boston planning & development agency

December 14, 2018

Gary W. Nicksa
Senior Vice President for Operations
Boston University
One Silber Way
Boston, MA 02215

Re: **Scoping Determination for the proposed Amendment to the Boston University Institutional Master Plan and Proposed Data Sciences Center**

Dear Mr. Nicksa:

Please find enclosed the Scoping Determination for the proposed Amendment to the Boston University ("BU") Institutional Master Plan and Proposed Data Sciences Center Project. The Scoping Determination describes information required by the Boston Planning & Development Agency in response to the Institutional Master Plan Notification Form/Project Notification Form ("IMPNF/PNF"), which was submitted under Article 80D and Article 80B of the Boston Zoning Code on October 1, 2018 by BU. Additional information may be required during the course of the review of the proposals.

If you have any questions regarding the Scoping Determination or the review process, please contact me at (617) 918-5303.

Sincerely,

Tim Czerwienski
Project Manager

BOSTON REDEVELOPMENT AUTHORITY
D/B/A BOSTON PLANNING & DEVELOPMENT AGENCY

SCOPING DETERMINATION

FOR

BOSTON UNIVERSITY
INSTITUTIONAL MASTER PLAN AMENDMENT/ DRAFT PROJECT IMPACT REPORT
DATA SCIENCES CENTER PROJECT

PREAMBLE

On October 1, 2018, Boston University ("BU") submitted to the Boston Planning & Development Agency ("BPDA") an Institutional Master Plan Notification Form / Project Notification Form ("IMPNF/PNF") seeking an amendment to the BU Institutional Master Plan ("IMP Amendment") and detailing the Data Sciences Center Project totaling approximately 305,000 square feet to be on a site bounded by Commonwealth Avenue, Granby Street, a private alley, and the Sargent College of Health and Rehabilitation Sciences ("Proposed Project").

The BPDA will review the proposed IMP Amendment and Draft Project Impact Report ("DPIR") pursuant to Sections 80D and 80B of the Boston Zoning Code ("Code"). As part of the BPDA's Article 80 review, BU is required to prepare and submit to the BPDA a proposed IMP Amendment pursuant to Section 80D and a proposed Draft Project Impact Report pursuant to Section 80B. The document/s must set forth in sufficient detail the planning framework of the institution and the cumulative impacts of the Proposed Project included in the IMP Amendment to allow the BPDA to make a determination about the merits of the proposed IMP Amendment and Proposed Project. **The proposed IMP Amendment and Draft Project Impact Report shall contain the information necessary to meet the specifications of Article 80 as well as any additional information requested below.**

Copies of the IMPNF/PNF were made available to the public in both electric and hard copy format. A scoping session was held on October 23, 2018 with public agencies. A public meeting was held on October 23, and a BU Task Force meeting was held on October 24, both at the BU Questrom School of Business. The comment deadline for the IMPNF/PNF was October 31, 2018.

Based on review of the IMPNF/PNF, related comments, as well as a scoping session and public meeting, the BPDA hereby issues its written Scoping Determination ("Scope") pursuant to Section 80D and Section 80B the Code. BU is requested to respond to the specific elements outlined in this Scope. Written comments constitute an integral part of the Scoping Determination and should be responded to in the IMP Amendment, Draft Project Impact Report or in another appropriate manner over the course of the review process. At other points during the public review of the IMP Amendment and Draft Project Impact Report, the BPDA and other City agencies may require additional information to assist in the review of the Proposed IMP Amendment and Draft Project Impact Report.

To facilitate the preparation and review of the two documents referenced above, the Scope contains two discrete sections: one setting forth the submission requirements for the IMP Amendment, and another setting forth the submission requirements for the DPIR. When appropriate, information requested in one section may be provided in the submission that responds to the other section.

In addition to the specific submission requirements outlined in the sections below, the following general issues should be noted:

- All development projects have construction impacts. As with any urban development there needs to be a balance of constructions related inconveniences with the daily activities that will continue to occur adjacent to the project site. A detailed approach to the construction management must be included in the DPIR.

- Throughout this initial phase of review, the Proponent has taken steps to meet with local residents, elected officials, abutters, and City and State agencies. These conversations must continue, ensuring that what is presented in the DPIR is beneficial to the adjacent neighborhoods and the City of Boston as a whole.

- The BPDA encourages the Proponent to continue to work closely with City agencies including the Boston Transportation Department ("BTD") and the Parks and Recreation Department.

- BPDA Staff comments are included as Appendix 1. Comments from other agencies and the general public are included as Appendix 2. The DPIR should include a response to these comments.

SUBMISSION REQUIREMENTS

FOR THE

BU IMP AMENDMENT

The Scope requests information required by the BPDA for its review of the proposed IMP Amendment in connection with the following:

1. Approval of the BU IMP Amendment pursuant to Article 80D and other applicable sections of the Code.

2. Recommendation to the Zoning Commission for approval of the BU IMP Amendment.

The BU IMP Amendment should be documented in a report of appropriate dimensions and in presentation materials which support the review and discussion of the IMP Amendment at public meetings. Ten (10) hard copies of the full report should be submitted to the BPDA, in addition to an electronic version in .pdf format. Hard copies of the document should also be available for distribution to the BU Task Force, community groups, and other interested parties in support of the public review process. The IMP Amendment should include a copy of this Scoping Determination. The IMP Amendment should include the following elements:

1. MISSION AND OBJECTIVES

- **Organizational Mission and Objectives.** Define BU's institutional mission and objectives, and describe how the development contemplated or proposed in the IMP Amendment advances the stated mission and objectives
- **Major Programs and Initiatives.** Update any major programs or initiatives that will drive physical planning in the future. Included in the description should be current and future trends that are impacting BU and shaping program objectives, employment numbers, number of beds, etc. Provide any updates to BU's current employee population, disaggregated by faculty/staff, full-time/part-time, Boston residents/non-residents, as well as projected employment over the term of the renewed IMP.

2. EXISTING PROPERTY AND USES

The IMP Amendment should present applicable updated maps, tables, narratives, and site plans clearly providing the following information:

- **Owned and Leased Properties.** Provide an updated inventory of land, buildings, and other structures in the City of Boston owned or leased by BU as of the date of submission of the IMP Amendment, with the following information for each property.

    - Illustrative site plans showing the footprints of each building and structure, together with roads, sidewalks, parking, and other significant improvements.
    - Land and building uses.
    - Building gross square footage and, when appropriate, number of dormitory beds or parking spaces.
    - Building height in stories and, approximately, in feet, including mechanical penthouses.
    - Tenure (owned or leased by BU).

3. PROPOSED PROJECT

Article 80D Requirements. Pursuant to Article 80D, the IMP Amendment should provide the following information for the Proposed Project:

- Site location and approximate building footprint.
- Uses (specifying the principal subuses of each land area, building, or structure, such as classroom, laboratory, parking facility).
- Square feet of gross floor area.
- Square feet of gross floor area eliminated from existing buildings through demolition of existing facilities.
- Floor area ratio.
- Building height in stories and feet, including mechanical penthouses.
- Parking areas or facilities to be provided in connection with Proposed Projects;
- Any applicable urban renewal plans, land disposition agreements, or the like.
- Current zoning of site.
- Total project cost estimates.
- Estimated development impact payments.
- Approximate timetable for development of proposed institutional project, with the estimated month and year of construction start and construction completion for each.

Rationale for Proposed Project. Discuss the rationale for the program and location of proposed buildings in light of discussions on mission, facilities needs, and campus planning objectives. Discuss the rationale for the scale of the proposed building.

4. PLANNING FRAMEWORK

This section should discuss, at a minimum, the following:

- **Existing Context.** Describe BU's place in the broader context of adjacent land uses, and the surrounding neighborhoods. Reference any City policies or plans that shape the planning context for the area and for BU.
- **Factors Driving Facilities Needs.** Provide any update since filing the IMP of current facilities utilization rates and BU's ability to accommodate patient number growth with existing facilities, by type of facility.
- **Campus Vision and Identity.** Describe any updates to BU's vision of its desired physical identity and, in general terms, strategies for achieving that identity.
- **Overview of Urban Design Guidelines and Objectives.** Discuss any current or new urban design guidelines and objectives that have emerged and strategies for implementing them in conjunction with the Proposed Project or in the future.
- **Public Realm.** Discuss any updates to the existing public realm conditions (i.e. parks, plazas, streetscapes) in the vicinity of BU facilities, regardless of ownership. Discuss key urban design and public realm goals and objectives proposed by BU for the campus, with a focus on creating a high-quality interface between the campus and the surrounding neighborhoods and transit stations.
- **Signage Master Plan.** BU should develop a signage master plan for the campus that would address building and wayfinding signage. This will help present a unified identity to the public and will help expedite signage review.
- **Pedestrian Circulation Goals and Guidelines.** Provide a statement of goals and guidelines for pedestrian circulation both within and through BU's campus and in relation to the Proposed Project.

5. TRANSPORTATION AND PARKING MANAGEMENT / MITIGATION PLAN

The following submission requirements relate to the proposed IMP Amendment; the DPIR will be required to present more specific information on the transportation impacts of the Proposed Project. In addition to the submissions detailed in this Scope, BU should continue to work closely with the Boston Transportation Department ("BTD") to outline an appropriate scope for studying and mitigating any transportation impact of the Proposed Project.

- **Existing Conditions.** Provide any updates to BU's existing transportation and parking characteristics, including data on mode share for employees, parking spaces owned and operated by BU, and policies regarding patient, visitor and employee parking, transportation demand management measures in place, etc.
- **Impact of New Project.** Discuss the impact of the Proposed Project on parking demand and supply.

6. ECONOMIC DEVELOPMENT

The IMP Amendment should address the following topics:

- **Employment and Workforce Development.** Provide any updates to existing and proposed programs to train and hire Boston residents for BU jobs.

7. COMMUNITY BENEFITS PLAN

The IMP Amendment should describe any updates to BU's Community Benefits Plan since the approval of the IMP and in relation to the Proposed Project and IMP Renewal.

8. ENVIRONMENTAL SUSTAINABILITY

The City of Boston expects a high level of commitment to principles of sustainable development from all developers and institutions. BU's Proposed Project provides exciting opportunities for innovation and excellence. BU will be expected to work with the BPDA, the City of Boston Environment Department, and others to set and meet ambitious environmental sustainability goals in the design of the Proposed Project. The IMP Amendment should present as much information as possible on the topics below, with the understanding that not all of them may be relevant at this current time. Additional topics related to sustainability are included in the DPIR Scope for the Proposed Project.

- **Existing Sustainability Measures.** Update if applicable BU's existing sustainability measures at the building and campus-wide level, including but not limited to energy, stormwater, solid waste, transportation, and infrastructure and utilities. Explain the administrative structure for making decisions about and promoting innovation in the area of building a sustainable campus. Describe any formal goals or principles that BU has adopted in the area of sustainability since the approval of the IMP.
- **Green Building.** New campus buildings should achieve a superior level of performance in the areas of materials and resources (recycled content, construction waste management, local/regional materials), energy (energy performance, renewable energy), water management (water efficiency, stormwater management, graywater and stormwater recycling, etc.), indoor environmental quality, and other standard performance areas of high-performance or "green" buildings. Whenever possible, buildings should achieve a high level of certification through LEED or another appropriate system.
- **Energy Use.** Future campus development should consider the impact of new buildings on the existing heating and cooling infrastructure. Reducing the current energy use of existing buildings should be addressed prior to expanding or building new power plants. Planning should consider the possible benefits of localized heating and cooling systems within a section of the campus or within an individual building, allowing for alternative energy sources to be easily explored.
- **Water Use.** Future campus development should incorporate water use, conservation, and rainwater harvesting strategies at a campus level. New construction allows

opportunities for storage systems to be installed for use by the new and adjacent buildings. Collected water can be used for flushing, HVAC make-up water, and irrigation.

- **Stormwater Retention/Treatment/Reuse and Groundwater Recharge.** BU's development should go beyond the minimum requirements related to stormwater runoff. In particular, the new developments proposed as part of this IMP Amendment should set a goal of reducing stormwater discharge from the sites into the storm sewers, not simply avoiding any additional runoff. This goal should be considered in conjunction with strategies for reuse of retained stormwater and strategies for groundwater recharge. Individual building design, site design, and street-level interventions should all maximize the opportunities for stormwater retention, treatment, and reuse, as well as groundwater recharge, through innovative approaches. To the extent possible, the systems put in place should strive to work with the natural hydrology of the area.
- **Solid Waste.** Campus master planning should set the goal of reducing the level of solid waste generation in both the construction and operation of buildings.

9. OTHER

- **Public Notice.** BU will be responsible for preparing and publishing in one or more newspapers of general circulation in the city of Boston a Public Notice of the submission of the IMP Amendment to the BPDA as required by Section 80A-2. This Notice shall be published within five (5) days after the receipt of the IMP Amendment by the BPDA. In accordance with Article 80, public comments on the IMP Amendment shall be transmitted to the BPDA within sixty (60) days of the publication of this notice. A sample form of the Public Notice is attached as Appendix 3. Following publication of the Public Notice, BU shall submit to the BPDA a copy of the published Notice together with the date of publication.

SUBMISSION REQUIREMENTS

FOR

BOSTON UNIVERSITY

DATA SCIENCES CENTER PROJECT
DRAFT PROJECT IMPACT REPORT

The Scope requests information required by the BPDA for its review of the Proposed Project in connection with the following:

1. Certification of Compliance and approval of the Proposed Project pursuant to Article 80, Section 80B of the Code.

2. Certification of Consistency with the BU Institutional Master Plan pursuant to Article 80, Section 80D-10 of the Code.

The requirements below apply to the Draft Project Impact Reports (DPIRs) for the Proposed Project.

Subsequent to the end of the forty-five (45) day public comment period on the DPIR, the BPDA will issue a Preliminary Adequacy Determination ("PAD") that indicates the additional steps necessary for BU to satisfy the requirements of the Scoping Determination and all applicable sections of Article 80 of the Code. If the BPDA finds that the DPIR adequately describes the Proposed Projects' impacts and, if appropriate, propose satisfactory measures to mitigate, limit or minimize such impacts, the PAD will announce such a determination and that the requirements for the filing and review of a Final Project Impact Report ("FPIR") are waived pursuant to Section 80B-5.4(c)(iv) of the Code. Before reaching said findings, the BPDA shall hold a public hearing pursuant to Article 80 of the Code. Sections 80B-6 and 80D-10 require the Director of the BPDA to issue a Certification of Compliance and a Certification of Consistency, respectively, before the Commissioner of Inspectional Services can issue any building permit for the Proposed Project.

The DPIR may be consolidated with the IMP Amendment. In addition to full-size scale drawings, ten (10) hard copies of the full bound report should be submitted to the BPDA, in addition to an electronic version in .pdf format. Hard copies of the document should be available for distribution to the BU Task Force, community groups, and other interested parties in support of the public review process. The report should contain all submission materials reduced to size 8-1/2"x11", except where otherwise specified, and should be printed on both sides of the page. A copy of this Scoping Determination must be included in the report submitted for review.

The DPIR should include the following elements.

1. GENERAL INFORMATION

- **Applicant/Proponent Information.** Pursuant to Article 80B, the DPIR should provide the following information:

  - Development Team
    - Names of developer(s), including description of development entity(ies), attorney, project consultants and architects.
    - Business address, telephone number, fax number and e-mail, where available, for each.
    - Designated contact for each.
  - Legal Information
    - Legal judgments or actions pending concerning the Proposed Project
    - History of tax arrears on property owned in Boston by Applicant.
    - Evidence of site control over project area, including current ownership and purchase options of all parcels in the Proposed Project, all restrictive covenants and contractual restrictions affecting the Proponent's right or ability to accomplish the Proposed Project, and the nature of the agreements for securing parcels not owned by the Applicant.
    - Nature and extent of any and all public easements into, through, or surrounding the site.

- **Disclosure of Beneficial Interests.** Disclosure of Beneficial Interests in the Proposed Project must be provided pursuant to Section 80B-8 of the Boston Zoning Code.
- **Regulatory Controls and Permits.** The DPIR shall include an up-to-date listing of all anticipated permits or approvals required from other municipal, state or federal agencies, including a proposed application schedule. A statement on the applicability of the Massachusetts Environmental Policy Act ("MEPA") should be provided. If the Proposed Project is subject to MEPA, all required documentation should be provided to the BPDA, including but not limited to, copies of the Environmental Notification Form, decisions of the Secretary of Environmental Affairs, and the proposed schedule for coordination with BPDA procedure.

2. PROJECT DESCRIPTION

- **Project Site.** The DPIR shall include a complete description of the Project Site including, at minimum, square footage of the site, a map indicating the boundaries, a legal description including metes and bounds, existing site conditions, and the surrounding development context, i.e. a description of the surrounding environment including the height, other dimensions, use, and other relevant characteristics of existing nearby buildings, as well as an inventory of surrounding proposed projects. Only projects that

have completed or are currently undergoing Article 80 review should be included and should be included as proposed in their filings at the Boston Planning & Development Agency. The Project Site, as defined in the DPIR, must be utilized for each Project Description and for any calculations or comparisons.

- **Project Description.** The DPIR shall contain a full description of the Proposed Project and any alternative(s) and their elements, including size, physical characteristics, FAR (utilizing the definition for calculation as provided for in the Boston Zoning Code), and proposed uses, including any uses planned or considered for all elements of the project during the summer months.

3. PROJECT ALTERNATIVES

The analyses as provided for in the Transportation Component, Environmental Protection Component, and Urban Design Component sections of this Scoping Determination, as well as any additional analysis specified by the BPDA, shall be required for the following alternatives:

- **Alternative 1.** No build as a means of measuring the baseline.
- **Alternative 2.** A compliant project according to the underlying zoning.
- **Alternative 2.** A compliant project according to the existing IMP
- **Alternative 4.** See Urban Design comments for alternates.

4. TRANSPORTATION COMPONENT

The DPIR shall include a detailed traffic and transportation analysis that examines the Proposed Project's impact on the transportation network and proposes measures intended to mitigate, limit, or minimize any adverse impact reasonably attributable to the Proposed Project. The scope of the analysis must utilize as its framework the Transportation Access Plan guidelines to be further defined in consultation with the Boston Transportation Department ("BTD"). Pursuant to Section 80B-3.1 of the Boston Zoning Code, this section of the DPIR should contain, at a minimum, the following elements. Additional questions and required submissions have been added to the baseline requirements of Article 80 based on concerns specific to the project and on comment letters. Not all items will apply to the Proposed Project. Please reach out to the Boston Transportation Department to discuss attached comment letter.

- **Traffic Management Element.** BU shall work with BTD to identify applicable items of study:

    - Identify the Proposed Project's impact on the transportation network from expected travel volumes, vehicle trip generation, and directional distribution; the location of loading and unloading activities, including service and delivery; the Proposed Project's impact on the vehicular and circulation systems within the impact area, including the

number and type of vehicles, pedestrians, and bicyclists, vehicle occupancy rates (VOR), and the Proposed Project's impact on road corridors and intersection capacities, including Levels of Service and intersection delays from 6:00 a.m. to 8:00 p.m. and for any other times of day that significant activity is anticipated in the Proposed Project.

- Inventory, map, and discuss on- and off-street loading, provide estimates of the level of loading and delivery activity, and describe in detail any special loading policies and procedures to be implemented.
- Identify mitigation procedures that are intended to mitigate, limit, or minimize the number of vehicle trips generated by the development, and the Proposed Project's interference with the safe and orderly operation of the transportation network; such measures may include an on-site traffic circulation plan, flexible employee work hours, dissemination of transit information, changes in traffic patterns, and full or partial subsidies for public mass transit.
- The DPIR shall describe Transportation Demand Management ("TDM") measures that are being considered for the Proposed Project.
- Review provisions for service and emergency vehicle access to the proposed dormitory building.

- **Parking Management Element.** BU shall work with BTD to:

  - Identify the location of proposed drop-off/pick-up, short-term parking, loading, and queuing for both autos and trucks. If no queuing area is available for trucks, identify steps to be taken to avoid negative impacts, referencing the projected frequency of delivery activity and any operational procedures to ensure that deliveries are adequately timed and spaced out.
  - Identify the demand created by the Proposed Project for tenant, commuter, and short- and long-term visitor parking; non-tenant and other parking needs within the Impact Area; and evening and weekend parking needs
  - Include operational policies and strategies for the Proposed Project that address the location, cost, and number of public, private, high-occupancy vehicle, and special-needs parking demand; short-term and long-term space availability; pricing structure of parking rates; location and type of off-site parking; and methods of transporting people to the site from off-site parking;
  - Document parking impacts of the Proposed Project. Describe alternative off-street parking locations for displaced parkers as necessary.

- **Article 80 Construction Management Element.** The Construction Management Element shall, at a minimum:

  - Identify the impact from the timing and routes of truck movement and construction deliveries for the Proposed Project; proposed street closings; and the need for employee parking.

- Identify, and provide a plan for implementing, mitigation measures that are intended to mitigate, limit, or minimize, to the extent economically feasible, the construction impact of the Proposed Project by limiting the number of construction vehicle trips generated by the Proposed Project, the demand for construction-related parking (both on-site and off-site), and the interference of building construction with the safe and orderly operation of the Transportation Network, such measures to include the use of alternative modes of transport for employees and materials to and from the site; appropriate construction equipment, including use of a climbing crane; staggered hours for vehicular movement; traffic controllers to facilitate equipment and trucks entering and exiting the site; covered pedestrian walkways; alternative construction networks and construction planning; and restrictions of vehicular movement
- Designate a liaison between the Proposed Project, public agencies, and the surrounding residential and business communities.

- **Pedestrian Analysis.** Address the adequacy of sidewalks and other pedestrian infrastructure in the area of the Proposed Projects and potential safety issues at pedestrian crossings. Propose improvements to facilitate pedestrian circulation to and around the Proposed Project and ways that development can improve the overall pedestrian circulation system of the campus.
- **Mitigation.** Identify measures to mitigate any transportation impacts identified in the preceding sections.

5. ENVIRONMENTAL PROTECTION COMPONENT

The DPIR shall contain an Environmental Protection Component as outlined below. Opportunities for sustainable design, as well as other issues, are described in the written comments from public agencies. These comments are included in Appendix 1 and are incorporated herein by reference and made a part hereof. The analyses as provided for in the Environmental Protection Component section of this Scoping Determination shall be required for each of the alternatives.

- **Wind.** A quantitative wind tunnel analysis of the potential pedestrian level wind impacts shall be required for the DPIR. Wind sensor locations need to be approved by BPDA Environmental review and BPDA Urban Design before the test is done This analysis shall determine potential pedestrian level winds adjacent to and in the vicinity of the project site and shall identify the projected annual wind speeds for each season at each location. Expected wind levels should be reported using the amended Melbourne scale. The DPIR shall identify any areas where wind velocities are expected to exceed acceptable levels, including the BRA's guideline of an effective gust velocity of 31 mph not to be exceeded more than 1% of the time.

Particular attention shall be given to areas of pedestrian use, including, but not limited to, the entrances to the proposed buildings and existing buildings in the vicinity of the Proposed Project, the sidewalks and walkways within and adjacent to the Proposed Project development and in the vicinity of the proposed development. Specific locations to be evaluated shall be determined in consultation with the BRA and the City of Boston Environment Department.

For areas where wind speeds are projected to exceed acceptable levels, measures to reduce wind speeds and to mitigate potential adverse impact shall be identified and tested in the wind tunnel to quantify the expected benefit. Should the qualitative analysis indicate the possibility of excessive or unacceptable pedestrian level wind speeds, additional study may be required.

The wind tunnel testing shall be conducted in accordance with the following guidelines and criteria:

- Data shall be presented for both the existing (no-build) and for the future build scenario(s) (see above).
- The analysis shall include the mean velocity exceeded 1% of the time and the effective gust velocity exceeded 1% of the time. The effective gust velocity shall be computed as the hourly average velocity plus 1.5 x root mean square variation about the average. An alternative velocity analysis (e.g., equivalent average) may be presented with the approval of the Authority.
- Wind direction shall include the sixteen compass points. Data shall include the percent or probability of occurrence from each direction on seasonal and annual bases.
- Results of the wind tunnel testing shall be presented in miles per hour (mph).
- Velocities shall be measured at a scale equivalent to an average height of 4.5-5 feet.
- The model scale shall be such that it matches the simulated earth's boundary and shall include all buildings within at least 1,600 feet of the project site. All buildings taller than 25 stories and within 2,400 feet of the project site should be placed at the appropriate location upstream of the project site during the test. The model shall include all buildings recently completed, under construction, and planned within 1,500-2,000 feet of the project site. Prior to testing, the model shall be reviewed by the Authority. Photographs of the area model shall be included in the written report.
- The written report shall include an analysis which compares mean and effective gust velocities on annual and seasonal bases, for no-build and build conditions, and shall provide a descriptive analysis of the wind environment and impacts for each sensor point, including such items as the source of the winds, direction, seasonal variations, etc., as applicable. The report shall also include an analysis of the suitability of the locations for various activities (e.g., walking, sitting, standing, driving etc.) as appropriate, in accordance with Melbourne comfort categories.

- The report also shall include a description of the testing methodology and the model, and a description of the procedure used to calculate the wind velocities (including data reduction and wind climate data). Detailed technical information and data may be included in a technical appendix but should be summarized in the main report.
- The pedestrian level wind impact analysis report shall include, at a minimum, the following maps and tables:

    - Maps indicating the location of the wind impact sensors, for the existing (no-build) condition and future build scenario(s).
    - Maps indicating mean and effective gust wind speeds at each sensor location, for the existing (no-build) condition and each future build scenario, on an annual basis and seasonally. Dangerous and unacceptable locations shall be highlighted.
    - Maps indicating the suitability of each sensor location for various pedestrian-related activities (comfort categories), for the existing (no-build) condition and each future build scenario, on an annual basis and seasonally. To facilitate comparison, comfort categories may be distinguished through color coding or other appropriate means. In any case, dangerous and unacceptable conditions shall be highlighted.
    - Tables indicating mean and effective gust wind speeds and the comfort category at each sensor location, for the existing (no build) condition and for each future build scenario, on an annual basis and seasonally.
    - Tables indicating the percentage of wind from each of the sixteen compass points at each sensor location, for the existing (no-build) condition and for each future build scenario, on an annual basis and seasonally.
    - All maps should include a north arrow and be oriented and of the same scale as shadow diagrams.

- **Shadow.** A shadow analysis shall be required for existing and build conditions for the hours 9:00 a.m., 12:00 noon, and 3:00 p.m. for the vernal equinox, summer solstice, autumnal equinox, and winter solstice and for 6:00 p.m. during the summer and autumn. This analysis should use the same metrics as applied by Mass. DEP for Chapter 91 shadow analyses and include documentation of net new shadows lasting more than one hour. It should be noted that due to time differences (daylight savings vs. standard), the autumnal equinox shadows would <u>not</u> be the same as the vernal equinox shadows and therefore separate shadow studies are required for the vernal and autumnal equinoxes. Shadows shall be determined using the Boston Altitude and Azimuth data (Sun Altitude/Azimuth Table, Boston, Massachusetts).

  The shadow impact analysis must include net new shadow as well as existing shadow. Diagrams must clearly show the incremental impact of the proposed new buildings. For purposes of clarity, new shadow should be shown in a dark, contrasting tone distinguishable from existing shadow. The shadow impact study area shall include, at a

minimum, the entire area to be encompassed by the maximum shadow expected to be produced by the Proposed Project (i.e., at the winter solstice). The build condition shall include all buildings under construction and any proposed buildings anticipated to be completed prior to completion of the Proposed Project. Shadow from all existing buildings within the shadow impact study area shall be shown. A North arrow shall be provided on all figures and street names, doorways, bus stops, open space and areas where pedestrians are likely to congregate (in front of historic resources or other tourist destinations, for example) should be identified.

Particular attention shall be given to areas of pedestrian use, including, but not limited to, the entrances to the project buildings and existing buildings in the vicinity of the Proposed Project, the sidewalks and walkways within and adjacent to the Proposed Project development.

The DPIR should propose mitigation measures to minimize or avoid any adverse shadow impact.

- **Combined Wind and Shadow Impacts.** Figures depicting no-build and build wind monitoring locations should be of an orientation and scale consistent with that used for shadow diagrams so that the cumulative effect of wind and shadow can be determined.
- **Daylight.** A daylight analysis for both build and no-build conditions shall be conducted by measuring the percentage of skydome that is obstructed by the Proposed Project and evaluating the net change in obstruction. The study should treat two elements as controls for data comparisons: existing conditions and context examples. Daylight analyses should be taken for each major building facade fronting these essentially public ways or open spaces. The midpoint of each public access way or roadway should be taken as the study point. The BRADA program must be used for this analysis.
- **Solar Glare.** Please refer to the BRA's Environmental Review comment letter.
- **Air Quality.** Please refer to the BRA's Environmental Review Comment letter.

- **Solid and Hazardous Wastes.** The presence of any contaminated soil or groundwater and any underground storage tanks at the project site shall be evaluated and remediation measures to ensure their safe removal and disposal shall be described. Any assessment of site conditions pursuant to the requirements of M.G.L. Chapter 21E that has been or will be prepared for the site shall be included in the DPIR (reports may be included in an appendix but shall be summarized in detail, with appropriate tables and figures, within the main text). Materials in the building to be demolished should be characterized and measures to mitigate impacts during demolition should be identified.

  The DPIR shall quantify and describe the generation, storage, and disposal of all solid wastes from the construction and operation of the Proposed Project. The DPIR shall identify the specific nature of any hazardous wastes that may be generated and their quantities and shall describe the management and disposal of these wastes. In addition,

measures to promote the reduction of waste generation and recycling, particularly for paper, glass, plastics, metals, and other recyclable products, and compliance with the City's recycling program, shall be described in the DPIR.

- **Noise.** The DPIR shall establish the existing noise levels at the project site and vicinity based upon a noise-monitoring program and shall calculate future noise levels after project completion based on appropriate modeling and shall demonstrate compliance with the Design Noise Levels established by the U.S. Department of Housing and Urban Development for residential and other sensitive receptors and with all other applicable Federal, State, and City of Boston noise criteria and regulations. Any required mitigation measures to minimize adverse noise impacts shall be described.

  An analysis of the potential noise impacts from the project's mechanical and exhaust systems, including emergency generators, and compliance with applicable regulations of the City of Boston shall be required. A description of the project's mechanical and exhaust systems and their location shall be included. Measures to minimize and eliminate adverse noise impacts on nearby sensitive receptors, including the project itself, from mechanical systems and traffic shall be described.

- **Nighttime Lighting.** The DPIR should explain, in text or graphics as appropriate:
  - The type of exterior lighting to be used on each façade or other portion of the building and the elements of the design that mitigate nighttime lighting impacts of the building on surrounding areas.
  - The DPIR should specify the type of interior lighting (i.e. fluorescent vs. incandescent, recessed or not) to be used in each portion of the building and, in the case of the common areas and non-residential portions of the program, the hours that the lighting will be on. The DPIR should also discuss the measures being taken to minimize the impact of interior lighting on the surrounding areas.

- **Stormwater Management/Water Quality.** Stormwater management requirements and suggestions are included in the section on environmental sustainability below.
- **Flood Hazards/Wetlands.** Describe any affected flood hazard zones or wetlands and proposed actions.
- **Tidelands/Chapter 91.** The project site does not include tidelands, and Chapter 91 does not apply to the Proposed Project.
- **Geotechnical Impact/Groundwater.** A description and evaluation analysis of existing sub-soil conditions at the project site, groundwater levels, potential for ground movement and settlement during excavation and foundation construction, and potential impact on adjacent buildings, utility lines, and the roadways shall be required. This analysis shall also include a description of the foundation construction methodology, the amount and method of excavation, and measures to prevent any adverse effects on adjacent buildings, utility lines, and roadways. Measures to ensure that groundwater levels will be maintained and will not be lowered during or after construction also shall

be described. In addition, the geotechnical analysis shall evaluate the earthquake potential in the project area and shall describe measures to be implemented to mitigate any adverse impacts from an earthquake event.

- **Construction Impacts.** A construction impact analysis shall include a description and evaluation of the following:
  - Measures to protect the public safety.
  - Potential dust and pollutant emissions and mitigation measures to control these emissions.
  - Potential noise generation and mitigation measures to minimize increase in noise levels.
  - Location of construction staging areas and construction worker parking; measures to encourage carpooling and/or public transportation use by construction workers.
  - Construction schedule, including hours of construction activity.
  - Access routes for construction trucks and anticipated volume of construction truck traffic.
  - Construction methodology (including foundation construction), amount and method of excavation required, disposal of the excavate, description of foundation support, maintenance of groundwater levels, and measures to prevent any adverse effects or damage to adjacent structures and infrastructure.
  - Method of demolition of the existing building on the project site and disposal of the demolition debris.
  - Potential for the recycling of construction and demolition debris, including asphalt from the existing parking lots.
  - Measures to make construction fencing as attractive as possible to ensure the visual character of the streetscape.
  - Identification of best management practices to control erosion and to prevent the discharge of sediments and contaminated groundwater or stormwater runoff into the City's drainage system during the construction period.
  - Impact of project construction on rodent populations and description of the proposed rodent control program, including frequency of application and compliance with applicable City and State regulatory requirements.

6. URBAN DESIGN COMPONENT

BU will be expected to undertake design review on the Proposed Project in accordance with standard BPDA procedure. In addition to the BPDA's Urban Design Department, the Boston Civic Design Commission (BCDC) will review the Proposed Project. The DPIR should also respond to the following elements.

- **Signage and Lighting.** BU will be required to perform design review with the BPDA Urban Design Department on any current and future plans for signage and lighting.
- **Views.** The DPIR shall present views of the Proposed Project from locations to be determined through consultation with the BRA's Urban Design Department.

- **Relationship to Surrounding Context.** The DPIR should describe the design of the Proposed Project in relationship to the surrounding urban context, including adjacent buildings, streets, and plazas.
- **Design Submission Requirements.** The following urban design materials for the Proposed Project's schematic design must be submitted for the DPIR. Materials must be at the required scale and in a printed form that is reproducible, as well as in electronic file form:
  - A written description of program elements and space allocation for each element.
  - Black and white 8"x10" photographs of the site and neighborhood.
  - Plans and sections for the area surrounding the project at an appropriate scale (1"=100' or larger) showing relationships of the Proposed Project to the surrounding area and district regarding massing, building height, open space, major topographic features, pedestrian and vehicular circulation, and land use.
  - Sketches and diagrams of alternative proposals to clarify design issues and massing options.
  - Eye-level perspectives showing the proposal in the context of the surrounding area; views should display a particular emphasis, on important viewing areas such as key intersections, access ways, or public parks/attractions. Long-ranged (distanced) views of the Proposed Project must also be studied to assess the impact on the skyline or other view lines. At least one bird's-eye perspective should also be included. All perspectives should show (in separate comparative sketches) both the build and no-build conditions. The BRA must approve the view locations before analysis is begun. View studies should be cognizant of light and shadow, massing and bulk.
  - Aerial views of the project in perspective or isometric form.
  - A site plan at 1 "= 16' or larger showing:
    - Relationships of proposed and existing adjacent buildings and open spaces.
    - Open spaces defined by buildings on adjacent parcels and across streets.
    - Location of pedestrian ways, driveways, parking, service areas, streets, and major landscape features.
    - Accessible pedestrian, vehicular, and service access and flow through the parcel and to adjacent areas.
    - Phasing possibilities clearly indicating the scheme for completing the improvements.
    - Construction limits.
  - Site sections at 1"=16' or larger showing relationships to adjacent buildings and spaces.
  - A massing model at 1"=40' showing all buildings in the area and a study model at 1"=16' showing facade design.
  - Drawings at an appropriate scale (e.g., 1"=8') describing architectural massing, facade design, and proposed materials including:
    - Site plans before and after construction.
    - Elevations in the context of the surrounding area.
    - Sections showing organization of functions and spaces.

- Building plans showing ground floor and typical upper floor.

- A site survey at 1"=40' showing nearby structures, utilities and bench marks.
- A written and/or graphic description of the building materials and its texture, color, and general fenestration patterns is required for the proposed development.
- Electronic files describing the site and Proposed Project at Representation Levels one and two ("Streetscape" and "Massing") as described in the document Boston "Smart Model": CAD & 3D Model Standard Guidelines.
- The schedule for submittal of Design Development materials.

7. ENVIRONMENTAL SUSTAINABILITY

In addition to the overall campus-wide approach to sustainability discussion in the IMP Amendment, new development of the size and complexity of the Proposed Project presents opportunities for sustainable design and construction to prevent damage to the environment, consistent with the goals of Executive Order 385 and recent initiatives of the Mayor and the BPDA. Opportunities for sustainable design are described below and are incorporated herein by reference and made a part hereof. Not all the topics below need be addressed in the DPIR; rather, some of them constitute suggestions that can be discussed through the design process in conjunction with the BPDA and the Environment Department.

- **Building Orientation, Envelope, and Façade Design.** Reduce thermal loads entering the building as much as possible. Consider the building orientation, envelope, and design carefully, including glazing selection, window and door shading, wall construction, roof color, and building shape. Make use of thermal mass to absorb heat and shift peak heating to off-peak hours. Building massing and façade treatment should respond to microclimate conditions and enhance appropriate solar control. The DPIR should describe any simulation designed to quantify the effects of these design choices.
- **Energy.** Energy conservation strategies should be explored at an early stage in the design and should include such approaches as taking advantage of natural day lighting, passive solar gain, passive cooling and ventilation which tie into HVAC systems, use of alternative energy strategies (including making the building design adaptable for the future inclusion of innovative energy and environmental technologies as they develop over time), in addition to properly sized efficient heating and ventilating systems, with heat recovery and other conservation strategies. Siting, orientation and massing of building should optimize passive strategies for light and energy management and design for natural and displacement ventilation. Building design should specify energy efficient HVAC and lighting systems, appliances, and other equipment, and solar preheating of makeup air. Early quantification and cost-benefit analysis through iterative energy simulation is helpful and would provide feedback on size of systems and envelope design early enough to impact those decisions.

- **Water Management.** Sustainable water management practices should be considered early in the site and building design process, and the process should explore integrated approaches to stormwater retention, treatment, and reuse, building and landscape water needs, and groundwater recharge. To the extent possible, the systems put in place should strive to work with the natural hydrology of the area, and the building should incorporate additional opportunities to conserve water beyond water-saving technologies required by law.

  Possibilities for using graywater for functions that are conventionally served by potable water should be explored. Stormwater captured from impervious areas or from roofs and hardscapes can be used for non-potable water uses.

  The DPIR shall contain an evaluation of the project site's existing and future stormwater drainage and stormwater management practices. The DPIR shall illustrate existing and future drainage patterns from the project site and shall describe and quantify existing and future stormwater runoff from the site and the Proposed Project's impacts on site drainage. The Proposed Project's stormwater management system, including best management practices to be implemented, measures proposed to control and treat stormwater runoff and to maximize on-site retention of stormwater, measures to prevent groundwater contamination, and compliance with the Commonwealth's Stormwater Management Policies, also shall be described. The DPIR shall describe the project area's stormwater drainage system to which the project will connect, including the location of stormwater drainage facilities and ultimate points of discharge.

8. HISTORIC RESOURCES COMPONENT

The DPIR should summarize any historic resources that will be affected by the Proposed Project, the position of public agencies on those resources (including any necessary regulatory process), and present a plan to minimize the adverse impact of the Proposed Project.

9. INFRASTRUCTURE SYSTEMS COMPONENT

The DPIR must include an infrastructure impact analysis.

The discussion of Proposed Project impacts on infrastructure systems should be organized system-by-system as suggested below. The DPIR must include an evaluation of the Proposed Project's impact on the capacity and adequacy of existing water, sewerage, energy (including gas and steam), and electrical communications (including telephone, fire alarm, computer, cable, etc.) utility systems, and the need reasonably attributable to the Proposed Project for additional systems or facilities. Thorough consultation with the planners and engineers of

the utilities will be required, and should be referenced in the Infrastructure Component section.

Any system upgrading or connection requiring a significant public or utility investment, creating a significant disruption in vehicular or pedestrian circulation, or affecting any public or neighborhood park or streetscape improvements, constitutes an impact which must be mitigated.

- **Water and Sewer.** Provide the following information on the Proposed Project's impact on water and sewer infrastructure and on water quality. As appropriate, this information can be integrated with the sustainability sections of the IMP Amendment and the DPIR.
  - Estimated water consumption and sewage generation from the Proposed Project and the basis for each estimate. Include separate calculations for air conditioning system make-up water.
  - Description of the capacity and adequacy of water, sewer, and storm drain systems and an evaluation of the impacts of the Proposed Project on those systems.
  - Description of the Proposed Project's impacts on the water quality of Boston Harbor or other water bodies that could be affected by the project, if applicable.
  - Description of mitigation measures to reduce or eliminate impacts on water quality.
  - Description of impact of on-site storm drainage on water quality; if this is described more fully in another section, reference that analysis here.
  - Detail methods of protection proposed for infrastructure conduits and other artifacts, including BSWC sewer lines and water mains, during construction.
  - Detail the energy source of the interior space heating; how obtained, and, if applicable, plans for reuse of condensate.
  - Identification of measures to conserve resources, including any provisions for water recycling.

- **Energy Systems.** The DPIR should discuss the Proposed Project's approach to energy systems and conservation. As appropriate, this information can be integrated with the sustainability sections of the IMP Amendment and the DPIR. The discussion should include at a minimum the following:
  - Description of all energy (heat, electrical, cooling, etc.) requirements of the project and evaluation of the Proposed Project's impacts on resources and supply.
  - Description of measures to conserve energy usage and consideration of the feasibility of including solar energy provisions or other on-site energy provisions.

- **Other Systems.** The DPIR should also discuss emergency systems, gas, steam, optic fiber, cable, and any other systems impacted by the Proposed Project. The location of transformer and other vaults required for electrical distribution or ventilation must be chosen to minimize disruption to pedestrian paths and public improvements both when operating normally and when being serviced, and must be described.

10. BROADBAND READY BUILDINGS QUESTIONNAIRE

As part of the DPIR, the Proponent must include a completed Article 80 Broadband Ready Buildings Questionnaire, attached as Appendix 4. The information that is shared through the Broadband Ready Buildings Questionnaire will help the BPDA and the City understand how developers currently integrate telecommunications planning in their work and how this integration can be most responsive to a changing technological landscape.

11. OTHER

- **Public Notice.** BU will be responsible for preparing and publishing in one or more newspapers of general circulation in the city of Boston a Public Notice of the submission of the DPIR to the BPDA as required by Section 80A-2. This Notice shall be published within five (5) days after the receipt of the DPIR by the BPDA. In accordance with Article 80, public comments on the DPIR shall be transmitted to the BPDA within forty-five (45) days of the publication of this notice. A sample form of the Public Notice is attached as Appendix 3. Following publication of the Public Notice, BU shall submit to the BPDA a copy of the published Notice together with the date of publication.

APPENDIX 1
BPDA STAFF COMMENTS

MEMORANDUM

TO: **Tim Czerwienski, Project Manager**
FROM: **BPDA Staff**
DATE: **November 30, 2018**
SUBJECT: **BPDA Planning Division Staff Comments on Boston University Data Sciences Center Project Notification Form**

The proposed Data Sciences Center is located at the corner of Commonwealth Avenue and Granby Street in the Boston University (BU) urban campus. It is also adjacent to the Bay State Road/Back Bay West Architectural Conservation District. The building site was identified as a Proposed Institutional Project in the 2013 Institutional Master Plan (IMP), which outlined the development of a building or buildings of up to 350,000 GSF with a maximum floor area ratio of 8.4 and a maximum height of 15 stories at 225 feet. The Data Sciences Center is currently proposed at 350,000 GSF and 19 stories at 305 feet. The use will be a mixed academic program of computer science, mathematics & statistics, the Hariri Institute, and classrooms, consistent with the uses outlined in the IMP. No below grade parking will be provided.

The proposed academic building represents a vastly more appropriate urban use than the current surface parking lot, and we look forward to continuing to work together to advance the building's design and its relationship with the urban fabric. It should also be added that we appreciate that the University is making an attempt to create a building that embodies the bold architecture that this administration has showed an enthusiasm for.

In response to these comments, a Draft Project Impact Report (DPIR) should be submitted providing additional information for the evaluation of the proposal. Details of submission requirements are outlined in this memorandum. Responses should be specific and graphic, as opposed to textual, when possible.

URBAN DESIGN COMPONENT

Note that the Boston Civic Design Commission (BCDC) has only begun its review of this project, and voted to send the project to Design Committee at their monthly meeting on

December 4, 2018 (the draft minutes are included below). Further comments will be forwarded to the proponent as they become available.

Issues that should be addressed in the DPIR and continuing design review include those raised in our meetings, as well as the following:

- Contextually-grounded creativity is a key design tool that the BPDA staff looks for in new projects. Based on the three design meetings we have had to this point, the strong initial ideas about the building will benefit from a thoughtful assessment of the physical context of the campus and city and how the building is adding to that context, making the campus and city better.
- Toward that end, provide graphic documentation and analysis of the existing site of the project. This should include the neighborhood context, site patterning (figure ground), open space, vegetation, and water bodies. Beyond showing these elements (much of which is included in the PNF), include analysis diagrams that show how the project specifically responds to the site and the surrounding contextual fabric of the city. It is anticipated that this analysis may impact the design of the building, particularly at the lower levels, where it directly meets the public realm.
- To the west of Granby Street, the BU campus has its most defined character of purpose built, buff masonry and concrete structures with a consistent relationship to the street. Analyze, in diagram form, how the project will relate to both this formal part of the campus and the different character represented to the east, where existing and purpose built structures have a variety of relationships to the existing context and take on more of a red brick character. How does this analysis inform the design of a project located between these two different parts of the campus?
- Provide multiple site sections in both directions extending beyond the site at least to the curb on the opposite side of the adjacent street. Ideally, some sections should go further than this into the mass of nearby buildings. These should be used to help explain the relationship of the building to the smaller scale along Bay State Road and the larger scale of the campus buildings across the width of Commonwealth Avenue.
- Provide context elevations of the building extending beyond the project for at least a block and preferably further in each direction. How does the project relate to its neighbors, as shown in elevation, and particularly along the public facing streets? This may be done in drawings or a combination of drawing and photorealistic context.
- Provide a diagram showing how the proposed height relates to other tall buildings on BU's campus and in the context of the surrounding neighborhoods.

- Provide massing diagrams for potential ways to add to the building in the event that additions may be needed in the future.
- The effect of the intended 'iconic' silhouette of the proposed offset, stacked-floor tower, as seen from the Charles River, is challenged by the existing Warren Towers that seem to bookend (and crowd) it as they stand in the background. Look at alternate locations for the tower that might make this reading clearer (*i.e.*, is the relationship stronger if the tower is on the east side of the site?).
- The primary design move of the building is the stacked offset tower. The strength of this reading is undermined by the facade strategy of mixed materials spiraling around the tower. The spiral may be the best option, but that is not immediately apparent. Provide several alternate facade studies that look at ways to reinforce the design of the tower. Look at alternatives that might respond to the environment, to a sense of verticality, or might spiral in a more subtle way. As was mentioned at the initial meeting, it is not clear that red terra cotta is the best option in this location; a graphic design case should be presented.
- Currently there is a material relationship between the base and tower. Provide options for either a stronger, designed relationship or a more distinct one. While the current approach may be most appropriate, it would be useful to understand if a strategy that has a base building and tower or a tower that comes down to the ground might be more appropriate on this site.
- The main facade faces south. One of the design propositions is that the base of the building will be very transparent. How will this be achieved on a south face, where the most intensive intervention will be needed on the glazing? Will the overhangs provide sufficient shadow to allow the use of a more visually transparent glass? If not, what other strategies are planned?

The stated objective of extending the public realm into the ground floor is a noble one, but would benefit from further study, as highlighted below:

- As proposed, the project sits forward of existing buildings to either side on Commonwealth Avenue, yet the building does not present any direct entry onto the street. Where entries are proposed, they either address Granby Street or are recessed into the building under a deep overhang, and are positioned at the very ends of the building podium. Explain the rationale behind this strategy.
- Most of the proposed exterior spaces that would be open and available to the public are positioned in locations either under the building's overhangs or where the building's mass will cast them in shade. Look at options, for example along Granby Street, where more of the public realm can be open to the sky.

- The proposed sidewalk along Commonwealth Avenue abuts the building's curtain wall, so that the public walking by the building can see the activity inside, but the expanded sidewalk is either not useable (because of the angle of the descending feature stair expressed on the building facade) or seems to be devoid of any proposed program that would invite the public to participate in the activation of the building. The relationship of the proposed building to Commonwealth Avenue is key to the success of the building as part of the city. Creation of a lively public realm across the frontage would greatly contribute to the Commonwealth Avenue corridor (and provide some public space with sun exposure, particularly in the fall, winter and spring seasons).
- The Granby Streetscape, despite being expanded to create additional width to accommodate a furnishing zone, seems to be negatively affected by the heft of the proposed overhang and massing of the building that currently extends all the way to the property line. Here, too, the proposed exterior program along Granby Street is confined to the northernmost portion of sidewalk created under the overhang, and held back from the intersection with Commonwealth Avenue. The exterior program should extend to the corner and wrap around to populate the Commonwealth Avenue street elevation, to whatever point can provide for a comfortable height under the descending interior stairway.
- The angle of the descending space along the Commonwealth Avenue elevation extends at an acute angle all the way down to the ground plane and, subsequently, creates an exterior space that will be difficult to program and/or maintain as a part of the public realm. This area should be eliminated through an architectural resolution.
- A continuous row of street trees should be provided along Granby Street from Bay State Road to Commonwealth Avenue.

Excerpt from the draft BCDC Minutes, December 4, 2018 Monthly Meeting:

The **Boston University Data Sciences Center** was next on the agenda. Paul Rinaldi with Boston University. Marianne McKenna, Partner at KPMB. Data Sciences serves as a hub for the university's faculty and students. The face of the building aligns with adjacent building, as Commonwealth is a backbone of the campus.
Ken Greenberg: When we prepared this Master Plan in 2012, Consolidate the university in a dense, transit-oriented form. Speaks to the relationship of porosity and activity along Commonwealth Avenue.
Marianne McKenna: The stacked form shapes views from Kenmore Square and along Commonwealth Avenue. Because multiple departments utilize the building, development

of the plans fosters collaboration and connectivity. Fly-through video presented by Paulo Rocha, Principal at KPMB.
David Hacin: I was struck by the exciting approach to this project. Would like to understand from a more citywide perspective --from around town. I think BU will have this strong relationship between this building and the law school tower. The building remains fairly heavy at the top, and personally I wish it grew lighter. Exciting and dynamic building that ends in a blunt way.
Mikyoung Kim: I'd like to know if there are opportunities for inside/outside relationship, and the accessibility of the important axis. What is the relationship of all the landscape spaces with the canopy over them.
Deneen Crosby: Need to know more about the strategy for the open space--why is the courtyard plaza on the North side and not open to Commonwealth Ave. Would like the plaza on the front side to be a little more generous. Like seeing into the building.
Kirk Sykes: I think the transparency on Commonwealth Avenue is quite exciting. There are two typologies that may be interesting to look at in Design Committee: both how this fits into a mile-long linear campus, and the river in the context of the campus.
Anne-Marie Lubenau: How has this corridor evolved over time. Does this establish a precedent as a high spine, especially since this acts as a hub for the campus. How might this anticipate further development.
William Rawn: I would also if you've considered carving open space out along the Northwest corner of the site so that it would be next to a street, and more useful for the campus. At the northwest it might get at least afternoon sun. Many of us would support a bold style for the architecture in this new center for the campus. My question for discussion at committee: is this stacked volume design the right focus?
David Manfredi: I think the direction is marvelous. This is a move don't make five times on the campus, it's a move you make one bold time on the campus. Hope that the internal circulation is as important and connected to streetscape as it seems to be.

TRANSPORTATION

- With the proposed conversion of Granby to 2-way, interventions to ensure the prohibition of left turns from eastbound Commonwealth Ave need to be proposed
- Does Granby St need to be three lanes (2 lanes southbound, 1 lane northbound) from the "alley" to Comm. Ave? Current one-way condition provides 2 lanes southbound (one left turn and one right turn lane). This

would require adjustments to the curb line and modification to the building footprint.

- Refinements to the Silber Way and Comm. Ave pedestrian areas will be needed, including possibly providing additional dimension to meet Complete Streets and ADA accessibility standards.
- A “no parking” project that relies on alternative modes needs a robust TDM program, including:
    - Subsidized MBTA passes for employees (full subsidy of monthly “Link” passes?)
    - Subsidy for Blue Bikes membership for employees?
    - Sponsorship of an additional Blue Bikes Station
- BU should consider improvements to the existing Silber Way pedestrian overpass as off-site mitigation (new and better overpass? Improvements to conditions at the landings?)

SUSTAINABLE & RESILIENT DEVELOPMENT

Boston University continues to lead in climate impact mitigation and, with the Data Science Center, will be constructing the next generation of high performance green buildings. The iconic nature and scale of the building will visibly exemplify BU leadership and inspire both the BU community and BU’s academic peers. As the building design work progresses BU should use the opportunity to elevate the university’s sustainability and resiliency values and goals.

In coordination with ongoing Urban Design discussions, further study facade shading and articulation strategies including consideration of adjacent building shadows.

Article 37 Green Buildings

PERMITS AND APPROVALS

Please revise Table 1-1 Anticipated Project Permits and Approvals to include “Boston Interagency Green Building Committee” and “Article 37 Green Building compliance”.

GREEN BUILDINGS

The PNF indicates the project will use the LEED v4 New Construction (NC) rating system and commits to achieving LEED Gold. The IGBC accepts the rating system selections and LEED commitment. As an expression of BU’s leadership and values, the project team should target LEED Platinum.

Following are specific credits that the project team should give priority to achieving:

- Rainwater Management - include onsite retention and infiltration strategies (2 to 3 points).
- Optimized Energy Performance – include additional strategies for achieving a 30% or greater reduction in energy use (+3 to 8 points).
- Demand Response – include strategies for reducing energy loads in response to utility (+3 points).
- Renewable Energy Production - include solar PV (+1 to 3 points).
- Regional Priority – the project appears eligible for additional points (+1 to 2 points).

BU's 100% renewable electricity purchase is truly exemplary and supports Boston's Carbon Neutral 2050 GHG goal. Please include the following strategies for further reducing GHG emissions associated with the proposed building:

- Prioritize passive strategies such as improved building envelope performance by increasing building envelope air tightness and insulation.
- Reduce active building systems and sizes to reflect improved passive performance and ensure systems cost savings are fully captured.
- Include solar PV and provide system(s) location, size, and output information along with any related analysis. At minimum the buildings should be solar ready.
- Please include an Energy Model Summary and the LEED v4 Minimum Energy Performance Calculator worksheet in the DPIR filing.

CLIMATE RESILIENCY

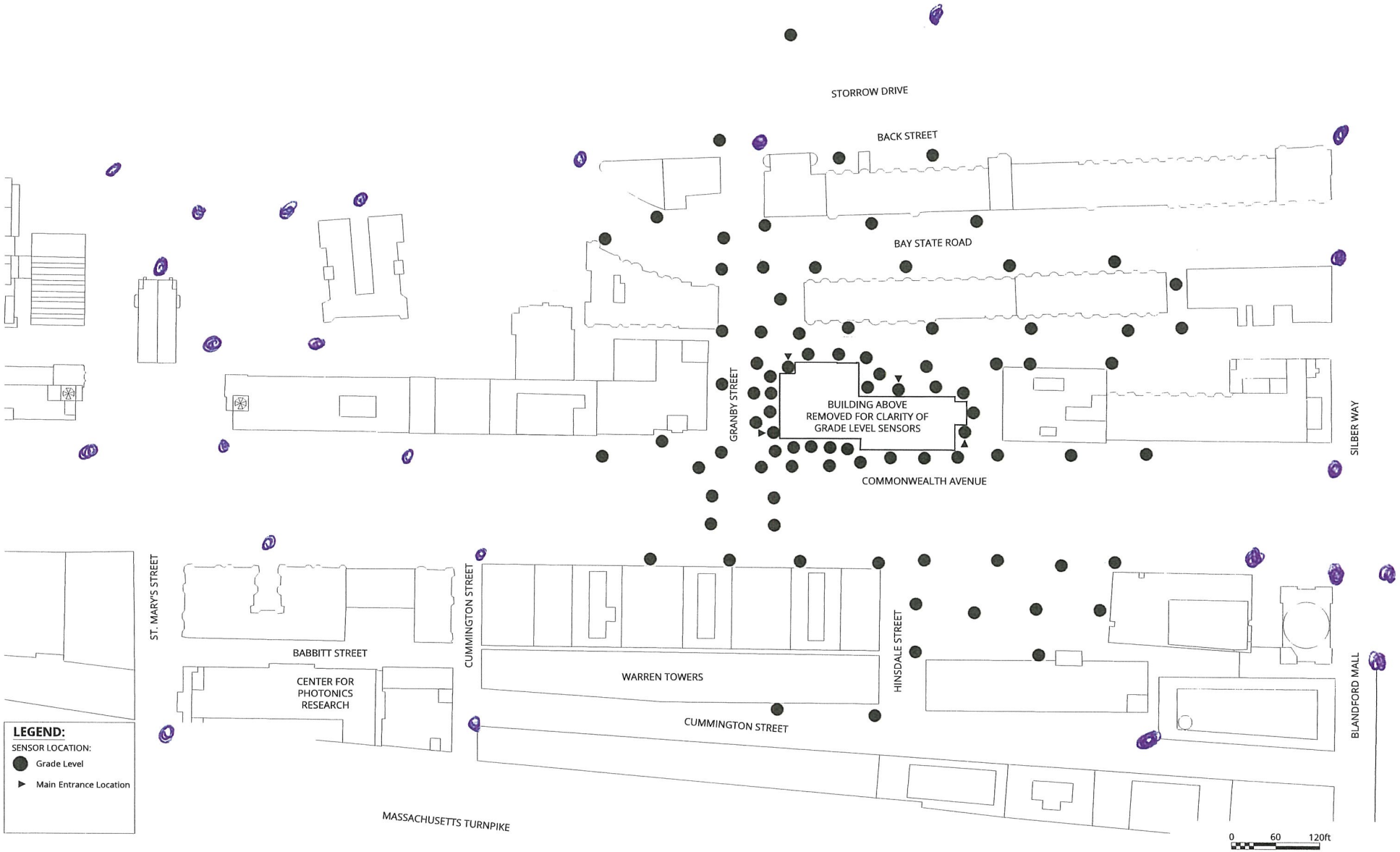
- The Climate Resiliency Report included in the PNF is a WORKING DRAFT. On online version of the CR Checklist should be completed for the building types with the resulting PDF submitted with the DPIR filing.
- Please insure all the Climate Resiliency Checklist fields are completed.

ENVIRONMENTAL

- Wind Tunnel Analysis

  Please see attached wind sensor plan with added points for study. Additionally, provide a list of the BPDA approved projects and those under construction that were included in the wind tunnel analysis.
- Solar Glare: Additional details about solar glare shall be required :

- Solar Spot Glare: As the proponent has stated that “as the design progresses” different exteriors will be evaluated and thus shall be required to demonstrate that extensive areas of glazing, highly reflective glass or metal cladding, or areas of sloping glass will not be included in the design or conduct a solar glare analysis to determine visual impact or discomfort due to reflective spot glare.
- Solar Heat Buildup: Analysis of the potential for solar heat buildup in any nearby buildings receiving reflective sunlight



Preliminary Sensor Plan

Boston University Math and Data Sciences Building - Boston, MA

True North

Project #1400479

Drawn by: DBB	Figure: PSP
Approx. Scale:	1"=120'
Date Revised:	Nov. 2, 2018

APPENDIX 2
OTHER AGENCY AND PUBLIC COMMENTS

Boston Water and Sewer Commission

980 Harrison Avenue
Boston, MA 02119-2540
617-989-7000

October 31, 2018

Mr. Michael Rooney
Boston Planning & Development Agency
One City Hall Square
Boston, MA 02201

Re: Boston University Data Science Center PNF/IMPNF

Dear Mr. Rooney:

The Boston Water and Sewer Commission (Commission) has reviewed the Project Notification Form (PNF) and the Institutional Master Plan Notification Form (IMPNF) for the above referenced Project (Project), located at 665 Commonwealth Avenue, in the Fenway/Kenmore neighborhood of Boston. The Project consists of the construction of a new academic building to serve the departments and institutes focused on computational and data sciences in one centrally located building. Two existing departments and a research institute will move to the building from five different locations. The proposed site consists of two parcels which are currently occupied by a paved, at-grade public parking lot. The Project site is bordered by Commonwealth Avenue to the south; Granby Street to the west; University-owned multistory brick townhouses fronting Bay State Road to the north; and Boston University's College of Health and Rehabilitation Sciences building to the east.

Water, sewer, and storm drain service for the site is provided by the Boston Water and Sewer Commission.

For water service the Project site is served on Commonwealth Avenue by a 16-inch southern low pit cast iron water main which was installed in 1893 and rehabilitated in 1990; on Granby Street by an 8-inch southern low ductile iron cement lined water main installed in 2000; on Bay State Road by an 8-inch southern low cast iron cement lined main installed in 1958; and also on Bay State Road by an 8-inch southern low ductile iron cement line pipe installed in 2010. Water demand for the Project is estimated at 13,112 gallons per day (gpd). For water service the proponent proposes to connect to the water main located on Commonwealth Avenue and/or Granby Street.

For sewer service the Project site is served on Commonwealth Avenue by an 18-inch sewer main installed in 1894, and rehabilitated in 2008; on Granby Street by an 18-inch sewer installed in 2001; and on Bay State Road by an 18-inch sewer which was installed in 1999. Sewage generation from the Project is estimated at 11,920 gpd. For sewer service the proponent proposes to connect to the sewers on Commonwealth Avenue or Granby Street.

For drainage the Project site is served on Commonwealth Avenue by a 15-inch storm drain which was installed in 1999; a 12-inch storm drain on Granby Street which was installed in 1895 and rehabilitated in 1999; and by a 15-inch storm drain on Bay State Road installed in 2010. For drainage the proponent proposes to connect to storm drains on Granby Street and Commonwealth Avenue. The drains from the Project site ultimately discharge to the Charles River.

The Commission has the following comments regarding the proposed Project:

General

1. The Proponent must submit a site plan and General Service Application to the Commission for the proposed Project. Prior to the initial phase of the site plan development, the Proponent should meet with the Commission's Design and Engineering Customer Services to review water main, sewer and storm drainage system availability and potential upgrades that could impact the Project's development.

2. The site plan must show the location of both public and private water mains, sewers and drains serving the Project site, as well as the locations of existing and proposed service connections.

3. Any new or relocated water mains, sewers and storm drains must be designed and constructed at the Proponent's expense. They must be designed and constructed in conformance with the Commission's design standards, Water Distribution System and Sewer Use Regulations, and Requirements for Site Plans.

4. With the site plan the Proponent must provide detailed estimates for water demand (including water required for landscape irrigation), wastewater generation, and stormwater runoff for the Project. The Proponent should provide separate estimates of peak and continuous maximum water demand for retail, irrigation and air-conditioning make-up water for the Project. Estimates should be based on full-site build-out of the Project.

5. It is the Proponent's responsibility to evaluate the capacity of the water and sewer system serving the Project site to determine if the systems are adequate to meet future Project demands. With the site plan, the Proponent must include a detailed capacity analysis for the water and sewer systems serving the Project site, as well as an analysis of the impact the Project will have on the Commission's systems and the MWRA's systems overall. The analysis should identify specific measures that will be implemented to offset the impacts of the anticipated flows on the Commission and MWRA sewer systems.

6. Developers of projects involving disturbances of land of one acre or more are required to obtain an NPDES General Permit for Construction from the Environmental Protection Agency. The Proponent is responsible for determining if such a permit is required and for obtaining the permit. If such a permit is required for the proposed Project, a copy of the Notice of Intent and any pollution prevention plan submitted to EPA pursuant to the permit must be provided to the Commission's Engineering Services Department prior to the commencement of construction.

7. A Total Maximum Daily Load (TMDL) for Nutrients has been established for the Lower Charles River Watershed by the Massachusetts Department of Environmental Protection (DEP). In order to achieve the reductions in phosphorus loadings required by the TMDL phosphorus concentrations in stormwater discharges to the lower Charles River from Boston must be reduced by 64%. To ccomplish the necessary reductions in phosphorus the Commission requires developers of projects in the lower Charles River watershed to infiltrate stormwater discharging from impervious areas in accordance with DEP requirements. With the site plan the Proponent must submit a phosphorus reduction plan for the Project.

8. The design of the Project must comply with the City of Boston's Complete Streets Initiative, which requires incorporation of "green infrastructure" into street designs. Green infrastructure includes

greenscapes, such as trees, shrubs, grasses and other landscape plantings, as well as rain gardens and vegetative swales, infiltration basins, and paving materials and permeable surfaces. The proponent must develop a maintenance plan for the proposed green infrastructure. For more information on the Complete Streets Initiative see the City's website at http://bostoncompletestreets.org/

9. Before the Proponent demolishes any existing structures the existing water, sewer and drain connections that won't be re-used must be cut and capped in accordance with Commission standards. The Proponent must complete a Termination Verification Approval Form for a Demolition Permit, available from the Commission. The completed form must be submitted to the City of Boston's Inspectional Services Department before a Demolition Permit will be issued.

Sewage/Drainage

10. The Department of Environmental Protection (DEP), in cooperation with the Massachusetts Water Resources Authority (MWRA) and its member communities are implementing a coordinated approach to flow control in the MWRA regional wastewater system, particularly the removal of extraneous clean water (e.g., infiltration/ inflow ("I/I")) in the system. Pursuant to the policy new developments with design flow exceeding 15,000 gpd of wastewater are subject to the Department of Environmental Protection's regulation 314 CMR 12.00, section 12.04(2)(d). This regulation requires all new sewer connections with design flows exceeding 15,000 gpd to mitigate the impacts of the development by removing four gallons of infiltration and inflow (I/I) for each new gallon of wastewater flow added. The Commission will require the Proponent to develop an inflow reduction plan consistent with the regulation. The 4:1 reduction should be addressed at least 90 days prior to activation of water service, and will be based on the estimated sewage generation provided with the Project site plan.

11. Oil traps are required on drainage systems discharging from enclosed parking garages. Discharges from the oil traps must be directed to a building sewer and must not be mixed with roof or other surface runoff. The requirements for oil traps are provided in the Commission's Requirements for Site Plans.

12. Grease traps will be required in any food service facility in the new development in accordance with the Commission's Sewer Use Regulations. The proponent is advised to consult with the Commission before preparing plans for food service facilities.

13. Sanitary sewage must be kept separate from stormwater and separate sanitary sewer and storm drain service connections must be provided. The Commission requires that existing stormwater and sanitary sewer service connections, if any are to be re-used by the Project, be dye tested to confirm they are connected to the appropriate system.

14. The discharge of dewatering drainage to a sanitary sewer is prohibited by the Commission and the MWRA. The discharge of any dewatering drainage to the storm drainage system requires a Drainage Discharge Permit from the Commission. If the dewatering drainage is contaminated with petroleum products for example, the Proponent will be required to obtain a Remediation General Permit from the EPA for the discharge.

15. The site plan must show in detail how drainage from the building's roof top and from other impervious areas will be managed. Roof runoff and other stormwater runoff must be conveyed separately from sanitary waste at all times.

16. The Project is located within Boston's Goundwater Conservation Overlay District (GCOD). The district is intended to promote the restoration of groundwater levels and reduce the impact of surface runoff. Projects constructed within the GCOD are required to include provisions for retaining stormwater and directing the stormwater towards the groundwater table for recharge.

17. The Proponent must fully investigate methods for infiltrating stormwater on-site before the Commission will consider a request to discharge stormwater to the Commission's system. A feasibility assessment for infiltrating stormwater on-site must be submitted with the site plan for the Project

18. The Massachusetts Department of Environmental Protection (MassDEP) has established Performance Standards for Stormwater Management. The Standards address stormwater quality, quantity and recharge. In addition to Commission standards, the proposed Project will be required to meet MassDEP's Stormwater Management Standards.

19. In conjunction with the site plan and General Service Application the Proponent will be required to submit a Stormwater Pollution Prevention Plan. The plan must:

    - Specifically identify how the Project will comply with the Department of Environmental Protection's Performance Standards for Stormwater Management both during construction and after construction is complete.

    - Identify specific best management measures for controlling erosion and preventing the discharge of sediment, contaminated stormwater or construction debris to the Commission's drainage system when construction is underway.

    - Include a site map which shows, at a minimum, existing drainage patterns and areas used for storage or treatment of contaminated soils, groundwater or stormwater, and the location of major control or treatment structures to be utilized during construction.

20. The Commission requests that the Proponent install a permanent casting stating: "Don't Dump: Drains to Charles River" next to any new catch basin installed as part of the Project. The Proponent may contact the Commission's Operations Division for information regarding the purchase of the castings.

21. The Commission encourages the Proponent to explore additional opportunities for protecting stormwater quality by minimizing sanding and the use of deicing chemicals, pesticides and fertilizers.

Water

22. The Proponent is required to obtain a Hydrant Permit for use of any hydrant during construction of the Project. The water used from the hydrant must be metered. The Proponent should contact the Commission's Operations Department for information on obtaining a Hydrant Permit.

23. The Commission utilizes a Fixed Radio Meter Reading System to obtain water meter readings. Where a new water meter is needed, the Commission will provide a Meter Transmitter Unit (MTU) and connect the device to the meter. For information regarding the installation of MTUs, the Proponent should contact the Commission's Meter Installation Department.

24. The Proponent should explore opportunities for implementing water conservation measures in addition to those required by the State Plumbing Code. In particular the Proponent should consider indoor and outdoor landscaping which requires minimal use of water to maintain. If the Proponent

plans to install in-ground sprinkler systems, the Commission recommends that timers, soil moisture indicators and rainfall sensors be installed. The use of sensor-operated faucets and toilets in common areas of buildings should also be considered.

Thank you for the opportunity to comment on this Project.

Yours truly,

John P. Sullivan, P.E.
Chief Engineer and Operations Officer

JPS/as
cc: Gary Nicksa, Senior Vice President, Boston University
Katherine Ronan, Mass. Water Resources Authority
Maura Zlody, Boston Environment Department
Mike Nelson, Boston Water and Sewer Commission
Phil Larocque, Boston Water and Sewer Commission

Boston University
Community Task Force
P.O. Box 15735
Boston, Massachusetts 02215

October 31, 2018

Boston Redevelopment Authority Board
One City Hall Square – 9th Floor
Boston, MA 02201

Dear Michael Rooney:

As the chairperson of the Boston University Community Task Force I am writing in support of the proposed Boston University Data Sciences Center to be located at 665 Commonwealth Ave and the digital sign package proposed for exterior of 700 Commonwealth Ave (Warren Towers) .

Boston University and the task force members met on September 26th prior to filing the project with the BPDA. On October 23 many of the members of the Task Force attended the BPDA public meeting and then met again the following evening of October 24th.

During the task force meeting the members present expressed a desire to see this project move forward and asked that I convey this in writing to you.

The Boston University Community Task Force looks forward to continuing to work with you on this project as it moves forward.

Sincerely,

Pamela Beale

Pamela G. Beale
Chairperson

cc: Tim Czerwienski

Comment: Created Date	First Name	Last Name	Organization	Opinion	Comments
10/23/2018	Brian	Sandford		Oppose	I would have liked to present these comments at the meeting on 10/23/18, but cannot attend. I write as an aspiring architect and recent graduate of Wentworth Institute of Technology, and someone who has spent a significant amount of time on and around the BU Campus. I want to make clear I am not fundamentally opposed to the University growing, it is well within their right. It is nice to see a proposal for what is now an underutilized site along Commonwealth Avenue. I am also not fundamentally opposed to the University building at the scale of the proposed building. It adds nice density and a counterpoint on the overall skyline. Overall, I support the ambition behind this project. What I am fundamentally opposed to is bad design. The proposed building is bad design. It's overall massing, with a 5 story podium and shifted cube tower, is uninspired, outdated, and completely blind to it's surrounding context. The sun studies provided in the PNF show how much shadow the proposed building would cast, cloaking wide swathes of Bay State Road and the Esplanade. The facades are incoherent and ill-considered, with the red metal screens appearing and disappearing seemingly at random. Despite some attempt to suggest potential louvres or sun shades, the form in general does not seem to respond at all to solar or environmental conditions. It is deeply disingenuous to aim for a LEED-certified Gold building with a South facing facade primarily sheathed in glass, even if that glass is triple-glazed. One of the few valuable pieces of the proposed design is the first and second floor elevations along Commonwealth Avenue. The ramping floor, butterfly stair, and general translucency has the potential to provide a lively view to passers-by. While the PNF claims that the spaces created by overhangs would create places for seating, I would push the design team to develop this experience further, creating truly human-scale spaces to be occupied and enjoyed, not merely walked or biked past. Figure 3-5, on page 74, is the best demonstration of my multitude of concerns. The massing
					is random and widely out-of-scale, appearing so large that even the behemoth of Warren Towers looks diminutive in comparison. The materiality is lacking any unity or coherence. The overall proportion seems heavy, ungainly, and nowhere near pleasing to the eye, especially next to the slim, solid Law Tower to the west. I appreciate the time, effort, and expense put forward by the University, the architects and planners, and the entire design team. However, this building will be visible by thousands of people a day, impacting the urban life of students, neighborhood residents, and many more Bostonians. Much more care and thought needs to be expended to create an elegant design that will be a strong contributor to the city for decades to come. I look forward to seeing revisions at further public meetings.

Comment: Created Date	First Name	Last Name	Organization	Opinion	Comments
10/23/2018	Sam	Burgess	BU Graduate Student	Support	I support this project. I find it a bold new addition to the Comm Ave skyline and a welcome contrast to the Warren Towers across the street. It's great that this project replaces a surface parking lot, making more productive use of the parcel and ideally reducing the number of SOV trips in the area. Secure bike parking on-site is welcome and a must given the high-rate of bicycle theft and vandalism on BU's campus. The proposed changes to Granby Street also look great - removing street parking and converting into two directions from a one way while adding bike lanes. Importantly, as Granby St. is a city street, I urge the project team to work with BTD in installing flexposts or bollards in the newly-installed bike lanes. This would be in line with MassDOT's Comm Ave work and build-out of protected bike lanes between the BU Bridge and Packard's Corner. They are cheap, easy to install, and will cause minimum disruption given that Granby will no longer have street parking. More importantly, they prevent cars from parking or otherwise obstructing the bike lane - an all too common problem on the current unprotected lanes on Comm Ave. The whole area in general is still very dangerous for cyclists, and protected infra should be a design must for any new streetscape improvements. Thank you for your consideration.
10/24/2018	Sydney	Ellis		Oppose	This would be a monstrous addition to Comm Ave. First of all, the size is ridiculous and it will destroy the open feel of the street as it overlooks the river. It is also hideous and would destroy the cohesive and enjoyable walk down Comm Ave.
10/28/2018	Christian	Cole	Boston University	Neutral	I think the podium needs to be knit a little better with the street and the diagonal cladding needs to be taken off the surfaces that'll have the best views. Who wants to have a view of the city tainted by diagonal lines?
10/8/2018	Karen	Heffernan		Oppose	What an eyesore. Please please please do not make this building a reality. It will detract from this neighborhood.
10/8/2018	Dianna	Carney		Support	I love the new concept, I think it adds an interesting and fun look to the Boston sky rise. Boston though rich with tradition is also a place of innovation. I think this building concept reflects just that.
10/8/2018	Merrill	Bloor		Oppose	Ugly, out of character for the city and just plain heinous.
10/8/2018	Larry	Ouellette		Oppose	The building as designed is simply one of the ugliest building designs I've ever seen. The brown elements look so out of place. The large number of offsets also looks very bad. Time for "Stack of Books" version 2.
10/9/2018	Steve	Appell	Boston resident	Oppose	A terrible design that will create an eye sore Keep these designs in Canada , not Boston Who?s political favor is being paid off with this firm ?

Comment: Created Date	First Name	Last Name	Organization	Opinion	Comments
10/19/2018	Jonathan	Rodrigues		Oppose	As a taxpayer in Boston, I hope the city will consider holding this project contingent upon assurances that BU pay their Payment in Lieu of Taxes (PILOT) contributions in full. While they are relatively good compared to other institutional actors, there is still millions left unpaid that BU should be contributing for the good of all our students in families in BPS and other city services. We hope the City may hold this consideration.
10/16/2018	Diane	Brown	Boston Resident	Oppose	It's ugly. I don't like the design. It's not aesthetically pleasing at all. The height is all wrong. The height should be the same as the building next to it. It is completely out of character with Boston. It is grotesque.

APPENDIX 3
SAMPLE PUBLIC NOTICE

SAMPLE

PUBLIC NOTICE

The Boston Planning & Development Agency (BPDA), acting pursuant to Article 80 of the Boston Zoning Code, hereby gives notice that a Draft Project Impact Report (DPIR) for Large Project Review has been received from _____

_____

(Name of Applicant)

for _____

(Brief Description of Project)

proposed at _____.

(Location of Project)

The DPIR may be reviewed or obtained at the Office of the Secretary of the BPDA Boston City Hall, Room 910, between 9:00 A.M. and 5:00 P.M., Monday through Friday, except legal holidays. Public comments on the DPIR, including the comments of public agencies, should be transmitted to Michael Rooney, Project Assistant, Boston Planning & Development Agency, Boston City Hall, Boston, MA 02201, within seventy five (75) days of this notice or by _____. Approvals are requested of the BPDA pursuant to Article 80 for _____.

The BPDA in the Preliminary Adequacy Determination regarding the DPIR may waive further review requirements pursuant to Section 80B-5.4(c)(iv), if after reviewing public comments, the BPDA finds that the _____ adequately describes the Proposed Project's impacts.

BOSTON REDEVELOPMENT AUTHORITY
Teresa Polhemus, Executive Director/Secretary

APPENDIX 4
BROADBAND READY BUILDINGS QUESTIONNAIRE

CITY of BOSTON | boston planning & development agency

ARTICLE 80 DESIGN REVIEW
BROADBAND READY BUILDINGS QUESTIONNAIRE

The City of Boston is working to cultivate a broadband ecosystem that serves the current and future connectivity needs of residents, businesses, and institutions. The real estate development process offers a unique opportunity to create a building stock in Boston that enables this vision. In partnership with the development community, the Boston Planning and Development Authority and the City of Boston will begin to leverage this opportunity by adding a broadband readiness component to the Article 80 Design Review. This component will take the form of a set of questions to be completed as part of the Project Notification Form. Thoughtful integration of future-looking broadband practices into this process will contribute to progress towards the following goals:

1. Enable an environment of competition and choice that results in all residents and businesses having a choice of 2 or more wireline or fixed wireless high-speed Internet providers
2. Create a built environment that is responsive to new and emerging connectivity technologies
3. Minimize disruption to the public right of way during and after construction of the building

The information that is shared through the Project Notification Form will help BPDA and the City understand how developers currently integrate telecommunications planning in their work and how this integration can be most responsive to a changing technological landscape.

Upon submission of this online form, a PDF of the responses provided will be sent to the email address of the individual entered as Project Contact. Please include this PDF in the Project Notification Form packet submitted to BPDA.

SECTION 1: GENERAL QUESTIONS

Project Information

- Project Name:
- Project Address Primary:
- Project Address Additional:
- Project Contact (name / Title / Company / email / phone):
- Expected completion date

Team Description

- Owner / Developer
- Architect
- Engineer (building systems):
- Permitting:
- Construction Management

SECTION 2: RIGHT OF WAY TO BUILDING

Point of Entry Planning

Point of entry planning has important implications for the ease with which your building's telecommunications services can be installed, maintained, and expanded over time.

#1: Please provide the following information for your building's point of entry planning (conduits from building to street for telecommunications). Please enter 'unknown' if these decisions have not yet been made or you are presently unsure.

- Number of Points of Entry
- Locations of Points of Entry
- Quantity and size of conduits
- Location where conduits connect (e.g. building-owned manhole, carrier-specific manhole or stubbed at property line)
- Other information/comments

#2: Do you plan to conduct a utility site assessment to identify where cabling is located within the street? This information can be helpful in determining the locations of POEs and telco rooms. Please enter 'unknown' if these decisions have not yet been made or you are presently unsure.

- Yes
- No
- Unknown

SECTION 3: INSIDE OF THE BUILDING

Riser Planning

Riser capacity can enable multiple telecom providers to serve tenants in your building.

#3: Please provide the following information about the riser plans throughout the building. Please enter 'unknown' if these decisions have not yet been made or you are presently unsure.

- Number of risers
- Distance between risers (if more than one)
- Dimensions of riser closets
- Riser or conduit will reach to top floor
- Number and size of conduits or sleeves within each riser
- Proximity to other utilities (e.g. electrical, heating)
- Other information/comments

Telecom Room

A well designed telecom room with appropriate security and resiliency measures can be an enabler of tenant choice and reduce the risk of service disruption and costly damage to telecom equipment.

#4: Please provide the following information about the telecom room plans. Please enter 'unknown' if these decisions have not yet been made or you are presently unsure.

- What is the size of the telecom room?

- Describe the electrical capacity of the telecom room (i.e. # and size of electrical circuits)

- Will the telecom room be located in an area of the building containing one or more load bearing walls?
- Will the telecom room be climate controlled?
    - Yes
    - No
    - Unknown

- If the building is within a flood-prone geographic area, will the telecom equipment will be located above the floodplain?
    - Yes
    - No
    - Unknown

- Will the telecom room be located on a floor where water or other liquid storage is present?
    - Yes
    - No
    - Unknown

- Will the telecom room contain a flood drain?
    - Yes
    - No
    - Unknown

- Will the telecom room be single use (telecom only) or shared with other utilities?
    - Telecom only
    - Shared with other utilities
    - Unknown

- Other information/comments

Delivery of Service Within Building (Residential Only)

Please enter 'unknown' if these decisions have not yet been made or you are presently unsure. Questions 5 through 8 are for residential development only.

#5: Will building/developer supply common inside wiring to all floors of the building?

- Yes
- No
- Unknown

#6: If so, what transmission medium (e.g. coax, fiber)? Please enter 'unknown' if these decisions have not yet been made or you are presently unsure.

#7: Is the building/developer providing wiring within each unit?

- Yes
- No
- Unknown

#8: If so, what transmission medium (e.g. coax, fiber)? Please enter 'unknown' if these decisions have not yet been made or you are presently unsure.

SECTION 4: ACCOMMODATION OF NEW AND EMERGING TECHNOLOGIES

Cellular Reception

The quality of cellular reception in your building can have major impacts on quality of life and business operations.

Please provide the following information on your plans to facilitate high quality cellular coverage in your building. Please enter 'unknown' if these decisions have not yet been made or you are presently unsure.

#9: Will the building conduct any RF benchmark testing to assess cellular coverage?

- Yes
- No
- Unknown

#10: Will the building allocate any floor space for future in-building wireless solutions (DAS/small cell/booster equipment)?

- Yes
- No
- Unknown

#11: Will the building be providing an in-building solution (DAS/ Small cell/ booster)?

- Yes
- No
- Unknown

#12: If so, are you partnering with a carrier, neutral host provider, or self-installing?

- Carrier
- Neutral host provider
- Self-installing

Rooftop Access

Building rooftops are frequently used by telecommunications providers to install equipment critical to the provision of service to tenants.

Please provide the following information regarding your plans for roof access and usage. Please enter 'unknown' if these decisions have not yet been made or you are presently unsure.

#13: Will you allow cellular providers to place equipment on the roof?

- Yes
- No
- Unknown

#14: Will you allow broadband providers (fixed wireless) to install equipment on the roof?

- Yes
- No
- Unknown

SECTION 5: TELECOM PROVIDER OUTREACH

Supporting Competition and Choice

Having a choice of broadband providers is a value add for property owners looking to attract tenants and for tenants in Boston seeking fast, affordable, and reliable broadband service. In addition to enabling tenant choice in your building, early outreach to telecom providers can also reduce cost and disruption to the public right of way. The following questions focus on steps that property owners can take to ensure that multiple wireline or fixed wireless broadband providers can access your building and provide service to your tenants.

#15: (Residential Only) Please provide the date upon which each of the below providers were successfully contacted, whether or not they will serve the building, what transmission medium they will use (e.g. coax, fiber) and the reason they provided if the answer was 'no'.

- Comcast
- RCN
- Verizon
- NetBlazr
- Starry

#16: Do you plan to abstain from exclusivity agreements with broadband and cable providers?

- Yes
- No
- Unknown

#17: Do you plan to make public to tenants and prospective tenants the list of broadband/cable providers who serve the building?

- Yes
- No
- Unknown

SECTION 6: FEEDBACK

The Boston Planning and Development Agency looks forward to supporting the developer community in enabling broadband choice for resident and businesses. Please provide feedback on your experience completing these questions.