to the CAQM shall be updated from time to time as necessary to maintain the effectiveness of the CAQM. Among other things, monitoring logs, visual-observation logs and incident-report logs (examples of which are included, or will be included, as exhibits in the CAQM) will be streamlined to facilitate their daily completion by the MEs. ESD and the ESD Environmental Monitoring Firm will be given the opportunity to review and provide comments on the modified logs prior to their use in the

field. Once the logs have been revised they will be completed by an OEM Engineer or the MEs on a daily basis, or as otherwise set forth in the updated CAQM, and will be compiled and submitted to ESD as attachments to the FCRC Quarterly Report for that period.

11. FCRC shall undertake the following steps to improve the contractor training program:

- (a) FCRC shall target its PowerPoint presentation so that it provides specific instructions to contractors on the requirements of the MEC. ESD and the ESD Environmental Monitoring Firm will be provided with the opportunity to comment on the PowerPoint presentations (and any modifications thereto) prior to their use in contractor training.
- (b) PowerPoint presentations shall be presented by the OEM to all foreman, project managers, field managers (such as project superintendents and foremen) and similar key personnel of all subcontractors every 90 days and upon mobilization, with sign-in sheets to track attendance. Sign in sheets for said 90 day period will be included in the FCRC Quarterly Report for that period.

12. FCRC shall implement a rodent control program in compliance with DOB and NYCDOH requirements and guidelines.

13. FCRC shall maintain an on-site construction coordinator to function as a liaison between FCRC and the community with respect to construction-related issues (the "CLO"). The CLO shall be available to consider specific concerns raised by the community with respect to the construction issues and seek to resolve such concerns. The CLO shall keep a record (log book) of construction-related complaints received by the CLO from the public and efforts taken to resolve such complaints. The CLO shall seek to resolve all complaints or provide relevant information to the person who brought the issue to the CLO's attention within 24-hours or as soon thereafter as is practicable.

14. The FCRC compliance staff for the construction-related requirements of this MEC shall include one or more OEM Engineers and MEs. Each six month look ahead shall include an assessment of staffing levels, and OEM staffing will be adjusted as appropriate in light of anticipated changes to the level of construction activity during future reporting periods. At each weekly meeting with the ESD Environmental Monitoring Firm, the OEM shall provide an update on upcoming after-hour and/or weekend work and make a recommendation as to whether such work requires the presence of an ME. If the ESD Environmental Monitor disagrees with a recommendation that an ME not be present during such activities, and FCRC thereafter disagrees with the position of the ESD Environmental Monitor, FCRC shall bring the matter to ESD's attention so that the issue is resolved before such work occurs.

15. In the event FCRC does not expect to commence construction of a particular portion of the Project site or to use such portion of the Project site for interim parking facilities or construction-related activities, including staging, in each case for a period of time to be set forth in the Project Documentation, then such portion of the project site shall be used as publicly accessible temporary open space, subject to safety and security requirements. FCRC shall improve and develop areas to be used as publicly accessible interim open space in accordance with a design and program subject to the approval of ESD (which is not to be unreasonably withheld), and such open space on the Arena Block shall include amenities such as kiosks, seating areas and landscaping. FCRC shall thereafter operate and maintain such interim public open space in good and clean condition until the property is needed for construction of the Project.

16. In the event that construction of Building 1 is delayed so that the Urban Room will not be completed by the date the arena commences operation, FCRC shall construct an urban plaza at the southeast corner of Flatbush and Atlantic Avenues, in substantially the same location as the location where the Urban Room is to be constructed. The design and program for the urban plaza shall follow the basic use and design principles of the Urban Room as set forth in the Design Guidelines, creating a significant public amenity. The urban plaza shall be a minimum of 10,000 square feet and shall include the following elements: landscaping, retail, seating, the subway entrance and space to allow for formal and informal public uses, such as outdoor performances, temporary markets, art installations and seating. In addition, the plaza may include public art or a prominent sculptural element (such as a canopy or other architectural feature that could be part of the arena and/or the subway entrance). The urban plaza shall be completed and available for public use upon the date of the opening of the arena. Thereafter, FCRC shall operate and maintain the urban plaza in good and clean condition, until such time as the area occupied by the urban plaza is required for construction of Building 1 or the Urban Room.

17. In the event development of Building 1 is delayed so that it will be constructed after the arena commences operation, FCRC shall, for the period of construction of Building 1: (i) relocate the main arena entrances to the north and east side of the arena; (ii) provide directional signage at various point on the arena block, indicating routes to the arena's entrances and amenities; and (iii) erect pedestrian construction sheds protecting, among other areas, the subway entrance and pedestrian walkways and sidewalks on the arena block.

18. FCRC shall screen the construction staging area and interim parking areas on Blocks 1120 and 1129 with fencing and landscaping installed in accordance with a plan subject to the approval of ESD, which is not to be unreasonably withheld. If an interim construction staging or parking facility is equipped with lighting, it shall be directional lighting angled to limit light intrusion beyond the site and shall employ controls to reduce lighting during periods when the facility is not in active use, consistent with site security. The screening measures required herein shall be properly maintained so long as such facilities remains in operation. Subject to LIRR requirements, lighting for Project-related construction work in the rail yard shall also be directional lighting angled to limit light intrusion beyond the rail yard and shall employ controls to

reduce lighting during periods and in areas when such lighting is not needed for construction, consistent with site security.

19. FCRC shall comply with applicable construction stormwater requirements of NYSDEC and NYCDEP during all phases of construction.

20. Should there be periods in which there are temporary cessations of site construction, there shall be no major equipment stored on the site; however, the project sites would be maintained and secured.

21. Where feasible and practicable, for construction sites east of 6<sup>th</sup> Avenue, construction fencing facing Vanderbilt Avenue, Dean Street, Carlton Avenue, Pacific Street or 6<sup>th</sup> Avenue shall be visually enhanced with temporary art displays curated by Artbridge or a similar organization if such fencing is to remain in place for more than one year. This requirement does not apply to the landscaped screening currently in place around the temporary parking lot on Block 1129.

22. Temporary parking and construction staging areas, if paved or otherwise required by law, shall have on-site detention systems equipped with standard NYCDEP Type 2 catch basins with oil water separators, as required by NYCDEP.

## **O. ENFORCEMENT**

1. The Project Documentation shall provide that ESD shall have the right to enforce FCRC's compliance with the commitments set forth above.

2. ESD shall have the right to enter the Project site at all reasonable times, subject to safety and operational constraints, to monitor FCRC's and FCRC's contractors' compliance with the terms of such commitments.

3. FCRC and FCRC's general contractor shall meet with ESD, at ESD's request, to discuss the compliance and implementation of the obligations and measures set forth in this memorandum.

4. FCRC shall include in its construction contracts, and require its contractors to include in all subcontracts, an exhibit incorporating an excerpt from the MEC that sets forth all construction-related requirements contained in that document. FCRC's construction contracts shall expressly require each contractor to comply with all of the terms of the MEC that apply to its construction activity, and to require its subcontractors to do the same. FCRC shall add to its standard MEC-related contractual terms a provision that reiterates FCRC's remedies for a contractor's non-compliance with the MEC, including the rights to withhold payment or terminate the contract; such provision, however, shall be in addition to other remedies available to FCRC to address any contractor's non-compliance with an MEC requirement. FCRC shall cause its contractors to address any substantive non-compliance with the MEC within 7 days after written notice thereof by ESD, or shall promptly advise ESD in writing as to why FCRC does not agree that a non-compliance has occurred (or why the matter cannot be addressed within a 7-day period and the time period FCRC believes is needed to address

this issue, in which case FCRC shall cause its contractors to address any substantive non-compliance with the MEC as soon as is practicable under the circumstances). In the event that a non-compliance has not been disputed by FCRC (or is disputed but is subsequently determined to be a non-compliance after further discussion between ESD and FCRC) and the contractor does not promptly address such non-compliance, FCRC shall utilize one or more of the remedies contained in its agreements with the non-complying contractor and shall advise ESD of the steps taken under the contract to address the non-complying condition.

5. During the period in which the Project buildings, or any one of them, are being constructed, FCRC shall provide funding for the reasonable costs of an environmental monitor (which shall be a qualified consulting firm with subconsultants, as appropriate, the “ESD Environmental Monitoring Firm”) to be selected by and retained by ESD to: (i) monitor FCRC’s compliance with certain provisions of this memorandum; (ii) review any submittals made by FCRC pursuant to such provisions and advise ESD with respect thereto; and (iii) provide ESD with periodic written reports concerning FCRC’s implementation of such provisions. The certain provisions referred to in the preceding sentence are paragraphs: C.3 (pertaining to Day Care); E (with respect to protection of cultural resources near the project site from being impacted by construction on the project site); G.2 (pertaining to Hazardous Materials); I.8 (pertaining to reviewing the effectiveness of any modified design for stormwater management facilities); J.2 (pertaining to reviewing alternative fuels or boiler technologies); J.4 (pertaining to the review of any proposed adjustment to the location of the Building 3 stack); J.5 (pertaining to review of any proposed installation of a fossil fuel-fired boiler in the public school); J.6 (pertaining to review of the location of HVAC intakes in the event that the design of the relevant Project buildings changes from the design subject to air dispersion modeling in the FEIS); J.8 (pertaining to review of any proposed reduction in specified window wall attenuation levels); J.9 (pertaining to review of designs to confirm compliance); K.6 (pertaining to decisionmaking with respect to the funding of TEAs in the event that FCRC and NYCDOT do not reach agreement on this issue); L.2 (pertaining to the potential adjustment of demand management measures as a result of the evaluation to occur in the 10<sup>th</sup> and 20<sup>th</sup> basketball season at the arena); and N (pertaining to construction). The obligation set forth in this paragraph shall cease upon completion of the Project buildings. This memorandum shall not make FCRC responsible for the cost or time expended by any ESD personnel or consultant otherwise hired by or in the employment of ESD. This memorandum is without prejudice to other funding discussions that may occur between ESD and FCRC.

6. Where ESD review and approval is required under this memorandum, ESD shall review, comment and make its determination on an expedited basis where practicable but in any event within twenty (20) days of the date a request for ESD approval is made. In the event ESD has not acted on any request within such twenty (20) day period, such request shall be deemed approved by ESD.