

**Fort Point Downtown Waterfront  
Municipal Harbor Plan Phase 2  
Appendix**



## **APPENDIX**

### **Fort Point Downtown Waterfront Municipal Harbor Plan Phase 2**

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**Appendix 2-A, List of MHPAC Members**

## FORT POINT DOWNTOWN WATERFRONT MUNICIPAL HARBOR PLAN

### The Municipal Harbor Plan Advisory Committee

#### *Committee Chair*

Ms. Joy Conway  
Vice President of Government and Industry Affairs

#### Neighborhood Representatives

##### *Leather District*

Mr. Robert Trestan

##### *Charlestown*

Mr. Dennis Callahan

##### *Chinatown*

Beverly Wing

##### *East Boston*

Karen Buttiglieri

##### *South Boston*

Michael Foley

#### Ex Officio

Congressman Stephen F. Lynch  
United States Congress

Representative Martin Walsh  
Massachusetts State House

Senator John A. Hart, Jr.  
Massachusetts State House

Councillor James M. Kelly  
Boston City Council

#### Government Representatives

##### *Massachusetts Port Authority*

Richard Henderson, Director of Planning and Development

##### *Massachusetts Water Resources Authority*

Marianne Connolly, Program Manager Coordination  
Lisa Marx, Program Manager Planning, Operation Planning

##### *Executive Office of Transportation and Construction*

Astrid Glynn, Director of Intermodal Policy and Programs (Alternate)

## **Government Representatives (continued)**

### ***Boston Environment Department***

Bradford Swing, Special Assistant to the Office of Environmental Services (Alternate)

### **At-Large Representatives**

#### ***The Boston Harbor Association***

Vivien Li, Executive Director

#### ***Save the Harbor/Save the Bay***

Bruce Berman, Director of Communications

Patty Foley, Executive Director (Alternate)

#### ***City of Boston Office of Civil Rights***

Stephen Spinetto, Commissioner of The Commission for Persons with Disabilities

#### ***The Children's Museum***

Neil Gordon, Vice President/Chief Financial Office

#### ***Artery Business Committee***

Richard Dimino, President and CEO

Bissera Antikarov, Manager of Urban Design and Planning (Alternate)

#### ***Boston Shipping Association, Inc.***

A. Ross Pope, President

Al Frizelle, Executive Director (Alternate)

#### ***Greater Boston Chamber of Commerce***

Jim Klocke, Executive Vice President

#### ***University of Massachusetts/Boston***

##### ***Urban Harbors Institute***

Richard F. Delaney, Director

Jack Wiggin, Assistant Director (Alternate)

#### ***National Park Service***

Terry W. Savage, Superintendent

Sarah Peskin, Chief of Planning (Alternate)

#### ***Conservation Law Foundation***

Stephanie Pollack, Acting President

Seth Kaplan, Senior Attorney (Alternate)

#### ***Boston Society of Architects***

David Spillane, Associate

**At-Large Representatives (continued)**

***Boston Natural Areas Network***

Valerie Burns, President

***Greater Boston Real Estate Board***

Joy Conway, Senior Vice President of Government and Industry Affairs  
(Committee Chair, see above)





## **Appendix 2-B, Summaries of MHPAC Meetings**

## **MUNICIPAL HARBOR PLAN ADVISORY COMMITTEE**

### **Meeting Summary**

**December 4, 2002**

The meeting of the City's Municipal Harbor Plan Advisory Committee was called to order at approximately 3:00 p.m. in the BRA Board Room by Richard McGuinness, Senior Waterfront Planner, Boston Redevelopment Authority.

Richard McGuinness began the meeting by pointing out the Phase II area of the Fort Point Downtown Waterfront MHP on the map and explained that the planning area covers approximately 34.54 acres of land and 44 acres of watershed. The area begins at Hook Lobster and ends at the U.S. Postal Annex. Richard made a few announcements: Joy Conway who represents the Greater Boston Real Estate Board on the Harbor Planning Committee will chair the Municipal Harbor Plan Advisory committee for Phase II.

Joy Conway introduced herself and asked if the committee and the members of the audience would introduce themselves.

The members of the committee and the audience introduced themselves.

Richard McGuinness said that there is a representative from the Leather District who is unable to make today's meeting but who will be at future meetings. Richard added the BRA is contacting someone from Chinatown to sit on the committee. Richard made some scheduling announcements:

- There are two municipal harbor planning efforts that will be running concurrently, Phase II of the Fort Point Downtown MHP and an amendment to the South Boston MHP for the Gillette property
- The MHPAC will be meeting every other Wednesday
- The BRA would like to submit Phase II in the spring.

Richard explained the Notice to Proceed provides the following guidance for harbor planning in Phase II:

- Integrating plans for Boston harbor water transportation needs with the uses proposed in the planning area
- Facilitate the implementation for the Fort point Channel watershed activation plan
- Develop a link between the Watersheet Activation Plan and the criteria for those measures provided to offset negative impacts to state tidelands policy objectives for the ground level of tidelands.

Richard listed the following objectives to be included in Phase II:

- Providing sufficient space immediately adjacent to the water for public access and water-dependent activities
- Providing extensive upland open space that further promotes public use and enjoyment of the waterfront
- Maintaining a physical environment that is conducive to pedestrian activity at and near the waterfront
- Priority to navigation and water-dependent uses

- Addressing the challenges created by the existing harbor line
- Supporting documentation including the delineation for Commonwealth and private tidelands

Richard also mentioned the track expansion at South Station having an impact on the development within the planning area as well as coordination with the South Boston transitway.

Richard explained that the planning framework comprises principles that will guide the City in determining the following for the harbor planning area:

- The orientation and type of public open spaces envisioned;
- Minimum standards for aggregate open space and water dependent use zones;
- How building heights and aggregate massing will be approached in relation to the requirements of 310 CMR 9.51(3)(e);
- A suitable method for quantifying the impacts of proposed substitute provisions;
- Criteria on which offsets to ground level adverse impacts associated with proposed substitute provisions that cannot otherwise mitigated will be based.

Richard said all of the property owners in the planning area will be invited to give presentations at future MHPAC meetings. Richard gave a short overview of each of the properties in the planning area.

Bruce Berman asked if the City owns the land around Hook Lobster.

Richard McGuinness said he will look into that question.

Richard McGuinness added that there will be updates made at MHPAC meetings on projects in the area such as the Central Artery/Tunnel surface restoration project, the Tea Party Ship Museum, the MBTA track expansion and the Congress Street Bridge restoration. Richard added that the City is seeking substitutions for minimum Harborwalk width, which would be to seek an increase in width to 12 feet minimum, 10 feet clear. Richard said another area-wide topic will be the implementation of the Fort Point Channel Watersheet Activation Plan. Richard said the MHP will only seek substitutions for Russia Wharf, which currently has a project going through Article 80 review. Richard said Russia Wharf will be giving a presentation at today's meeting, and that at future meetings the committee will be looking at what's allowed under Chapter 91 and what the project is proposing as well as shadow and wind impacts.

Jim Klocke asked how Phase II would be able to be submitted in the spring if there are that many presentations to get through and the committee is only meeting twice a month with two planning processes. Jim suggested having a few more meetings in the next month.

Vivien Li said she is glad that the committee will not be doing weekly meetings because everyone on the committee is volunteering time and it's unfair and too much work to meet everyday. Vivien said the neighborhood representatives do not attend, and these are fairly large projects that should be looked at by neighborhood representatives. Vivien asked if the proposed schedule is really doable with the staffing capabilities, and if not, maybe it's best not to raise the level of expectation.

Richard McGuinness said the BRA will have a consultant on board by the new year. Richard added that there will be competing MHPAC meetings, and that the committee will not be meeting every week, but every other week.

Vivien Li asked about the schedule and when the committee would actually discuss the Plan.

Richard McGuinness said the staff is not into the level of detail of agenda topics yet. Richard explained that in terms of the Amendment to the South Boston MHP, the Gillette portion of the Plan expires in December 2003; therefore this schedule is aggressive and optimistic. Richard added that they do not know when the amendment process will get underway.

Vivien Li asked about staff for the South Boston MHP amendment process.

Richard McGuinness answered that BRA staff will be presenting for the amendment process.

Bissera Antikarov said it would be great to have an outline for each meeting especially given that two processes are going on at the same time. Bissera also asked, given the timeframe, if all of the presentations are necessary.

Bruce Berman said the MHPAC meetings on the amendment for the ICA were very efficient, but if the committee needs to be realistic maybe they should consider having one or two longer four-hour meetings.

Brad Swing asked how involved the MHP amendment for the ICA was and whether this is going to be more involved.

Richard McGuinness said that yes, this totally different.

Joy Conway suggested having all the presentations early on in the process in order for the committee to have the context.

Richard McGuinness said there will be presentations at the next MHPAC meeting on January 8<sup>th</sup>.

Joy Conway suggested having all of the presentations at one meeting and maybe making it a longer meeting that would go from 1-5PM.

Bissera Antikarov said that would be good, to have all of the property owners at one meeting and then all of the representative from the State agencies at another.

Richard McGuinness said that several of the updates will be short.

Joy Conway asked about the amount of time allocated to presentations.

Vivien Li said that for some of the presentations a half an hour will not be sufficient, The Post Office, for instance, will most likely have a more extensive presentation than 470 Atlantic. Vivien added that having the presentations early on will be helpful, but it's probably not realistic to think they can all be done in one meeting.

Richard McGuinness said the staff is working on written summaries to send to the committee so that everyone will have the facts before the presentations.

Bissera Antikarov said it would be good to have the project proponents' presentations separate from the updates because they are different.

Joy Conway asked Richard to look into resolving this issue.

Richard McGuinness said he would look into expanding the meetings in January as well as how to have the presentations from the property owners kept to a timeframe.

Vivien Li said in terms of the composition of the MHPAC, there are virtually no neighborhood representatives, the East Boston people will not be coming to these meetings, and there is a lack of

diversity. Vivien asked that the staff look into finding representatives from the Leather District, Chinatown, the North End and South Boston, and recharging the MHPAC. Vivien said there are newly elected officials who should be offered a seat on the committee, such as Brian Wallace, since there has been some concern about the elected officials being up to speed on the process. Vivien said it's very important to broaden the community representatives since these are not small projects.

Richard McGuinness said the staff is in the process of inviting a representative from Chinatown to join the committee and there is a representative from the Leather District, Robert Trestan, who was unable to attend today's meeting.

Richard Henderson asked if the committee could see a list of the committee.

Richard McGuinness replied there is a copy in the beginning of the Phase I MHP.

Joy Conway said it appears that if a new person representing Chinatown can come on board and the Leather District representative can attend, with some phone calls to current committee members there should be sufficient coverage at the January 8<sup>th</sup> meeting.

Bissera Antikarov said it may be worth it to make a round of calls to all of the current committee members.

Richard McGuinness said the staff will take care of that.

Bruce Berman suggested that some of the committee members who are at the meeting might want to look into making some calls as well.

Joy Conway clarified that she will be the chair for Phase II of the Fort Point Downtown MHP, but that Rod Macdonald will continue to chair the committee for the amendment to the South Boston MHP.

Bob Kaye introduced himself as the project manager for Russia Wharf and gave a short presentation on plans for by Equity Office for future development. Bob explained that Equity is filing its ENF/PNF and plans to file its EIR/PIR in January; they hope to have all permits in place by the end of 2003 and the project ready to open in 2006-2007.

Steve Cecil presented the plans for the Russia Wharf project.

Richard McGuinness asked the committee if there were any questions.

Vivien Li said Bob has compared it to Rowes Wharf, and are there differences between the two on the waterside.

Bob Kaye answered that there are, the first being that Rowes Wharf looks out to the Atlantic Ocean, and Russia Wharf has much less actual waterfront. Bob explained that Russia Wharf is a much more constrained site, it looks to the Channel and has much less water depth than at Rowes. Bob said the plan is to dredge to six feet below the mean low water to provide access to a range of watercraft. Bob said they are in discussions with the Central Artery about connections to the ferry terminal, since the goal is to have accessibility during all tide cycles. Bob said there are some similarities between the two properties, the first being that they will be managed by the same property management company. Bob said in addition, as many boats as want will be able to use it.

Richard Henderson asked about the walkway between Pearl Street and Congress Street.

Bob Kaye pointed out the walkway on the plan and explained that there will be a sculpture garden and it will be a completely public walkway, a very unique Boston space.

Brad Swing asked Bob to point out the public access to piers on the plan.

Bob Kaye showed the access point on the plan, and said the piers will not be accessible from Congress Street.

Bruce Berman asked about ADA access and said there is no reason why Russia Wharf shouldn't have a short non-compliant ramp. Bruce also asked about whether the landing would be free and open to the public and if Russia Wharf would be a 24-hour destination.

Bob Kaye answered yes.

Bruce Berman asked whether he meant 18-hour or 24-hour, because it is particularly important that this site be 24-hour.

Bob Kaye said that in many office buildings there are shifts and it has become more of a 24-hour day, which means that there will be a reason for people to be there. Bob added that hopefully the transit system will be open 24-hours in the future.

Bruce Berman said if the tenants are able to enjoy access to the tidelands 24-hours, then the public should be able to enjoy it 24-hours.

Vivien Li added that just because offices want to be open 24-hours, it does not necessarily create public access, that comes from the residences and the hotel.

Bob Kaye said that the office space is not an FPA.

Vivien Li asked about the size of the vessels.

Bob Kaye said that the clearance underneath the Old Northern Avenue Bridge is very low, and the new Moakley Bridge is 14 feet clearance with high tide. Bob said they will design a facility that can handle that size vessel.

Bruce Berman asked if the committee could have an update on the Old Northern Avenue Bridge at the January 8<sup>th</sup> meeting.

Stephen Spinetto asked about the entrance to the office building and said he has some concerns with the public use of the lobby. Stephen asked if there is any way to develop it without making that interior space.

Bob Kaye said Equity has looked into this, but it's not feasible because they do need the lobby space. Bob added that the combination of the architecture, transparency and management of the space will allow the public to see it as a public space. Bob said in addition there will be signage. Bob cited Rowes Wharf as an example of combining architecture and management. It took a while to get the combination right.

Neil Gordon asked how Equity plans to make the site feel accessible and affordable to people coming from all over the city.

Bob Kaye answered that at Rowes Wharf they have free programs such as the blues concerts and Friday night movies, both of which have been very well attended. Bob said they envision having a tremendous amount of activity. Bob said the hotel at Russia Wharf is planned as a three and a half-star hotel instead of a four and a half-star or five-star hotel because they are thinking of its new position to serve families. Bob said that the hotel will be a suites hotel, meaning it will be hospitable financially. Bob said the jazz and blues club will be a café during the day where a family can get a reasonable meal at reasonable prices.

Brad Swing asked about the number of parking spaces.

Bob Kaye answered that there are currently 62 public/commercial spaces and 69 private spaces, so 131 total spaces. Bob said they are proposing 512 spaces in the underground parking garage, 450 private, which would be for the office, residences and hotel, and 62 commercial spaces. Bob said that many people want fewer spaces, but they are trying to reach a balancing point.

Vivien Li said she has concerns with the entrance/exit on Congress Street.

Bob Kaye said that her concern is well taken, and that the valet is underground in order to reduce side-friction at the curb on Congress Street.

Steve Cecil added that they are working on the relocation of unnecessary pavement by widening the sidewalk, which would allow for the street trees and a better width, which would be a big benefit to the City and the project.

Bob Kaye pointed out on the plan the parking lane next to the Federal Reserve and explained how it responds to the pedestrian need by adding it to the Russia Wharf side.

Vivien Li said she would like to reiterate the conflict between pedestrians and vehicles.

The meeting was adjourned at 5:00 p.m. The next meeting to discuss the Fort Point Downtown Waterfront MHP is Wednesday, January 8, 2002 at 3:00 p.m. in the Piemonte Room (5<sup>th</sup> Floor, Boston City Hall).

Note: If anyone on the committee has any edits or comments with respect to this meeting summary, please submit them to Richard McGuinness in writing via fax (617-367-6087) or email ([Richard.McGuinness.bra@ci.boston.ma.us](mailto:Richard.McGuinness.bra@ci.boston.ma.us)) within seven (7) days of receipt. A copy of your comments will be placed with the records of the meeting.

## **MUNICIPAL HARBOR PLAN ADVISORY COMMITTEE**

### **Meeting Summary**

**January 8, 2003**

The meeting of the City's Municipal Harbor Plan Advisory Committee was called to order at approximately 3:00 p.m. in the Piemonte Room by Richard McGuinness, Senior Waterfront Planner, Boston Redevelopment Authority.

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Richard McGuinness began the meeting by giving updates on the shoreline structures around the Fort Point Channel. Richard then went on to discuss the State Harbor line and give the clearances of the bridges along the Channel. Richard explained the water quality in the Channel and the Combined Sewer Overflow improvement project and its effect on the Channel's water quality. Richard gave a brief history and update on the Old Northern Avenue Bridge.

Bruce Berman asked about the cost of having a pedestrian connection with the bridge kept open.

Richard McGuinness answered the latest estimate in 1997 was about \$12 million.

Bruce Berman said that by 2004 the bridge will need to be open for the water shuttles.

Stephen Spinetto said the Moakley Bridge is terrible for people with disabilities, whereas the old bridge is very easy. Stephen said there will really be no pedestrian bridge for people with disabilities if this bridge does not remain.

Richard McGuinness gave a brief update on the Congress Street Bridge and said it is scheduled to be complete in September of 2005.

Vivien Li said that no matter what, one lane should remain open to traffic because it is one of the main links to the Convention Center. Vivien added that it would be helpful to have the Bridge reconstruction coincide with the renovations of the Tea Party Museum.

Richard McGuinness said the Tea Party Museum will be presenting to the MHPAC.

Vivien Li said that it could be a concern that part of the bridge would close twice, once for the reconstruction of the bridge, once for the Tea Party Museum, so there should be some coordination there, and it would be good to have someone from MassHighway at the meeting to clarify.

Richard McGuinness explained that both projects will be coordinated.

Neil Gordon said it's frustrating on many levels, especially with the Convention Center. This should be a top priority.

Rosemary Powers from Senator Jack Hart's office introduced herself and said in terms of the bridge, one side of the bridge should remain open at all times, and this is the first their office has heard of the lanes being closed. Rosemary added that her office would make a call to MassHighway to check the status.

Richard McGuinness went over the specific widths of Harborwalk along the Channel and said the staff would get a map made showing the widths along the Harborwalk and the bridges for the next MHPAC meeting. Richard McGuinness introduced the Committee Chair, Joy Conway.



Joy Conway asked if the new committee members would please join the table and introduce themselves. Joy also said that the minutes from each meeting would in the future be sent to the elected offices to keep them up to speed on the process.

Vivien Li said that assuming the Central Artery/Tunnel completes some segments of the Harborwalk, will the property owners have the responsibility to maintain them.

Richard McGuinness said yes in some cases, but we are not sure about the City property.

Colby Rottler from the Federal Reserve said the Federal Reserve will be responsible for maintaining some of the City-owned property along Dorchester Avenue.

Vivien Li said that if we go into security alert, does it mean the City-owned property that is maintained by the Federal Reserve will be made off-limits to the public at the Federal Reserve's discretion.

Colby Rottler said they are talking about the piece of land across the street from the Federal Reserve, and that they will not be closing that down or securing that area if they do need to secure their own area.

Vivien Li said that in the document that describes the maintenance of the land it would be helpful to have a section that clarifies that.

Bruce Berman asked if in the case of 500 Atlantic Avenue and other places is maintenance part of the license agreement.

Richard McGuinness said that it is.

Bruce Berman asked if there was any MOU by the City (except in the case of City-owned land).

Richard McGuinness said it depends property by property, some are through the Article 80 process.

Sue Brown said she thinks there are standards in the Harborpark Plan.

Richard McGuinness said that harbor plans will do that.

Vivien Li said that there are clearly parcels that do not comply with ADA and that we should think about what to do about that.

Stephen Spinetto said the Coast Guard is not grandfathered in as a federal agency. They are held to a higher standard, but there are others that might be grandfathered.

Vivien Li asked if the MHPAC could have a conversation about this issue since it is important to the committee and others that this area be accessible to everyone.

Richard McGuinness said maybe a subcommittee could be set up to look closer and discuss this on a harbor-wide level.

Joy Conway introduced Sue Brown from the Parks Department to give an update on the Rose Kennedy Greenway.

Sue Brown went over some design and process along the corridor.

Richard McGuinness asked if the development proposals along the Greenway need to go through the Parks Commission will there be one level of review.

Sue Brown answered that anything within 100 feet of a park or parkway will go through the review.

Richard McGuinness asked if there will be any conversations on the criteria for development that abuts the Greenway.

Sue Brown said the BRA and the communities will be setting up design guidelines as has been done with the North End.

Brad Swing said in terms of the wharf district, how are they going to incorporate the designs.

Sue Brown said that they will be making very sustainable designs.

Brad Swing asked if there will be high performance design features like with buildings in terms of the way the parks are irrigated.

Sue Brown answered that it will be a highly green process of building.

A member of the audience asked for clarification on what piece has been completed.

Sue Brown said the section between Atlantic Avenue and Kneeland Street.

Neil Gordon asked about the management structure of the greenway.

Sue Brown answered that the pieces are being contemplated with a new entity called a trust that would manage the entire greenway corridor entrusted with development parcels and park parcels.

Richard Henderson asked about the money being contemplated for the construction of that trust.

Sue Brown said there is a \$60 million budget for the construction of the trust. Sue added that the construction budget is for basic design elements and it is anticipated that there will be additional elements going into these parks that will cost additional money.

Bruce Berman asked about the status of Spectacle Island.

Sue Brown responded that it is owned by the City and DEM. Sue added that once it is turned back to the owners, they are in charge of maintenance. The money was to complete the visitor center.

Brad Swing said that in December legislation was filed to have the City and DEM lease the island to the Island Alliance.

Vivien Li asked about the funding source.

Sue Brown answered that it remains the responsibility of the City and State and they hope to find money through grants and partnerships.

Vivien Li said it's a good point that if the island opens in September 2003 even without concessions and a marina, someone will need to pay to maintain the island, and there should be money ensured for that. Vivien said that needs to be secured both for the greenway as well as Spectacle Island.

Sue Brown said the greenway does not currently have funding for maintenance earmarked.

Vivien Li said there are articles about the business community not being satisfied with the money for the surface restoration.

Bissera Antikarov said there is \$31 million left for building which will only cover basic structures, and the business community thinks it's not enough money for additional things and the question is how to partner public money with private money.

Bruce Berman asked if at some point if some of the money from the development parcels will contribute to the parks and whether some of the concessions from the parks could help defer the maintenance costs.

Vivien Li said there is a differing opinion on how much building should be on park parcels.

Richard Henderson said that it is important to remember the skating rink in East Boston on the waterfront that does not work due to the microclimate.

Sue Brown announced that on February 4<sup>th</sup> at 6PM at the Boston Public Library there will be a public event showcasing these called Celebrating Boston.

A member of the audience asked about the timetable.

Sue Brown said that some parcels, like the North End are already in the process. Sue said the design process is about a year, and the construction process is about a year, so the entire length will take about three years to complete.

The audience member asked if it is a phased process.

Sue Brown answered that the North End piece is the first contract out so it is staggered, but once all are out they can work together.

Joy Conway asked if all the members of the committee would introduce themselves for the new members of the committee.

John Peterson from the Massachusetts Horticultural Society gave a presentation on their project.

Bruce Berman asked if the public would be allowed to walk through the project freely 24 hours a day.

John Peterson said there are ways to do that, with arcades and exterior walkways that enhance the movement of people.

Bruce Berman said that people care that it be a public space.

John Peterson said that they also hope it will be very public, but they also need to run a business and it's a critical component to have the space be free while finding revenue support.

Brad Swing asked if they are thinking about applying for state funds and grants and if green building will be part of the building facility.

John Peterson said Massachusetts Horticulture does want to build in an environmentally friendly way since they are a green organization and they are willing to apply for any grants they can.

Vivien Li said it is very encouraging that Massachusetts Horticulture is making these announcements since there is significant competition.

John Peterson said that at the announcement it will be made clear that all of the funds are not in place but this is a new component to the cultural facilities in Boston and this project should happen.

Richard Henderson asked about the total cost of the project.

John Peterson answered that it would be about \$70 million and would be phased.

Neil Gordon asked about the kind of visitorship and whether it would be seasonal.

John Peterson answered that they are hoping to get 1 million visitors a year.

Jamy Buchanan Madeja commented on the covering over of the Dewey Square parcel and said that a lot of pleasure can be attained from the outdoor experience and that maybe they should think about constructing something that takes away some of the unpleasantness but keeps the feeling of being outdoors. Jamy asked if they have thought about doing some coastal botany.

John Peterson answered yes, but they cannot do everything, that there are other organizations that do that and Massachusetts Horticulture wants to be in keeping with who they are but that there might be programming that could deal with coastal botany.

Matthew Sances commented that it would be very interesting to have local plants featured.

John Peterson said they hope to include diverse plantings.

Jamy Buchanan Madeja said the only other place that compares to this is in Chicago and that attracted tens of thousands of people.

John Peterson said they are big on the human encounter on a day to day basis.

Charles Norris asked how critical the elevated walkways are to the overall design since the view corridor on Congress Street especially is important.

John Peterson answered that they think it is very important.

Charles Norris said it is an important precedent for other parts of the City to keep lateral streets as open and inviting to the public as possible.

Joy Conway went over the schedule for upcoming meetings and announced that ICON architecture, Inc had been hired as the consultant for Phase II with Beatrice Nessen as ICON's project manager.

The meeting was adjourned at 5:00 p.m. The next meeting to discuss the Fort Point Downtown Waterfront MHP is Wednesday, January 22, 2003 at 3:00 p.m. in the BRA Board Room (9<sup>th</sup> Floor, Boston City Hall).

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## **MUNICIPAL HARBOR PLAN ADVISORY COMMITTEE**

### **Meeting Summary**

**January 22, 2003**

The meeting of the City's Municipal Harbor Plan Advisory Committee was called to order at approximately 3:00 p.m. in the BRA Board Room by Joy Conway, Committee Chair.

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Joy Conway, Committee Chair, made several updates regarding the Committee and said that BRA staff is looking into inviting representatives from Dorchester and the Artist Community to sit on the Committee and would look for any suggestions. Joy also announced the upcoming MHPAC meetings on February 5<sup>th</sup> and February 19<sup>th</sup>. Joy introduced Jon Seward with the Hook Lobster presentation.

Jon Seward from the Community Design Partnership gave a short presentation on Hook Lobster.

Bruce Berman asked for more elaboration on water quality improvement through bio-remediation.

Jon Seward answered that it is more cost effective and easy to use bio-remediation than conventional methods.

Bruce Berman said that salt marshes are another way to filter water.

Jon Seward said it has to do with aeration of the water column, and the process of aeration might be enhanced to improve water quality.

Bruce Berman said it is a concern when sediment turbidity affects the business, and there is evidence that ferry traffic can cause such problems. Bruce stated that ferry traffic will be consistently increasing in the area, and we need to protect the businesses from water quality impacts.

Jon Seward said that an existing source of turbidity is from the ferries on the other side of the Old Northern Avenue Bridge.

Bruce Berman suggested having a cautionary sign showing the location of water intake.

A representative from Hook said it's a problem that more and more boats are pushing closer and closer to the bridge.

Bruce Berman said it's not really the effect of the boat traffic in the Channel.

Bissera Antikarov suggested having hard copies of Jon's presentation available for the Committee.

Joy Conway said the staff will try to make the presentations available by email but if that is not possible there will be handouts at following meetings.

Brad Swing asked if Jon could elaborate on the aquaculture.

Jon Seward said they have looked into doing more general procedures, they looked to the Urban Harbors Institute, but one restriction is that they have limited space. Jon added that they are not considering penning large numbers of fish, but maybe some kind of fishery for shellfish, you can look to the mussels covering the pilings in Charlestown as an example.

Vivien Li said that recently she had been to Hook with a group of teachers and students and it still has the funkiness of the Fort Point Channel. It has not become gentrified. Vivien said that she would like to see educational programming where the public has the ability to go through the facility, and that she likes the idea of introducing the public to the Fort Point Channel and using educational components to do so. Vivien also added that there have been suggestions about the cantilevered Harborwalk, and that it's not as important for this site since it is a water-dependent use, but it might be good to see how much watersheet it would cover.

Jon Seward said that Hook's existing building is built out to existing harborline, and they are not sure if they could cantilever with pilings already holding up the building. Jon added that the BRA previously asked for them to look at floating a Harborwalk but it could not be contemplated given current uses.

Joy Conway asked for explanation of what current Harborwalk users do around the site.

Jon Seward said that they can cross the front of the property along Atlantic Avenue. Jon added that Hook doesn't allow for people to park on that land unless they are doing business. Jon stated that being a water-dependent use, they cannot foresee a time when Harborwalk would be used along the waterside.

Dennis Callahan asked if at one point a proposal had the Harborwalk going along the Old Northern Avenue Bridge.

Jon Seward answered that might have been part of one proposal.

Dennis Callahan asked how many people are employed by Hook.

Jon Seward said 15 to 30 depending on the season.

Michael Foley asked Jon to show the slide about the Central Artery.

Joy Conway asked if the audience has any questions. Joy introduced Tom McShane from the Dewey Square Group.

Tom McShane made a presentation on Independence Wharf.

Dennis Callahan asked about the game plan and timing improvements to the building in conjunction to Phase I.

Tom McShane said it's not contingent on future tenants, that the plans must go on regardless. Tom explained that they are ready to go and they would like to have the improvements made by the end of the Spring 2003.

Brad Swing asked about the status of their Chapter 91 license and the 14<sup>th</sup> floor.

Tom McShane said that the observation floor is there and open. All you must do is sign in with the security guard.

Vivien Li said she has spent time in the building, and this presentation is very negative. Vivien said that the 14<sup>th</sup> floor and the unique signage are very positive things about the building. Vivien questioned whether this presentation was meant to lower the Committee's expectations. Vivien added that by last November they were supposed to tell what their plans are for the waterside, and it's ok that they have asked for an extension. The Committee is not uncomfortable with them delaying for a while. Vivien said that the Committee would like a timetable, and that they should take credit for the observation deck since they have not dealt with the watersheet activation portion. Vivien suggested that 470 Atlantic come back and talk to the Committee about watersheet activation at another time.

Tom McShane said that there is Harborwalk, there is an observation deck and there is signage, but in terms of where they want to go there are constraints.

Neil Gordon asked about the genesis of the space between the bridge and the building.

Tom McShane said he has no idea, but there is the possibility that there could be a connection because of the grade.

Jim Klocke asked if it was their intent to lower expectations about the waterside.

Tom McShane said that expectations are low. Tom added that the building only has two tenants, and they needed to have something to DEP by last November, but it would just be crazy to come out with one more thing right now. Tom asked that they have until the Spring to get together with the abutters group and help make it something that everyone wants.

Joy Conway said that this MHP is scheduled to be completed in the Spring but maybe the things that the Committee is curious about could be submitted in a memo in order to get further input about activation.

Jamy Buchanan Madeja complimented Vivien on bringing groups up to the 14<sup>th</sup> floor. Jamy added that in the short term the connection would need legislation. Jamy suggested looking into a bottom-moored walkway as an alternative. Jamy added that for the long term this is a gateway to the entire walk, and to activate the 14<sup>th</sup> floor, the best way would be food.

Tom McShane said that a kiosk is built in the lobby and that it is their hope that people will see it and go further into the building and up the 14<sup>th</sup> floor. Tom agreed that food would be great on the 14<sup>th</sup> floor, but they cannot legally have a restaurant up there.

Joy Conway announced the 3<sup>rd</sup> presentation.

Ron Killian from the Central Artery/Tunnel Project gave a presentation on the water transportation facility.

Richard McGuinness said the Harborwalk will be completed by the MBTA and would it be possible to make the connection prior to the completion of 500 Atlantic Avenue because it would open up circulation right away, and it could be used in 2004.

Ron Killian said it's a matter that the owner (Intel) would have to discuss and it would be about figuring out how to do it without constraining construction of safety.

Michael Foley asked if there has been consideration of Hook's water quality and the water transportation in the Channel.

Ron Killian said that the size and depth of the vessels coming into the Channel will be much smaller than those at Rowes Wharf since they need to get under the bridges.

Vivien Li asked for clarification on the maintenance and subsidy.

Ron Killian answered that the docking will be maintained by Intel, owned and serviced by the MBTA and the CA/T will subsidize until the end of 2004.

Rich Brazile from the Central Artery/Tunnel Project gave a presentation on the Dorchester Avenue sidewalk and bridge park.

Bruce Berman asked about the elevation of the small landscaped area.

Rich Brazile answered that it's at street level and there is access to it from Dorchester Avenue. Rich added that the fencing is a result of security concerns from the Post Office.

Vivien Li stated that the Dorchester Avenue stretch is owned by the City but going to be maintained by the Federal Reserve. Vivien added that the Federal Reserve is going to have times of very high security alert, can we be sure that the MOU between the City and the Federal Reserve states that the Harborwalk will remain open despite security concerns at the Federal Reserve.

Richard McGuinness asked if there is a MOU.

Vivien Li asked why we would want the Federal Reserve to control that park if the public is not going to be able to use it if we go to war.

Richard McGuinness said that the Federal Reserve will be in to talk to the Committee at the meeting on February 5<sup>th</sup> about their landscaping plans.

Dennis Callahan said the City turned away from a long-term lease but the City's attorney should be aware of these concerns and issues. Dennis added that he finds it hard to believe that the Federal Reserve could just do that.

Vivien Li said it is not a good sign that there are no trash receptacles.

Bruce Berman said no matter who manages the park the Federal Reserve can ask the City to close it, but he would feel more comfortable if the City were making the decision.

Michael Foley asked about the timetable.

Rich Brazile said the restoration can start in mid to late summer and the Dorchester Avenue Bridge will get started next fall and take about a year. Rich added that there should be coordination with Dorchester Avenue and the Congress Street Bridge reconstruction.

Bruce Berman said he is concerned about the timing of the Congress Street Bridge, and that he assumes the CA/T has heard from the representatives.



Rich Brazile said he hopes they will construct the corner.

Jamy Buchanan Madeja suggested that carry in/carry out trash management could be better at this waterfront location. Jamy asked if the park is handicapped accessible.

Rich Brazile said that yes, they have added a few mounds, but the park is flat.

Chris Hart suggested looking to models in Philadelphia and Chicago.

The meeting was adjourned at 5:00 p.m. The next meeting to discuss the Fort Point Downtown Waterfront MHP is Wednesday, February 5, 2003 at 3:00 p.m. in the BRA

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Note: If anyone on the committee has any edits or comments with respect to this meeting summary, please submit them to Richard McGuinness in writing via fax (617-367-6087) or email ([Richard.McGuinness.bra@ci.boston.ma.us](mailto:Richard.McGuinness.bra@ci.boston.ma.us)) within seven (7) days of receipt. A copy of your comments will be placed with the records of the meeting.

## **MUNICIPAL HARBOR PLAN ADVISORY COMMITTEE**

### **Meeting Summary**

**February 5, 2003**

The meeting of the City's Municipal Harbor Plan Advisory Committee was called to order at approximately 3:00 p.m. in the BRA Board Room by Joy Conway, Committee Chair.

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Joy Conway, Committee Chair, made several announcements: Meeting minutes are being taken and will be available to the members of the Committee and the audience; The next MHPAC meetings are February 19<sup>th</sup>, March 5<sup>th</sup> and March 19<sup>th</sup> all to discuss the Fort Point Downtown.

Colby Rottler from the Federal Reserve Bank made a presentation on the Federal Reserve's landscaping plans for its plaza.

Joy Conway thanked Colby and said the Committee appreciates his participation in the process. Joy asked for questions from the Committee.

Valerie Burns asked if the street trees are included on the plan, because a number of street trees currently along Summer Street are dead, and she hopes the new trees in the plan will be better maintained.

Colby Rottler said that there are street trees in the plan and the Bank plans to have raised planters to avoid chemicals from getting to the root. Colby added that the Bank will provide the money to maintain these new trees.

Valerie Burns said that the Committee is concerned with the pedestrian network and getting the public down to the harbor. Valerie said that the plans show the sidewalk being moved closer to the building on the Summer Street side, described as a boulevard, but that the Bank might want to consider some additional design thought to accommodate the high flow of pedestrians.

Colby Rottler answered that these plans are conceptual and they are undergoing design development right now, and he will take these comments back with him.

Valerie Burns asked about the pieces of public art that are currently on the site and whether they will remain.

Colby Rottler said the Bank is thinking of moving one of the sculptures to another spot, but all of the pieces of art will remain on site, although some will be relocated.

Vivien Li said that the building is not an easy one to penetrate, and it's become less welcoming since 9/11. Vivien said that if the country goes to war, the security force will be greater on the outside of the building. Vivien said that if the Bank is going to maintain the City park across the street, will it be closed if security heightens. Vivien said this should be at the discretion of the City. Vivien asked if security people from the Federal Reserve would be willing to come and address this concern with the Committee. Vivien asked if the Bank is moving the automobile entrance to Congress Street. Vivien asked if it is true that the parking will be removed and the sidewalk on the Russia Wharf side of Congress Street will be expanded.

Colby Rottler answered that the exit will remain on the Dorchester Avenue side. It will be the entering that will be limited to Congress Street and parking eliminated from Congress Street side.

Vivien Li asked if one of the traffic lanes would be closing.

Colby Rottler said no, not as far as he knows.

Valerie Burns asked how much the consolidation of entrances and exits will increase the traffic on Congress Street.

Colby Rottler stated it would increase by about 70 vehicles.

Valerie Burns said that there will be a cumulative effect, and asked what this will mean in terms of impact to pedestrians.

Colby Rottler said that the Bank is in the process of discussing these issues with the BRA and BTB.

Vivien Li said that with this new traffic, the Children's Museum and Tea Party Museum and their buses, there will be a considerable increase in traffic on Congress Street and it needs to be looked at in a comprehensive way.

Richard Henderson asked where the school buses going to the auditorium are going to drop off.

Colby Rottler answered that they are working with the research department on this. Now they are dropping off on Summer Street. Colby added that it's really only a few school buses a day that drop off for the educational component.

Richard Henderson said that walking by today, it's very difficult to know that the auditorium is there. Richard asked if additional signage is something the Bank plans to do.

Colby Rottler answered yes; they are working with signage and signage for the exhibit space that is open to the public. Colby added that there will be security in these places as well.

Richard Henderson asked what the width of the sidewalk along Atlantic Avenue is.

Colby Rottler answered that it's 12 feet.

Richard Henderson said that would really be the minimum, and it's a very busy street, and the Bank is taking away all of the parking along there, and parking is important in order to help activate the area.

Colby Rottler answered that he believes the City intends to put parking back along Summer Street. Colby added that the Bank is just going to maintain the property along the Channel. It is not going to own it.

Richard Henderson said that there used to be a crosswalk across Summer Street which is now gone.

Colby Rottler said the Bank wanted to keep it, but it would have cost several hundreds of thousands of dollars.

Richard Henderson said that many people enter South Station at that point and people are going to cross anyway, regardless of whether there is a crosswalk.

Colby Rottler said the crosswalk is really a Central Artery/City issue.

Richard Henderson said maybe we can bring this up to the City.

Dennis Callahan asked about the maintenance of the park, and whether this is a long-term maintenance agreement and if so, are there liability issues. Dennis asked if this group will be able to comment on the park in terms of the issues of trash receptacles, public space and security.

David Spillane said that the security issues here are real. David asked about the corner of Summer Street and Dorchester Avenue and said that is a main connection to the sidewalk along the Summer Street Bridge. David asked if there is a way to continue the boulevard down. David also asked what coordination the Bank has had with the Central Artery on the scheme that the trees go all the way across.

Colby Rottler said there will be further conversations with the Central Artery, and he thinks it's important to get these comments from the Committee. Colby said the Bank wants to make the landscaping really nice, and they haven't issued any contracts yet. This is still in the planning phase.

Joy Conway said the Committee appreciates the Bank's willingness to be a part of this give and take.

Brad Swing asked how many square feet the economic museum is.

Colby Rottler answered it is 5,000 square feet.

Jamy Buchanan Madeja said that activation means that people use it not just because they have to use it. Jamy said that people don't use places with trees and hard barriers. Why not use mounds of soil that create natural barriers and help shield people from the traffic.

Colby Rottler said it is a concern, and the alternative is to do street walls, which do not work in this space. Colby explained that there will be grass on top of the structures.

Edward Johnson from 245 Summer Street introduced his architect Doug Gensler to give a presentation on the improvements to the lobby. Edward said they are halfway through the design for the first floor.

Vivien Li said in terms of security, will you be able to get into the building and the security will not be until just before the elevators.

Doug Gensler said yes, the idea is to make the lobby publicly accessible.

Vivien Li asked about the meeting room on the first floor, and wondered if that could become a meeting place for the public.

Edward Johnson said that there is a multi-purpose room and opening it up for public meetings is something they could talk about.

Vivien Li asked if the room is going to be kept in the new plans.

Doug Gensler said that it is going to be kept. He added that as the retail gets developed it could turn into a restaurant or a multi-menued food venue.

Vivien Li suggested having public bathrooms outside of the elevator bank.

Doug Gensler said that they are envisioned.

Valerie Burns said that the colonnade is really a point that offers protection from the elements and the protectiveness should be kept while they are doing the thinking of how to better activate.

Doug Gensler said they are hoping to put glass up and make it a semi-enclosed colonnade.

Joy Conway said that while the Committee and the public do want to see progress made and they do envision change, some things need to be protected and retained.

Doug Gensler said that One Federal is an example. He added that here, it would be going through the building while on the path. He said they are working on how to capture the ease of movement and make it a more conditioned environment. He added that they want it to be an attraction.

Neil Gordon asked about the schedule.

Doug Gensler said that it is a true concept right now, and they are trying to solve inherent problems with the building.

Edward Johnson said that it is going to happen in phases, and retailers might be late in the phasing. Edward explained that a Fidelity tenant is going in at the end of the summer 2003.

Richard McGuinness asked if they would speak to the condition of the rear of the building, the side facing the Channel. Richard asked what is available now to help with pedestrian circulation, and is it possible to do some landscaping in the rear parking area.

Edward Johnson answered that they inherited some tenants when they bought the building who have parking at the rear, so it is really a long-term issue. Edward added that they hope to focus on it at some point but in all honesty they are more in the Post Office's timeframe for developing back there.

David Spillane asked about the width of the Summer Street sidewalk and how much would remain if you choose not to walk through the building.

Doug Gensler showed the pinch-point on the plan and said it would be about 17 feet wide.

David Spillane said the volumes of pedestrians are very high on that sidewalk and the volumes are only going to increase. David asked if that would be enough space.

Doug Gensler said that a pedestrian traffic study is underway and the building would be open fairly late. He added that when the calculations are complete they can look at pinch points, because that is one of their concerns as well.

David Spillane said there is something nice about walking outside the building.

Doug Gensler said that it is intended to be transparent, and it would be a natural flow in and out, not having to open doors. He added it would be as if the interior is just an extension of the exterior.

Neil Gordon asked for clarification about Dorchester Avenue. Neil said that there is surface parking today, and there will be in the short term, but in the long term, there might be an opportunity for something else besides parking to occur.

Edward Johnson said the southern half of the rear of the building is the loading dock and it is unlikely that would change.

Vivien Li said that she likes the idea that they are going to do something to activate the lobby. It is a good idea, it fits with the public realm, and it is in the spirit of what they have been talking about in this planning process.

Edward Johnson said they want to benefit the public as well as the tenants.

Richard McGuinness said that since Pembroke recently purchased the building it is not clear about the Amnesty license or Chapter 91 license.

Edward Johnson said that they have no licenses and they need to talk to DEP at some point about this committee's suggestions.

Richard McGuinness said that this Committee gives advice to DEP, but also let the Committee know if there is anything that 245 Summer would like included in the Plan, and we hope that you will come back to the Committee with any updates.

Edward Johnson said that there will be no major shifts in this plan.

Joy Conway agreed with Richard and said it would be great to get any big picture thoughts the sooner the better.

Alice Boelter suggested one way to get people from South Station to the Channel to shop would be to have a different kind of retail, maybe a toy store that focused on different kinds of transportation elements since it would be located next to an inter-modal hub. Alice said this would be great because of its close proximity to the Children's Museum.

Charles Norris asked about the sub-floor area.

Doug Gensler said the whole floor is a basement.

Charles Norris said that leaves very little room for manipulation.

Joy Conway introduced Richard McGuinness and Isabel Kriegel from the Boston Redevelopment Authority to give a brief presentation of the results of the Open Space Charrette from April 2002.

Bob Leite asked who owns Pearl Street.

Richard McGuinness answered that it is owned by Intel but it is a perpetual public easement.

Jamy Buchanan Madeja suggested having something fun to do along Pearl Street such as fish rubbings. Jamy said it would be great to have unifying themes around the harbor.

Valerie Burns said that the staff should look to other river and Harborwalks for good examples of ways to do that.

Charles Norris said that Pearl Street is part of Intel property.

Richard McGuinness answered that it is, but it is a public accessway secured through the Chapter 91 process.

Todd Fontanella asked if there were any details on floating structures, docks, etc.

Richard McGuinness replied that we are not at that level of design.

Bissera Antikarov asked if it would be possible to get copies of the diagram to the Advisory Committee.

Richard McGuinness answered yes, and the Committee would be getting copies of the PowerPoint presentations.

Vivien Li said that signage is incredibly important for Harborwalk as well as in places along the Channel that have public restrooms. Vivien suggested having a meeting to hear what the Committee and public can expect in terms of signage, as well as what is going to be online by the DNC to see what will be going on in the Fort Point Channel area so that information can be shared.

Valerie Burns asked if the lighting along this stretch of Harborwalk will be the same as that along the Children's Museum. Valerie said that this is unattractive and unhealthy because of the birds' guano, and it should be site tested before they are employed all over the Channel.

Richard McGuinness said they are looking into this problem.

Joy Conway asked if the staff could get some examples of other lighting around the harbor.

Richard McGuinness said that the staff would follow up with Massport and the Courthouse.

Neil Gordon asked about Independence Wharf and a connection between the Harborwalk and the Moakley Bridge.

Richard McGuinness said the property owner is looking into it, and looking at the cost of a connection.

Neil Gordon asked if there is a public entity that controls this. Neil added that he likes the idea that the area should be "welcoming to all," but what criteria need to be met in order to achieve that and expect people will keep it casual.

Richard McGuinness said an example would be to have the retail and restaurants be less lavish than other places, or to have the programming be more casual and available to a wider audience.

Neil Gordon said it is a great idea to have informality but it may be difficult in the current economy. Neil said it may also be hard to have the informality while having the high-class housing. Neil added that we have to ask how we can encourage informality.

Vivien Li said that a place like Davis Square has the funkiness and reasonable prices that we are looking for at this part of the Channel. Vivien said that when the Watersheet Activation Plan was being written we did talk

about there being a funkiness, and the question is how do we achieve that. Vivien said that in the East Boston MHP the Committee asked some property owners to provide free rent to some businesses.

Neil Gordon said he agrees, but he doesn't know what the right answer is, and the economics are every different for a local business than for a chain so it may not be right to place a further requirement.

Jamy Buchanan Madeja suggested having several smaller offerings, such as a food court.

Isabel Kriegel made an announcement about the Fort Point District planning process and said that the staff is working toward having a meeting, and wanted to let the Committee and audience know that. Isabel explained that since the end of last year the BRA has had a number of meetings to bring the Mayor and the elected officials up to speed on the planning process, and the elected officials have requested several more internal meetings to discuss transportation and infrastructure. Isabel said the staff is discussing the same plan that we brought out to the community at the end of last summer.

The meeting was adjourned at 5:00 p.m. The next meeting to discuss the Fort Point Downtown Waterfront MHP is Wednesday, February 19, 2003 at 3:00 p.m. in the BRA Board Room (9<sup>th</sup> Floor, Boston City Hall).

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## **MUNICIPAL HARBOR PLAN ADVISORY COMMITTEE**

### **Meeting Summary**

**February 19, 2003**

The meeting of the City's Municipal Harbor Plan Advisory Committee was called to order at approximately 3:00 p.m. in the BRA Board Room by Joy Conway, Committee Chair.

MHPAC Members Present: Bissera Antikarov, Bruce Berman, Joy Conway (Chair), Todd Fontanella, Jim Klocke, Vivien Li, David Spillane, Brad Swing, Beverly Wing

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Joy Conway, Committee Chair, made several announcements about the schedule of upcoming meetings and introduced Jim Travers of CB Richard Ellis to give a presentation on the Post Office.

Jim Travers introduced the USPS team: Mike Powers from the USPS, Jim Travers and Trevor Hardy from CB Richard Ellis, Alex Krieger from Chan Krieger and Associates, Myrna Putziger from Rubin and Rudman, and Greg Carrafiello from Fort Point Associates. Jim began to give a presentation on the USPS.

Dan Breen from the MBTA made a comment on the track expansion at South Station and said that the plan being shown in the presentation addresses both the extension of track length and the addition of tracks.

Bruce Berman said that everyone wants to see the mail system become more efficient and this proposed plan is not that complicated from the Committee's perspective because the track expansion causes a problem to any development and the USPS does not want to be penalized for doing something that will benefit the public, such as allowing for the expansion. Bruce said he feels unsure of what the Committee can do in the short term to help.

Jim Travers said the USPS needs to move, it needs a new facility, and this needs to happen in order for the process at South Station to begin. Jim added that this is an appropriate time for that process to begin. Jim said that trains do bring a lot of things along with them, such as noise, odor, vibrations, and a substitution for height would be important to the USPS in the future, and the USPS doesn't know the exact next step.

Jim Klocke asked what is involved in putting the building over the tracks, and is there going to be a need to have more than 4 additional tracks in the future.

Dan Breen said that 4 additional tracks would give South Station an additional expansion on all traditional rail lines.

Jim Travers said that the cost of building over the tracks would be prohibitive, and they would like to build parking structures over the tracks instead.

Alex Krieger said that in the case of the Hynes project, you can build over tracks, but to do so you must build high over the tracks to make it financially feasible, and you need to start at about 30 feet above the tracks. Alex added that you would need to figure out how to get back to the ground level in order to connect with public activity on Dorchester Avenue.

Jamy Buchanan Madeja said that if the MBTA wants to expand they have to buy the land at fair market value, as does the USPS. Jamy questioned the timing of this decision, saying that the Committee should not want the MBTA to be paying more because of the potential for development of the land.

Jim Travers said the USPS knows what it can build within Chapter 91 and know what the land is worth. Jim said that there are values associated with the trades, but there will be no disadvantage to the MBTA.

Jamy Buchanan Madeja said they should be looking at ways to help the MBTA.

Jim Travers said this has all been done in good faith.

Jamy Buchanan Madeja asked what the future of the relationship will be.

Jim Travers said that it will be whatever is to the best advantage.

Vivien Li said that she has been through the General Mail Facility and it is very antiquated and the USPS does need a new facility. Vivien asked if there is any chance at having an interim Harborwalk within the next 5 years, understanding that we are maybe going to war, and there are security issues. Vivien said there are other places along the waterfront that have similar safety concerns who have Harborwalks, such as the courthouse and the Federal Reserve.

Mike Powers said the main concern is safety and security and one of the main drivers in leaving the current site is the elevation of security. Mike added that the USPS does want to be a good neighbor, and so he could sit down and talk about opening the interim Harborwalk.

Vivien Li said that is the most the Committee has ever heard regarding the Harborwalk on the Post Office site and they should and will follow up.

Bissera Antikarov said in terms of substitutions, 3 were listed, but maintaining 50% open space was not one of them, just the reconfiguring of the Water Dependent Use Zone.

Greg Carrafiello said yes, they can keep to it; they just would need to reconfigure the WDUZ.

Bissera Antikarov said the building height would be compensating for the open space/WDUZ.

Greg Carrafiello said the USPS is looking to development, context, relationship to South Station, and appropriate density given the unique location and the constraints.

Bruce Berman said there isn't a back to the building, so the reconfiguring of FPAs would serve what purpose.

Greg Carrafiello said that the site is long and narrow and it would make sense to have the FPAs where there is more activity, such as closer to Summer Street.

Alex Krieger said there is a back to the building at the concourse, but to activate the Channel they want to have the FPAs along or at least closer to Dorchester Avenue.

Chris Hart said that although it is clear that there are added costs when developing above tracks or roadways, will the USPS be documenting these costs. Chris added that the ability to place columns in close proximity of each other along a train platform, unlike the wide spacing required for Air Rights over highways, negates the claim that height cannot be achieved over yet to be constructed tracks.

Jim Travers said that the lack of depth of the site creates a problem, and it may be best to not put people above the tracks. Jim said that Plan B would be to spread costs by going up, such as with the Hynes project,

but at this point the USPS doesn't know what "up" is. Jim added that the USPS thinks it is a constraint just being next to South Station.

Chris Hart said that in order judge whether the USPS is offering the appropriate public benefit, it would be necessary to have the extra costs documented. Chris added that this development, unlike an air rights project over an active R.O.W. will not face the added costs of guaranteeing access to the ROW 24/7 during construction.

Alex Krieger said that it is important to note that spanning over tracks is different than over a road, the costs over tracks are primarily for vibrations, ventilation, and fire safety. Alex added that each successive covering would cost more than the previous because you are covering more.

Vivien Li asked if representatives from the Fort Point artists, Chinatown and the Leather district could be included on a future Post Office planning advisory committee at the time it is needed. Vivien asked where the boating opportunities suggested in the presentation would be given the tide difference, and that they would need to be handicapped accessible. Vivien also said it is important to keep in mind the types of vessels that can get under the bridges.

Jim Travers said that is the challenge, since there is limited programming that can be done in this basin.

Bruce Berman said there are ways to link South Station to transportation in the Channel, but it is not going to be easy.

Vivien Li said it's a question of translating the picture into reality.

Jamy Buchanan Madeja said in terms of the Water Dependent Use Zone, there are realities between a reflecting pond and a WDUZ. Jamy said that in reality, this area is different from others along the Channel and the reconfiguration should happen if it will help to better activate.

Alex Krieger said they are not thinking of big boats, but there can be little boats that are a lot of fun.

Jamy Buchanan Madeja said the WDUZ could apply here like at the Fan Pier.

Bruce Berman said that if there is ever a place to say let's not be bound, this is it.

Joy Conway said that the Committee might like to see the agreement between the USPS and EOTC.

Dan Breen said there is no timetable, but the move is what needs to happen geometrically.

Bissera Antikarov asked for copies of the USPS presentation to be handed out to the Committee.

Jim Travers said they would be made available to the Committee at the next meeting.

Joy Conway concluded the meeting and said the topic of the next meeting (March 5, 2003) is the Fort Point Channel Watersheet Activation.

The meeting was adjourned at 4:30 p.m. The next meeting to discuss the Fort Point Downtown Waterfront MHP is Wednesday, March 5, 2003 at 3:00 p.m. in the BRA Board Room (9<sup>th</sup> Floor, Boston City Hall).

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Note: If anyone on the committee has any edits or comments with respect to this meeting summary, please submit them to Richard McGuinness in writing via fax (617-367-6087) or email ([Richard.McGuinness.bra@ci.boston.ma.us](mailto:Richard.McGuinness.bra@ci.boston.ma.us)) within seven (7) days of receipt. A copy of your comments will be placed with the records of the meeting.

## **MUNICIPAL HARBOR PLAN ADVISORY COMMITTEE**

### **Meeting Summary**

**March 5, 2003**

The meeting of the City's Municipal Harbor Plan Advisory Committee was called to order at approximately 3:00 p.m. in the BRA Board Room by Joy Conway, Committee Chair.

MHPAC Members Present: Bissera Antikarov, Bruce Berman, Valerie Burns, Joy Conway (Chair), Todd Fontanella, Neil Gordon, Richard Henderson, Vivien Li, David Spillane, Stephen Spinetto, Beverly Wing

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Joy Conway, Committee Chair, announced that the March 19<sup>th</sup> meeting has been rescheduled to March 12<sup>th</sup>.

Patty Foley of Save the Harbor/Save the Bay, Richard McGuinness of the BRA, and Neil Gordon of the Children's Museum presented an update on the Fort Point Channel Watersheet Activation Planning.

Patty provided an overview of the Watersheet Plan's evolution, public process and coordination with abutters, public agencies and community.

Richard presented the recommendations and capital costs of the plan particularly public amenities proposed in the Hub of the Channel Basin. He also explained how the plan is to be implemented through Phase Two of the Harbor Plan.

Neil discussed the formation of the “Friends of the Fort Point Channel”, a non-profit organization whose role is to manage and program the implementation of the Watersheet Activation Plan. Neil also identified numerous outdoor programming that the Children’s Museum is providing along the channel as an example of the Friends of the Fort Point Channel mission.

Valerie Burns asked if the Friends of the Fort Point Channel Board of Directors and Friends members are the same group of people.

Kathy Bachman pointed out that the Board of Directors and Friends members are envisioned as the same group.

Valerie Burns asked if the Board of Directors select the members.

Kathy Bachman said that was the current plan.

Richard McGuinness reported that an Operations Board would be formed. The Operations Board would be comprised of the State, City and representatives of the Friends Group. This board would oversee the expenditure and management of capital improvements and funds secured through state and local public process.

Vivien Li asked if the Friends of the Fort Point Channel would be an advocacy group that would weigh in on development proposals along the Channel.

Neil Gordon explained that was not the role envisioned for the Friends of the Fort Point Channel.

Todd Fontanella asked if the Friends of the Fort Point Channel was structured more as a Business Improvement District than a non-profit organization.

Neil Gordon and Kathy Bachman explained that membership in the Friends Group was voluntary and that the Friends of Copley Square non-profit was the example used when drafting the plan not a BID model.

Bissera Antikarov asked what the funding source would be for the Friends Group.

Neil Gordon and Patty Foley explained that the Friends Group would secure funding through contributions from abutters, grant writing, fundraising and working with the Operations Board.

Richard Henderson asked how much is being contributed by the abutters.

Neil Gordon explained that the amount is not identified at this time.

Valerie Burns noted that there are numerous differing examples of friends’ groups including Friends of Copley Square, Friends of Public Garden, and Friends of Post Office Square. She asked which group was used as model. She asked how the accountability of the Friends Group will be tracked, she also asked if there is a conflict of interest by allowing property owners to play a role in implementation of public benefits.

Kathy Bachman explained the Copley Group was used as the model.

Neil Gordon and Patty Foley explained that the make-up of the Friends Group and the meetings to discuss programming and management would provide the accountability of the group. The make-up of the group is more than abutters; the Board would include representatives of harbor and open space advocacy and non-profit groups, artist, community groups and neighbors.

Rich McGuinness explained that Chapter 91-license requirement for other projects formed groups made up of the State, City and property owner to implement public benefits. The BRA foresees no risk of conflicts of interest with this proposal.

Vivien Li noted that the artist community should be included in this process. She also noted that the Leather District and Chinatown should be included as well.

Vivien Li asked about the contribution requirements for members of the Board. She asked if all members were responsible to pay dues.

Bruce Berman explained that there is no set requirement for dues. The abutters are expected to contribute, but it is understood that other members representing community groups, etc. would be providing support in other ways.

Christina Lanzl explained that the Fort Point Artist Community conducted a series of meeting to discuss cultural events, programming and coordination between the numerous artist groups in the area. She said that they had a terrific turnout and would like to have their work recognized and supported by the Friends Group.

Jon Seward asked how does one get to participate in this plan.

At this point interested parties should direct calls to the Children's Museum or Save the Harbor/Save the Bay.

Bruce Berman again noted that the Friends Group would play an advocacy role for development. The goal is to carry forward the Watersheet Plan.

Ron Killian asked about the role of public agencies on the Board.

Neil Gordon said that several public agencies are represented as abutters, including the Parks Department, MBTA and MTA.

Joy Conway asked if more information on this matter would be presented to the MHPAC understanding that the MHP is one of the primary tools to implement the Watersheet Plan.

Rich McGuinness reported that the Friends Group will be presented to the Fort Point Channel Working Group. This group is comprised of numerous interests along the Channel and within the area. Updates will be provided to the MHPAC as more details are provided.

Valerie Burns requested additional details on this proposal.

Joy Conway asked if there are issues that need to be addressed before the submission of Phase II MHP.

Rich McGuinness noted that although the Friends Group will be identified in the MHP as one method of implementing the Watersheet Plan, the Friends Group does not have to be finalized by the MHP submission date.

Vivien Li asked Alex Strycky of DEP about DEP's Chapter 91 Water Transportation Policy.

Alex Strycky reported that DEP issued its second draft of the Policy in December 2002. Although it is not finalized and remains a draft, the policy is being employed during permitting review.

Valerie Burns asked if the funds secured through the DEP Policy would go into the General Fund of the Commonwealth.

Alex Strycky stated that since the money secured through the Policy is not a fee it would not have to be put in the General Fund.

Richard Henderson asked if there are ways through the MHP to modify the requirements of the Policy to acknowledge that water transit is just one way to activate tidelands and watersheet.

Rich McGuinness repeated from his earlier presentation that MHPs could provide guidance to DEP in administering the Policy. The MHP will point DEP to the benefits identified in the Watersheet Plan as appropriate ways to generating water-dependent activity to a degree that is appropriate to the project site.

Bruce Berman added that flexibility is crucial to making the Watersheet Plan work.

Alex Strycky agreed that Harbor Plan instruct DEP on the Administering of the Policy.

Vivien Li pointed out that the Policy remains in effect.

Joy Conway asked to have all past meeting minutes emailed to the MHPAC.

Joy Conway introduced Charles Norris representing the Tea Party Museum.

Charles Norris provided an update on the progress of the expansion of the museum on Congress Street Bridge.

Stephen Spinetto asked if there was full universal access proposed for the new facility.

Charles Norris said that there would be full access for all areas except for boarding the historic vessels.

Stephen Spinetto asked if wayside lifts would be possible and offered to sit down with the Museum to discuss access. He pointed out that universal access was achieved on the Mayflower and the Amistad.

Valerie Burns asked when construction would begin.

Charles Norris reported that construction would be completed in Spring 2004.

Neil Gordon asked if the new facility would be operated year-round.

Charles Norris said the new museum would be open year-round.

Bruce Berman asked about water transit coordination with the facility at Russia Wharf/500 Atlantic Ave. and if more access to transit vessels was being considered.

Charles Norris said that access to water transit would be provided at 500 Atlantic Ave. and the Children's Museum. No service is envisioned at the Tea Party Museum.

Vivien Li voiced her support for the new public uses proposed by the project but asked about bus queuing and layover.

Charles Norris reported that the Museum has been working with the City's Transportation Department ("BTD") and other cultural facilities to address this matter.

Rich McGuinness reported that BTD is arranging to provide layover parking for buses in Charlestown for cultural uses in the City.

Valerie Burns noted that sections of the Congress Street Bridge were in very bad repair. A section of sidewalk had collapsed and a light fixture has fallen over. She asked if there was an interim plan to deal with this condition prior to the future reconstruction project.

Rich McGuinness said he was not aware of a short-term plan but would pass this information on immediately to the Public Works Department. Public Works owns the Bridge.

Vivien Li noted that there will be considerable amount of construction in the area for the next couple of years (Congress Street Bridge, Tea Party Museum and Russia Wharf) and that someone should look at short and long-term traffic impacts. She suggested that this may be a task the Friends Group takes on.

Vivien also asked Todd Fontanella to report our concerns about the Bridge to EOTC.

Representative Wallace's office offered to send a letter to the City addressing concern about the safety of the Congress Street Bridge.

John Seward pointed out that Hook Lobster relies on clean water for its operation and to consider this when designing and constructing projects in and along the Channel.

Joy Conway concluded the meeting and said the topic of the next meeting (March 12, 2003) is the Russia Wharf Project.

The meeting was adjourned at 4:45 p.m. The next meeting to discuss the Fort Point Downtown Waterfront MHP is Wednesday, March 12, 2003 at 3:00 p.m. in the Piemonte Room (5<sup>th</sup> Floor, Boston City Hall).

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## MUNICIPAL HARBOR PLAN ADVISORY COMMITTEE

### Meeting Summary

March 12, 2003

The meeting of the City's Municipal Harbor Plan Advisory Committee was called to order at approximately 3:00 p.m. in the Piemonte Room by Joy Conway, Committee Chair.

MHPAC Members Present: Bissera Antikarov, Bruce Berman, Dennis Callahan, Joy Conway (Chair), Richard Henderson, Jim Klocke, Vivien Li, David Spillane, Stephen Spinetto, Brad Swing, Robert Trestan

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Joy Conway, Committee Chair, opened the meeting by introducing Bob Kaye from Equity Office, the owner of Russia Wharf.

Bob Kaye explained that Equity Office would be presenting its relationship to Chapter 91. Bob said that the development has been guided by planning and zoning, and by the open space charrette that was held last April, as well as meetings with agencies, organizations and advocates. Bob added that this has also been guided by the owning and maintaining of Rows Wharf and South Station. Bob said that at the MHPAC meeting on April 2<sup>nd</sup> Equity will be discussing the project benefits package. Bob introduced the team.

Kathy Bachman said the PNF was submitted in July of 2002 and the DEIR in February 2003. Kathy said that there simultaneous review process has the project reviewed by many agencies at the same time and it allows for the community and regulatory concerns to be addressed. Kathy explained that an amnesty license was issued in 1990.

Steve Cecil gave a presentation detailing the next life of Russia Wharf. Steve explained the MHP process and how Russia Wharf relates to it. Steve's presentation covered the following topics: Project Overview; Chapter 91 and the MHP: Tidelands Status, Planning Principles, and Substitute Provisions; Compliance with Other Standards; and Summary of Public Benefits. Steve explained that the new project is intended to meet the spirit of Chapter 91 and will be fully compliant with the public purposes of Chapter 91 in a way that the current structure cannot be.

Bob Kaye reiterated that on April 2<sup>nd</sup> there will be an extended discussion on public benefits. Bob said that there is a comprehensive package of public benefits, and that the project is being planned as if it is entirely in commonwealth tidelands. Bob said that the public benefits fall into 5 major categories: Early Actions which are either already started or will be by the completion of construction; Linkage for Jobs and Affordable Housing; On-Site Benefits; Off-Site Benefits; and Operations and Management Benefits. Bob elaborated on what benefits would fall into each category:

Early Action: Dredging; Responsibility of lighting the Congress Street Bridge; Underwrite the Staff of "Friends of" group for 10 years.

Linkage: \$5.4 million for affordable housing and \$1.1 million for jobs.

On-Site Benefits: Underwrite staff of "Friends of" group and provide their space for 10 years; Provide civic space; Provide historic and interpretive signage.

Off-Site Benefits: Congress Street Bridge lighting; Validated parking on weekends for cultural facilities in the area.

Operations and Management: Program and Activate public space on-site; Sculpture garden and waterfront plaza; Underwrite cost of public arts programming.

Bob added that there are 20 separate actions in addition to being consistent with City and State plans.

Richard Henderson asked that before the meeting on April 2<sup>nd</sup> could the MHPAC get a list of everything Equity is proposing to do for benefits. Richard also requested that Equity bring the model to the meeting on April 2<sup>nd</sup> because it might be valuable for the Committee to look at the massing.

Bob Kaye agreed.

Richard McGuinness said that the list could be included in the minutes and emailed out before the next meeting.

Vivien Li said that she did not see the benefits listed in the EIR.

Bob Kaye pointed Vivien to chapter 10 and said that there is an extended list of benefits and mitigation printed there. Bob added that the material brought to the next meeting will be shorter since these items are in tune with Phase I of the MHP.

Vivien Li asked about the timing of the decision on Phase II being issued and the Final EIR.

Maureen Gaffney said she thought there needs to be a Secretary's Certificate issued.

Kathy Bachman said that they are currently working through Article 80, MEPA and the MHP processes, all of which have comment periods. Kathy added that their MEPA process could be revisited like 500 Atlantic Avenue's.

Vivien Li asked for clarification that her understanding is correct.

Kathy Bachman said that as in the past, the MEPA process could be revisited.

Bruce Berman said that it has been helpful to see all the benefits in one place because all the processes are going on concurrently even though many are not relevant to this planning process. Bruce suggested this works very well and it would be great to have other projects going through all the processes at the same time.

Colby Rottler said that the Federal Reserve will work with Russia Wharf on the Congress Street lighting and said that it will be nice to have retail along the street.

Bob Kaye thanked Colby.

Jamy Buchanan Madeja said she has 2 comments. Jamy thanked Steve Cecil and said that the presentation was very effective. Jamy added that the Hub of the Channel should be heavily used by small vessels and it might help to have daisy-shaped floating docks to have more individual docking space.

Bob Kaye said that Equity has considered having a dockmaster handle the docks.

Jamy Buchanan Madeja asked what plans Equity has to have shared car facilities such as Zip Car.

Bob Kaye said that Equity does not want to use the name to advertise, but that there are 2 spaces in the garage set aside for shared rental cars. Bob added that Chapter 2 of the DPIP is on transportation. Bob said that every spot in the garage would be a shared space.

Jamy Buchanan Madeja said that in terms of CZM's policies, there wasn't a direct correlation, but that providing a shared car is what makes this level of density work, and connects to CZM's policies.

Jon Seward asked about Congress Street activities.

Bob Kaye said that Congress Street is currently 10 feet wide and in fair to good condition. Bob said that they are proposing to take the 8-foot parking lane and add it to the sidewalk to create an 18-foot sidewalk. Bob

said it is the sunny side of the street and that with the wider sidewalk, landscaping and the lobby entrance the street will be very active. Bob added that there will be 2,000 plus employees in the office building adding to the activation. Bob said that right now Lannan's is in the ground floor, but the idea is to relocate them elsewhere on-site and have some cultural/civic space off of Congress Street.

Jon Seward asked about the curbside-parking lane and about tourist trolleys.

Bob Kaye said that there will be no curbside parking, just pick up and drop off and shuttle buses. Bob said that he has talked with Shawn Ford about the tourist trolleys and they are still working on the answers to that.

Richard Henderson said he is not sure why there is no curbside parking, but parking is an important element to a streetscape, and he would urge Equity to work with BTM on this issue.

Bob Kaye said that they will work with BTM, and it's going to be a busy curb area. Bob said that this is Congress Street, and there is no curbside parking on any part of Congress Street downtown.

Charles Norris said he has a concern with Congress Street, that the ability to have bus stops is eliminated if there is no lane reserved for parking.

Mike Tyrell said that he thinks they should reinstate the curbside parking.

Alice Boelter said there are other trolleys to think about. Alice also asked if there are volumes of traffic coming out of the garage.

Bob Kaye said that the figures are in the EIR.

Alice Boelter asked if he know what the figures are.

Bob Kaye answered that they are in the EIR that he cannot remember off the top of his head. Bob said that they understand the importance of having the queuing work properly. Bob added that they are utilizing the first level of the garage for valet and pick up/drop off space for the hotel. Bob said that to assure those people who have traffic concerns that it has amounted to them building the garage one level deeper.

Bissera Antikarov said the presentation was great, and she liked the summary on Chapter 91 points. Bissera added that there is a danger in having the processes converge, since we need to focus on the points that are related to the MHP and keep focus to the three areas of substitutions. Bissera added that she is impressed by the comprehensive benefits package.

Vivien Li asked that at the next MHPAC meeting could a member from BTM please attend. Vivien said that in this plan, the pick-up/drop-off is now shown near the crosswalk on Atlantic Avenue. Vivien asked how the subsidy required for water transportation ties in to all of this. Vivien also said that she has a comment: at Rowes Wharf it was very hard to keep many of the ground floor FPAs and it might be helpful to have the property manager at the next meeting to speak to this.

Jim Klocke said the presentation was great, and that any improvements to the site would be great. Jim said that this is a reason to keep the discussion moving forward and that speed and promptness in order to get these improvements through.

David Spillane said that in terms of the timeframe, what is going to be open during construction.

Bob Kaye said that they are preserving in entirety the Russia building, but that this is not going to be a phased project. Bob said the goal is to have everything open at the same time in the spring or summer of 2007. Bob said it is a very busy place, but they will stay within the standards for noise and pollution. Bob said that outside, the plaza will be used as lay down space, but that there is a commitment that Harborwalk will remain open and safe during construction with lighting, barriers and signage. Bob added that during the construction process they hope to maintain the dock to be used as a water taxi stop. Bob said that during the construction of Rowes Wharf a pathway along the site was always maintained.

Jamy Buchanan Madeja said that the open space provision is well worth spending time on and the group will want to take a perspective on that.

Bob Kaye said thank you.

Jamy Buchanan Madeja said it is how the provision is written that will be important.

Joy Conway announced the next meeting is April 2<sup>nd</sup> from 3-5 PM in the BRA Board Room.

The meeting was adjourned at 4:45 p.m. The next meeting to discuss the Fort Point Downtown Waterfront MHP is Wednesday, April 2, 2003 at 3:00 p.m. in the BRA Board Room (9<sup>th</sup> Floor, Boston City Hall).

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## **MUNICIPAL HARBOR PLAN ADVISORY COMMITTEE**

### **Meeting Summary**

**April 2, 2003**

The meeting of the City's Municipal Harbor Plan Advisory Committee was called to order at approximately 3:00 p.m. in the BRA Board Room by Joy Conway, Committee Chair.

MHPAC Members Present: Bissera Antikarov, Bruce Berman, Valerie Burns, Joy Conway (Chair), Jim Klocke, Vivien Li, Stephen Spinetto, Brad Swing

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Joy Conway, Committee Chair, opened the meeting and announced the next MHPAC meeting is April 16<sup>th</sup> in the BRA Board Room. Joy said Richard McGuinness would be talking about the substitutions brought up in the Russia Wharf presentation on March 12<sup>th</sup>.

Richard McGuinness began by showing a slide with the difference in wind condition between what's allowed under Chapter 91 and the 2010 buildout of Russia Wharf. The categories on the slide were less windy, no change, and more windy.

Valerie Burns said that she is not sure this diagram is accurate, that there are some places on Congress Street that do not match up with this diagram.

Daniel Padien said they looked at the difference between Chapter 91 compliant scheme and the 2010 buildout and explained that +/- 1 mph is the threshold for change. Daniel added that the graphic in the DEIR is different.

Valerie Burns said that it would be helpful if the graphics were consistent.

Steve Cecil said that the DEIR graphic is about comfort levels and this graphic categorizes the change, so it's a slight difference.

Vivien Li agreed that it would be helpful if the Committee were shown the same graphics.

Bob Kaye said the graphics can be made available as hard copies, and this one was made differently because of the conversation at today's meeting, they were not intended to confuse the Committee.

Richard McGuinness added that the BRA asked for this information.

Valerie Burns said that there are 2 places where she comes out with a different answer.

Bruce Berman asked about the level of magnitude with the increased wind in each spot.

Daniel Padien read through the list, which ranged from 2 mph to 5 mph.

Stephen Spinetto asked if these numbers are assuming the Massachusetts Horticulture parcels are built out.

Kathy Bachman answered that they are.

Bruce Berman asked if the decreases in wind are of a similar magnitude to the increases.

Daniel Padien said most of the areas dropped by 1 to 2 mph, in one area the drop was by 5 mph.

Valerie Burns said the real issue is whether these are slipping too far into the uncomfortable area.

Richard McGuinness said these figures will be provided at the next meeting and handed out.

Shirley Kressel asked why there was no pattern to the wind study.

Bob Kaye said sensor technology is used for this study, and these are very microscale changes. Bob added that it is difficult to really interpret the change. Bob explained that in open air, one presumes these would be neutralized, and that there is no one day when you would see a pattern like this.

Steve Cecil added that it's really about learning how to build buildings. Steve said that in terms of Chapter 91, the building would step back from water to shield water, but this building minimizes impacts by stepping back from all sides.

Valerie Burns said if there will be offsets.

Richard McGuinness answered that in South Boston and East Boston, they looked at structural changes not offsets. Richard added that BRA staff will have wind and shadow analysis at the next meeting. Richard pointed out a slide with the shadow impacts on it, and said it's from October 23<sup>rd</sup>.

Joy Conway asked the Committee for comments on Russia Wharf's presentation on March 12<sup>th</sup>.

Vivien Li asked the Central Artery how much money they give to water transportation and when that subsidy will be over.

Ron Killian answered the CA/T currently gives \$787,000/year until the end of 2004. Ron added that is the end of CA/T construction.

Richard McGuinness asked if that is the total cost or the subsidy.

Ron Killian answered that is just the subsidy; there is additional money from the MBTA as well and the money from the riders.

Vivien Li said the MBTA is currently asking for a fare increase, and all of the environmental studies have water transportation in them. Vivien said that when all is said and done the CA/T will have paid \$12-13 million to water transportation. Vivien asked if it was possible to find out if the MBTA's proposed fare increase would help after the CA/T's subsidy ends. Vivien also asked about the status of DEP's water transportation policy. Vivien said it's important since 500 Atlantic Avenue is building the terminal to know who is going to pay for the transportation service.

Jim Klocke asked whether or not the fare revenue is getting closer or further away for covering the cost.

Ron Killian said that water transportation is going to need a subsidy for a long time.

Jim Klocke asked if it is actually getting better over time.

Ron Killian answered that he is not sure, and it depends on other factors such as increases in the cost of fuel.

Jamy Buchanan Madeja said it is important to remember that no public transportation pays for itself.

Bruce Berman said the airport run is \$10 and subsidized, the other ferries are \$1.50 and subsidized. Bruce said he's not sure what the shortfall is.

Jamy Buchanan Madeja said it goes to the point are the property owners going to be responsible to pay if they are located on the water, or not—this is part of the DEP policy.

Joy Conway asked if staff could follow up on this.

Richard McGuinness said that DEP is at the meeting, and that staff will find the answers to these questions.

Valerie Burns said she is concerned about the deterioration in Congress Street between the greenway and the Channel, specifically the pedestrian environment. Valerie said that one issue is wind, but she is also concerned with the entrance to the garage and the amount of cars going into the building mid-block. Valerie

said that with the Federal Reserve building's garage also on Congress Street a pedestrian environment might not be retained. Valerie said that the passageway between 500 Atlantic Avenue and Russia Wharf could be used as a visual corridor but also as the garage entrance and that idea should not be abandoned too quickly. Valerie added that this project is not bringing any enhancements to the pedestrian environment.

Bissera Antikarov said that she thinks Congress Street is being enhanced by this project, the sidewalk is being widened, trees are being planted, and the garage is only one curb cut along the entire block. Bissera said she thinks what Equity is proposing is positive, unlike the other side of the street.

Valerie Burns said the volume of the garage must be considered.

Bissera Antikarov said we have to keep in mind that this is an urban environment, and this is only one curb cut.

Vivien Li asked for clarification on the offset or amplification for the space for the "Friends of" group.

Richard McGuinness said that they will be going back to that, right now they are going to talk about the requirements because they haven't given specific benefits and staff wants to put in more effort on that.

Joy Conway asked if the Committee would be discussing that at the next meeting.

Richard McGuinness answered that the Committee will be doing an analysis of substitutions and have a discussion of substitutions.

Vivien Li said there is clearly a desire to have a coordinated approach between 470 Atlantic, 500 Atlantic and Russia Wharf in order to come up with public benefits, maintenance plans, etc. Vivien asked if there have been any discussion about this.

Richard McGuinness answered that the abutters have been meeting regularly to discuss the watershed activation, and that right now the City is trying to have Russia Wharf and 500 Atlantic Avenue come up with a maintenance plan.

Kathy Bachman said that DEP has issued a determination on 500 Atlantic Avenue.

Frank Stearns said that there is an operations board and a management board.

Kathy Bachman said that there are two efforts going on right now, one is the coordination of water transit, and the other is the group of abutters looking towards planning watershed activation.

Vivien Li asked about access to the terminal at 500 Atlantic Avenue in 2004 during Russia Wharf construction, since there will be the CA/T subsidy in 2004 and the terminal will need to be subsidized.

Frank Stearns said that they are apprising the CA/T of status of construction monthly.

Shirley Kressel said that the rationale for having the height at Russia Wharf because it is an example of Transit Oriented Development does not make sense with the proposed 500 car garage. Shirley said that this development is not built as Transit Oriented Development, but built near South Station, and this is really a negative argument.

Bob Kaye said that BTD is reviewing the traffic study, and that Equity has done a very detailed traffic analysis, and that BTD wanted to look at the number of parking spaces. Bob explained that 75% of all work related trips come by public transit, and currently 62 spaces are for existing commercial uses. Bob added that each spot is for multiple uses, there will be no assigned spots, and that Equity believes that all 512 spots are justified.

Shirley Kressel asked if they have studied transit capacity.

Bob Kaye answered yes, and there is adequate transit capacity. Bob said they are located one block from South Station, 7 or 8 bus lines run by the site, the commuter rail is right there, so there are many different options. Bob added that Equity sees it as a responsibility to subsidize fares, and the garage will be priced to discourage daily use. Bob said the implication that on the other side of the Channel, the residents do not want their parking spots used, and it's a simple matter of supply and demand, that there not be too few or too many.

Shirley Kressel asked if they factored in other garages in the area, and what the current zoning of the site is.

Bob Kaye answered that the zoning is M4, and he would have to check on the allowed height, and it's a PDA.

Shirley Kressel said that if they do not have to care about the zoning, what is the point of zoning.

Richard McGuinness said that our zoning predates Chapter 91, and it is through the Municipal Harbor Planning that this is tackled; it's one of the implementation tools.

Shirley Kressel said it is a self-zoning district.

Kathy Bachman added that the zoning is manufacturing, which is out of date and relates to a much earlier period. Kathy explained that the City has designated it a planning district. Kathy added that the harbor is the interface between the State and the City.

Alice Boelter said she is confused about BTD and the developer in terms of Transit Oriented Development. Alice asked for clarification on BTD's numbers and the developer's numbers and the increase in number of office workers.

Bob Kaye answered that there are 4-5 per 1,000 driving, that there are 2,000 people in the office building. Bob said that in terms of BTD's numbers, that's an Article 80 question, and will be addressed at the April 28<sup>th</sup> public meeting.

Alice Boelter said that she would like to see more emphasis on water transit and how to get office workers to use it, there doesn't seem to be that encouragement.

Bob Kaye said as part of the package of benefits the City is reviewing there are extensive benefits to support water transit. Bob said that Equity is going to dredge, as well as open up the dock in advance of construction when the water transit facility opens. Bob added that the dock will be available for free to water transportation providers, and in the summer they will have a dock hand. Bob said that they need to wait for 2 weeks to see what the City proposes Equity do for water transit. Bob also said that Equity fully intends to work cooperatively with 470 Atlantic Avenue and 500 Atlantic Avenue.

Richard McGuinness went over the tools employed to activate the Water Dependent Use Zone (WDUZ). Public amenities, consistency with Chapter 91 regulations, subsidies for water transit, construction of water terminals, etc. Rich explained that most recent projects have secured 99-year licenses with \$2/square foot of overall project area. Rich said that in reviewing the Fort Point Channel, it's a unique body of water in terms of programming and access to the water. Rich explained that what the City would like to do in the MHP is provide an amplification that when calculating the baseline public benefit that it go to one of the recommendation in the Watersheet Activation Plan. Richard said that another amplification would be increasing the width of Harborwalk from 10 feet to 12 feet.

Vivien Li asked about the width of Harborwalk and asked if it was part of modification of DEP's policy.

Richard McGuinness answered that we have 12 foot wide Harborwalk in the entire planning area, and it is not connected to the DEP formula.

Jim Klocke asked about the status of DEP's policy.



Alex Strysky from DEP responded that DEP is using it as a guideline although it is not in place as a policy yet.

Jim Klocke said it is his understanding that in terms of flexibility, either as baseline, amplification, or offset, it is up to the municipality to decide what it wants to do. Jim asked of the mechanism is up to the municipality.

Alex Strysky said that is true if there is an MHP, if not, then it's baseline.

Jim Klocke said the Chamber feels as is it should be an offset.

Vivien Li said that The Boston Harbor Association assumed that it was baseline. Vivien said that more proponents are looking at long licenses, and even though DEP's policy is not formal, most of the development projects are using it as a guideline.

Bruce Berman asked if it is considered baseline in exchange for a long-term license, when it really isn't a baseline but an offset.

Vivien Li said the issue then becomes are there other things that should be funded. Vivien said there is not much in this harbor that has a 33-year license.

Bruce Berman said that assuming other mitigation efforts, someone seeking a 99-year license is paying \$2/square foot counting towards water transit.

Vivien Li said that what Richard is saying is that it should be used for both water transportation and watershed activation, but the way the policy is written it is used for water transportation.

Alex Strysky said that he is not sure that a license term can be binding in an MHP.

Jamy Buchanan Madeja said that is not within the authority of this group, that the MHP has the authority to address certain provisions; the license term is not one of the provisions, that it is up to DEP to figure out the license.

Joy Conway said that we want to be assured that there is the ability to get the license.

Richard McGuinness said that the MHP needs to argue that the public benefits outweigh the impacts, and thus warrant an extended term.

Jamy Buchanan Madeja said that whatever the Committee decides about water transportation benefits in this plan, it should not reference DEP's policy since it is a draft policy and it will change, and it is therefore not law. Jamy added that this plan addressed the Fort Point Downtown area and it should be very specific about which sites are in the catchment. Jamy said that nothing else is within this Harborwalk, so all of these other places are not going to be sources for money. Jamy said that it's important to be clear about what you want with the money, since there will not be a non-profit set up in time to deal with the money.

Joy Conway asked if the staff could clarify the difference between baseline, amplification and offset.

Bruce Berman said that water transportation is very important, and this is a very unique district with a cooperative planning effort, which makes it different from other parts of the harbor. Bruce said he is not sure which is better, baseline, amplification, or offset.

Jim Klocke said that baseline applies to everything with the MHP planning area even if the developer is within Chapter 91. Jim said that an amplification is extra baseline.

Richard McGuinness explained that an amplification can modify not just add to baseline, it's not increasing. Richard added that the staff will put this in writing for the April 16<sup>th</sup> meeting.

Jim Klocke asked if amplifications apply to every property whether or not it exceeds Chapter 91, because he thinks an offset applies when you get into excessiveness.

Bruce Berman said that the change is in where the \$2/ square foot goes, not changing the number.

Beatrice Nessen said that an MHP can modify certain numeric requirements and amplify discretionary requirements. Beatrice said that baseline is something that has to be provided, and that in the case of the MHP, it can amplify which would give DEP more direction, it allows the Committee to work with the policy or adjust it as it likes.

Joy Conway asked if for the next meeting the Committee could see what the staff has in mind for language.

Richard McGuinness said the staff will try to get language that addresses this issue.

Vivien Li said that occasionally the MHP has had subcommittees, and maybe there should be a subcommittee to look at water transportation with representatives from BTDC, EOTC and the abutters, since the Committee does not have time at these meetings to address all the issues. Vivien added that it would be good to have the "Friends of" group on the agenda for discussion at an MHPAC meeting.

Joy Conway asked for clarification on the "Friends of" group.

Richard McGuinness said that the "Friends of" group is the method for implementing the Watersheet Activation Plan.

Joy Conway said she thinks it's fine to have smaller groups working on certain pieces since the Committee is going to get bogged down in discussion until the actual document is in front of us.

Richard McGuinness said that the staff will provide a schedule at the next meeting with agendas. Richard added that draft chapters 1-6 will be emailed to everyone next week. Richard said the staff needs to put some more time into the substitutions, but the Committee will be talking about offsets and substitutions at the April 16<sup>th</sup> meeting. Richard said that at the next meeting they will have an analysis of the impacts and applying them to specific offsets.

Jamy Buchanan Madeja if a subcommittee is formed she would like to be part of it.

Valerie Burns said that she has heard the commitment from Equity about planning around water transportation, but has not heard a lot about the open space. Valerie said that she would like to see some design coordination among the abutters that she is not seeing yet.

Bob Kaye said that he agrees, and that the landscape plan in the EIR is a snapshot of a work in progress. Bob said that in 4 weeks they could give an update on that work and they are hoping it will tie in functionally as well as visually.

Valerie Burns said that she would like to keep the discussion open.

Bruce Berman said that there was a charette at 470 Atlantic Avenue last year, and maybe there should be an additional one.

Vivien Li said that it is encouraging that all of the property owners are currently in the room.

Shirley Kressel said that she is interested in the legislation around the "Friends of" group. Shirley asked if it is a BID and how it will be in the MHP.

Richard McGuinness said that in the Notice to Proceed the State asked how the Watersheet Activation Plan was going to be implemented. Richard said currently the BRA is working with the abutters, the Children's Museum and others to figure it out.

Joy Conway said that there have been discussions about it at previous meetings, and asked if the work was going on to create it.

Richard McGuinness said that the implementation is not regulatory, but it's methods of implementing the plan.

Shirley Kressel said that her concern is that it would become privatized, and that it should not be governing.

Bruce Berman said it would be similar to the Friends of Copley and others that do a good job of balancing all interests.

Joy Conway asked if there were any other matters for this meeting.

Chris Hart said that the question everyone should be asking is whether or not we should be having developments in this area, or whether we should be looking at some mitigation towards the CA/T parks to make it a reality since it might be a bigger draw.

Bruce Berman said that since its not in tidelands the group probably cannot do anything.

The meeting was adjourned at 5:00 p.m. The next meeting to discuss the Fort Point Downtown Waterfront MHP is Wednesday, 16, 2003 at 3:00 p.m. in the BRA Board Room (9<sup>th</sup> Floor, Boston City Hall).

Note: If anyone on the committee has any edits or comments with respect to this meeting summary, please submit them to Richard McGuinness in writing via fax (617-367-6087) or email ([Richard.McGuinness.bra@ci.boston.ma.us](mailto:Richard.McGuinness.bra@ci.boston.ma.us)) within seven (7) days of receipt. A copy of your comments will be placed with the records of the meeting.

## **MUNICIPAL HARBOR PLAN ADVISORY COMMITTEE**

### **Meeting Summary**

**April 16, 2003**

The meeting of the City's Municipal Harbor Plan Advisory Committee was called to order at approximately 3:00 p.m. in the BRA Board Room by Joy Conway, Committee Chair.

MHPAC Members Present: Bissera Antikarov, Bruce Berman, Joy Conway (Chair), Jim Klocke, Vivien Li, Brad Swing, Neil Gordon, Valerie Burns, David Spillane

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Joy Conway, Committee Chair, opened the meeting and announced the next MHPAC meeting is April 30th in the Piemonte Room. Joy introduced Greg Bialecki representing the Friends of the Public Market Place.

Greg explained the goal of his group and benefits of establishing public market place in downtown Boston. They are looking for a location close to a major transportation hub with high pedestrian traffic. They are preparing a business plan. They would like to complete a public market place by 2006.

Bruce Berman asked how the market could survive if just selling local seasonal produce.

Gheta Pradan explained that they would be offering other goods from around a broader area to provide a year-round market.

Bruce also noted that the parking need seemed unnecessary considering that similar successful venues have no parking.

Neil Gordon asked about the proposed management structure of the Market. Would the Friends group take over this role?

Greg explained that they have not addressed this issue yet. Other city markets utilize a variety of management options, friends groups, private management, etc.

Valerie Burns offered her support of the Public Market Place project and said it would be a great FPA use in the harbor planning area.

Joy then asked the committee for any comment on the documents that were distributed at the beginning of the meeting.

Jim Klocke asked about the formula for the draft Water Transportation Policy

Richard McGuinness explained that the MHP is not changing the \$2.00/sf formula it is requesting that some of the money go towards watershed activation not just water transit.

Jim Klocke asked if a development could provide other things for credit towards the Policy requirements?

Richard McGuinness explained that there are numerous things identified in the Policy that developer could receive credit.

Vivien Li asked about the difference between the VHB wind study handout and the power point slide from the DEIR.

Daniel Padien explained that it is the same data. The handout was put together to specify any changes in wind as requested by the MHP Committee.

Valerie Burns noted that there are clusters of increased wind impacts and that more consideration needs to be given greater pedestrian comfort. Modifications to building design should be considered to mitigate wind changes.

Neil Gordon asked if there was full build-out of 500 Atlantic Avenue when wind modeling was conducted.

Daniel Padien said that the wind analysis compares the Chapter 91 build-out with the preferred 2010 build-out that included the proposed development at 500 Atlantic Ave.

Vivien Li asked about the differing heights in the planning area including the vent building at 500 Atlantic Ave. compared to the substitution request for Russia Wharf.

Bob Kaye pointed out that figure 1-2 of the DEIR showed the building heights in the planning area.

470 Atlantic Avenue at 160 ft

Vent building at 500 Atlantic Ave at 287 ft

Russia Wharf Substitution 395 ft

Federal Reserve Bank 614 ft

Vivien Li asked what the zoning height was for Russia Wharf.

Bob Kaye explained that Russia Wharf is in an M-4 zoning area with a maximum height for occupied floor up to 125 feet. Equity office will propose a Planned Development Area with a 395 foot zoning height through the Article 80 process.

Jim Klocke said it is not clear if we are comparing zoning heights to zoning heights or building massing vs. building massing.

Neil Gordon said there should be some comparison between today's conditions, the Chapter 91 build-out and the preferred alternative build-out.

Valerie Burns questioned the offset for the Russia height substitution and asked if there are other improvements needed to thoroughly restore the Congress Street Bridge. She wondered about the lanterns on the bridge and if they would be restored by the bridge project. She suggested that if there are details not included in the bridge project then they should be considered before the proposed lighting program.

Bob Kaye explained that the lanterns and other historic details for the bridge would be replaced by the bridge project

Neil Gordon asked if \$400K would be enough to cover the lighting program project.

Bob Kaye said that he thinks this amount will pay for the design and installation. The City is installing the conduit, junction boxes and the switches. Long-term maintenance and operation is being discussed and is recognized as being very important.

Valerie Burns agrees that long-term maintenance of the lighting program is very important

Bob Kaye agreed saying that vibration, moisture, and salt make it difficult to maintain.

Valerie pointed to the North Washington Street Bridge lighting program as a possible example to follow.

Biss Antikarov asked about the location of the historic interpretive exhibits and signage.

Rich McGuinness explained that they are proposed for the Russia Wharf site interior and exterior.

Biss Antikarov asked if the sidewalks improvement were being made just to the Russia Wharf site

Bob Kaye explained that the improvements are being made to the publicly owned sidewalks along Russia Wharf.

Biss Antikarov asked about the method of payment to the Children's Museum for the open space substitution, timeline etc.

Bob Kaye noted that these details have not been worked out

Biss Antikarov asked where will this take form.

Rich McGuinness said these details would be worked out in the Harbor Plan and the Chapter 91 licensing.

Bruce Berman asked about the offsets supporting the Friends of the Fort Point Channel and wondered if the offsets could be less specific about its intent and leave the funding subject to the needs of the Friends Group. He noted that the Friends Group may not need office space or staffing early on and may need funding for other things.

Bob Kaye noted that Bruce's approach is possible and that he was amenable to this flexibility.

Bruce Berman asked about the free public docking and added that this type of benefit requires policing and staffing. Is the \$325,000 amount enough to cover the life of the license?

Bob Kaye explained that they assumed a subsidy of \$32-33,000 per year for a period of ten years. This amount includes staffing and utilities. The amount does not include insurance and contributions for capital funds.

Bruce Berman stated that free public landing is very important and would like to see the benefit be provided for the 99-year license term.

Bob Kaye said they would think about this matter.

Vivien Li questioned the height of Russia Wharf substitution and noted that it was higher than adjacent buildings. She pointed out that height was not an issue it was the impacts to the ground level. She asked for the rationale for this height and how does it relate to impacts including air quality.

Vivien Li pointed out that the bridge lighting offset may not be enough to mitigate the shadow impacts.

Vivien Li voiced her concern about Water Transportation Benefits. She pointed out that the Draft Water Transportation Policy was carefully thought out. She noted that some of the benefits listed do not relate to water transit. The Friends Group is not connected to the intent of the Policy. She would be more interested in a dockmaster than staff person for the Friends Group.

Vivien questioned the connection of the Friends Group with the established artist community. Why is there no support of this group.

Vivien sees the watershed activation recommendations a dilution of the money intended for water transit.

She asked what the costs of water transit was in Boston Harbor and asked for this to be provided.

Rich McGuinness said that Charles Norris had put this information together. There are no figures available for water transit at 500 Atlantic Ave terminal.

Rich McGuinness pointed out that the watershed activation plan predated the DEP Policy

Rich McGuinness noted that the City did work with the artist community throughout watershed planning effort.

The objective of the watershed plan to attract people from around the city to the public benefits of the Fort Point Channel.

Bruce Berman asked if there was still a committee of Fort Point Artists can this group be included in our planning efforts.

Neil Gordon would like to echo Bruce's comment of maintaining flexibility of funding earmarked for the Friend's Group. May want more deliverables than staffing and office space. The investment should be in items that attract the public to the waterfront.

Neil agrees that investment in the destination would create more demand for water transit and supports the BRA's balance approach to watersheet activation and water transit.

David Spillane noted that we want to get the best benefit from the subsidies. Think about the destination what will attract people to this area.

Charles Norris noted that there is sufficient demand for service at the Fort Point Channel. The MBTA however is not looking to fund the service at 500Atlantic Ave. there is more focus on the other three services

Bruce Berman stated that the government should be funding water transit we should not be relying on private investment.

Vivien Li notes that Equity Office has run it water transit route since 1987 and credits them for doing this service.

Jim Travers noted that the Charlestown Navy yard had to have the residential and office space to create the demand for the water shuttle to Long Wharf. He said that you have to make the basin and exciting place to get people to use water transit.

Alice Boelter explained that the committee should look at how the MBTA run their services, the quality of the service, procurement, time to board time to disembark, etc.

Valerie Burns commented on the open space offset and understands the open space limitations of Russia Wharf. Children's Wharf Park offers a range of public amenities that private section of Harborwalk do not. Funding toward Children's Wharf Park is an appropriate offset but thinks all the money earmarked for the open space offsets should go to the park.

Valerie Burns is concerned about the other offsets. Friends' of the Fort Point Channel may be needed and is laudable suggestion but more information is needed before it can be considered a public benefit. She suggests creating a Friend's of Children's Wharf Park instead.

Bruce Berman notes that the Channel watersheet is a park.

Biss Antikarov states that the offsets are a good balance. The Children's Wharf Park, the Congress Street Sidewalk and the support of the Friend's Group are all appropriate offsets that should support activation of the Channel.

Vivien Li states that the offsets are diluted and not related to the impacts. The items offered as offsets are usually provide dispute substitutes. They may be good benefits but are not appropriate offsets. Civic space sidewalk enhancements, these are things that will be done anyway.

Vivien Li states the entire offset amount should go the Children's Wharf Park

David Spillane suggests different definitions of public space would be helpful to more broadly the goals.

Jim Klocke does not think Equity Office should be asked to pay for the entire park

Valerie Burns states that \$1.4 million would not pay for the entire park

Biss Antikarov suggests listing the goals of the offsets.

Kathy Bachman states that the project does not impact open space and to say it does is shortsighted and unbalanced. The project enhances a 1/3-acre park and preserves a historic building. She also notes that the public is more than well compensated for impacts of the height. She believes a substitution for the water-

dependent use zone is not required but has acquiesced to the state because it is practical. She views the Draft Water Transportation Policy as an unauthorized attempt by the Commonwealth to tax development

The meeting was adjourned at 5:00 p.m. The next meeting to discuss the Fort Point Downtown Waterfront MHP is Wednesday, April 30, 2003 at 3:00 p.m. in the BRA Board Room (9<sup>th</sup> Floor, Boston City Hall).

Note: If anyone on the committee has any edits or comments with respect to this meeting summary, please submit them to Richard McGuinness in writing via fax (617-367-6087) or email ([Richard.McGuinness.bra@ci.boston.ma.us](mailto:Richard.McGuinness.bra@ci.boston.ma.us)) within seven (7) days of receipt. A copy of your comments will be placed with the records of the meeting.



## **MUNICIPAL HARBOR PLAN ADVISORY COMMITTEE**

### **Meeting Summary**

**April 30, 2003**

The meeting of the City's Municipal Harbor Plan Advisory Committee was called to order at approximately 3:00 p.m. in the BRA Board Room by Joy Conway, Committee Chair.

MHPAC Members Present: Bissera Antikarov, Bruce Berman, Joy Conway (Chair), Richard Henderson, Jim Klocke, Vivien Li, David Spillane, Stephen Spinetto, Brad Swing

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Joy Conway, Committee Chair, opened the meeting and announced the next MHPAC meeting is May 14th in the Piemonte Room. Joy said that David Carlson would be giving an update on Russia Wharf's status with the Boston Civic Design Commission. Joy also announced that although Tom Skinner, Director of CZM, was on the agenda to give a short presentation on the waterways program he is unable to attend the meeting. Joy said that today's agenda would be an update on the public benefits package as well as comments on the materials handed out at the April 16<sup>th</sup> meeting and on Draft Chapters 1-6.

Richard McGuinness went through the changes to the Offsets and Extended License Term since the last meeting.

Joy Conway asked for comments or questions from the Committee.

Brad Swing said that the concept of money being allocated for transporting Boston school children to the Harbor Islands is consistent with the Mayor's goal to get all school children out to the Harbor Islands at least once a year. Brad asked about the money going to the "Friends of" group.

Richard McGuinness answered that it is meant to be flexible since it will depend on the need of the group at that time.

Jim Klocke said that the package is a strong one that covers many bases, and that he and the Chamber hope the project gets built without delay.

Bissera Antikarov said that this list is better than the original draft, which lacked some detail. Bissera added that this is a strong, generous package and it is good to see other benefits that are not necessarily offsets. Bissera also said that she is in favor of changing the "Friends of" to something not as specific as staff but to support. Bissera asked if that included programs.

Richard McGuinness answered that it does.

Bissera Antikarov said that it is a good idea for the civic space to be offered to the "Friends of" group first because it is important to underscore that this organization needs to be involved. Bissera added that it is a good balanced package and that the offsets relating to the substitution is good.

David Spillane said that he agrees that it is a good strong package.

Richard Henderson asked about the "Friends of" support and who would oversee how the money gets spent.

Richard McGuinness answered that it would fall under the waterways program, but that the amenities would be managed by a board made up of representatives from the State and City and friends. Richard added that the detail of payment falls under the terms of the waterways license.

Bob Kaye said that initially when this benefit was proposed it was to be \$100,000 per year for 5 years and that would be Equity's preference still.

Richard Henderson said that he likes the idea that it is flexible and that the money can be used for programming. Richard asked how the free public docking was going to be managed.

Bob Kaye answered that there are two aspects to the public docking: the first is for small boats that come and stay for 5 minutes and Equity hopes to have the maximum access that it can for these and make it flexible where this docking will be located. Bob added that they will always provide this benefit. Bob said that the second aspect is the free public docking for dinghies and small vessels that will be staying for 2-3 hours at a time. Bob said that they are thinking about having a situation like a parking meter to ensure that these boats do not stay there for the whole season, and that the fee would not be collected by Equity but rather used as an encouragement for turnover of boats. Bob said that benefit of free docking would be for 10 years, but that Equity would like the flexibility to charge a nominal fee.

Richard Henderson said that on the issue of free docking, Massport has run into some trouble.

Bruce Berman said that he thinks they are talking about 8 slips, and that the idea of flexibility is key.

Bob Kaye said that however they end up managing the docks, he presumes it will be the responsibility of Equity to get a comfort level for how it is being managed.

Richard Henderson asked about the amount listed, \$325,000.

Bob Kaye said that this would include a dockmaster, insurance, and a fund for maintenance of the dock.

Richard Henderson asked if this list is all-inclusive for the 99-year license term.

Bob Kaye said yes, and said that there are a lot of other things that Equity does to promote water transportation in the Harbor that have no price tag.

Jay Conway introduced David Carlson from the BRA's Urban Design department to give an update on Russia Wharf's status with the Boston Civic Design Commission.

David Carlson said that Russia Wharf has been through the BCDC and the Commission is accepting of the height and massing of the tower. BCDC also remarked favorably on the benefits and their thoughtfulness as well as on how the building engages with the bridge. David said that the Commission is generally positive and will be voting on the project at the May 6<sup>th</sup> meeting. David said that there will be a discussion and that the Commission may take input from the audience.

Joy Conway said that therefore people can go to the BCDC meeting and make comments.

Richard Henderson asked about the FAA issue and said it needs to be resolved through the permitting process. Richard added that Massport is looking into these issues and will be commenting in the MEPA process. Richard said that in a section of the Plan that relates to the overall planning area there should be a statement that says that all development needs to respect and reflect FAA guidelines. Richard said that this is critical to the planning area, and may affect Russia Wharf but may also affect the Post Office site.

Bruce Berman said that it does need to be addressed in some forum and that staff should take steps to discuss this in the MHP setting.

Bob Kaye said that he is acutely aware of this issue and that he needs to make sure that it is not a problem. Bob added that he has been advised by the FAA that it is not a problem for Russia Wharf although they do need to have appropriate building lighting.

Richard McGuinness asked what the timing of the permit is.

Kaye answered that they will be getting permit applications together sometime between September and December.

Joy Conway asked if there were other thoughts on how the MHP is being written in regards to the entire planning area.

Richard McGuinness said that this can be in a section that relates to the whole planning area.

Bissera Antikarov asked if there was reference to the FAA in Phase I, and said that it should not be site specific to Russia Wharf but relate to the entire planning area.

Bruce Berman said that it is an incredibly generous benefits package and the project has many different types of positive impacts. Bruce said that in addition to connections being made in the area, the development will be turning the building into a mixed-use area with FPAs and watershed contributions. Bruce said that it is wonderful that Russia Wharf is making such an investment across the Channel with the Children's Museum because that proves that this is going to be a neighborhood. Bruce added that the commitment to have a touch-and-go landing and the decision to make it free is a great one. Bruce said that there are over 1,000 vessels moored in Boston Harbor but it is difficult to get off the boats to spend money in Boston, and this effect assures that there is not going to be the disconnect that there is in other places between what's happening on land and on the water. Bruce also suggested having a sign to encourage tipping the boat hands despite the fact that the dock is free.

Jamy Buchanan Madeja said that she represents the Massachusetts Marine Trade Association and that touch-and-go docking should be a baseline requirement. Jamy said that she would like to see this figure juiced up and that the developer not get credit for free touch-and-go since that's the public's access right. Jamy added that it would be good to look into how to manage having dinghies stay longer since there may be a time when there will be excessive demand for dock space. Jamy said it would be good to plan in advance for when the space gets competitive. Jamy added that in terms of Lannan's shipbuilder, it would be great to move the shop to an upstairs location to enable the business to remain and to get real FPAs in the ground floor, but it would be good to have the window displays remain to draw people to the building and have a maritime theme. Jamy said that in terms of the cash payment to the Harbor Islands, it's a concern the way it is written. Jamy suggested giving a letter of credit instead of cash in an effort to leverage the operators instead of having it go to operational use.

Bob Kaye said that the amount of money that they are proposing for this purpose would probably enable 5,000 school children a year to go to the Harbor Islands.

Bruce Berman said that this opens up possibilities.

Jamy Buchanan Madeja said it's a question of fine tuning how to do this. Jamy asked about the money going to Children's Wharf Park and why it would go to that if it is a public park.

Richard McGuinness explained that the BRA is taking over the property for the Parks Department and the Children's Museum will be in charge of the maintenance and would like to improve the park's design with the additional money.

Jamy Buchanan Madeja said that she thinks long terms benefits are helpful.

Bissera Antikarov said that if it's not the MHP's purpose to decide where the benefits go, what is the best way to do this.

Richard McGuinness said that these are determined during the permitting process.

Vivien Li said that she thinks that tangible, permanent improvements are best since it is difficult to monitor things that are not permanent. Vivien said it is useful to have things that are enforceable since this is about a long-term license.

Joy Conway asked about the previous MHPs and how the long-term enforcement worked.

Richard McGuinness answered that the enforcement comes from the State, and that the main goal of the “Friends of” group is to make sure that these benefits do get enforced. Richard said that for this area at least the “Friends of” group can work to help maintain these.

Vivien Li said that she didn’t see the “Friends of” group being a watchdog group.

Bruce Berman said that people are going to keep their commitments and will be more likely to do so if there are people talking about it and expecting them.

Richard McGuinness said that the enforcement always goes back to the State but it is the vision of the Watersheet Plan to have the activation.

Joy Conway said the issue is how to write the MHP and asked the State to respond how the Committee can accomplish this. Joy said there are general expressions of concern about how to enforce these things in the future.

Maureen Gaffney said that very specific language is helpful, and that what the MHP recommends DEP takes on, but it’s really in the enforcement where it is legally done. Maureen added that to be honest, the staff resources are unfortunately not always there.

Bruce Berman said that there is a mechanism, a lawsuit, to ensure enforcement.

Kathy Bachman said that there will be an operations board for Russia Wharf, with representatives of many agencies, that will be the mechanism the developer proposes.

Bruce Berman suggested that if there is a situation of non-compliance then the operations board could be informed.

Vivien Li said that there is an operations board for Rowes Wharf, and that board does not meet. Vivien said that we should be realistic about these boards. Vivien added that she has never talked about the “Friends of” group as a watchdog group, and that the Committee should have that discussion. Vivien said that if the “Friends of” group is going to be given a significant role in the implementation of the MHP then there needs to be a discussion.

Richard McGuinness said that there will be a public meeting to discuss the “Friends of” group at the end of May. Richard added that in previous MHPs there have been two types of offsets, qualitative and quantitative.

Vivien Li said that in the case of the South Boston MHP, after the City submitted the Plan it took a long time before the Plan was approved. Vivien said that it would be good to move this in such a way that it would get approved quicker, and that this could be done by being as specific as possible, and that the Committee should address as many of these issues in the Plan as possible.

Richard McGuinness said that the City staff does meet with the State to look at language and make sure that the Plan is on the right track. Richard added that a lot has been learned about writing MHPs since the South Boston plan.

Jamy Buchanan Madeja said that sometimes the less specific the better, for example with the civic space, saying “such as” would be better. Jamy added that as for the enforcement issues, the “Friends of” group would be much like the civic associations in neighborhoods.

Vivien Li asked why you would go to the “Friends of” group instead of going to the State.

Jamy Buchanan Madeja answered because you do not have to go to the State, that maybe knowing that the “Friends of” group is annoyed and aware is good enough to solve the problem. Jamy said that because the State does not have the staff, some local groups are taking on some of the monitoring.

Vivien Li said that she did not read the bylaws as having that role.

Kathy Bachman said that she concurs, that the idea of the “Friends of” group is to be positive, and get press, network, and have events. Kathy said that the enforcement is really up to DEP, and the advocacy should be to get DEP more money to do its job. Kathy said that it gets complicated when you try to take over the job.

Maureen Gaffney said that in terms of speeding up the approval process, the City and State are learning together how to do this, but it is always good to look to the Notice to Proceed before submitting the MHP to make sure that everything is included.

Vivien Li said there seems to be a lot of squishy stuff in this MHP, and what was ultimately approved in the South Boston MHP was very specific, such as tangible capital things and hours. Vivien said that with Phase I and 500 Atlantic Avenue, there were very specific things. Vivien added that the concern is that there is room for different interpretations if the plan remains this squishy/less tangible.

Jim Klocke said that there are levels of specificity in this new draft because of a number of people’s comments.

Alice Boelter said that she is concerned that the Committee is satisfying lots of different stakeholders. Alice also said why is the building so high, what is the nature of the building. Alice said it is curious that there are no visuals for what it will be like to be sitting in a small boat at the dock. Alice said that if there is space that no one wants to go, we have the Watersheet Activation plan to look to, and right now with these offsets we are going in the wrong direction. Alice said that we should be having more support of water transportation at 500 Atlantic Avenue. Alice added that this is a big project but she is not convinced that it’s in the right place.

Bruce Berman said that there are many people all over the harbor, but another reason to have the density in this location is because it is not only close to South Station but also to support water transportation when the subsidy runs out. Bruce said that to the extent that this is going to succeed, those linkages need to be strengthened.

Bissera Antikarov said she likes the way the benefits were distributed, that it seems balanced. Bissera said that by distributing them a balance is achieved. Bissera said that the idea is balancing impacts and mitigating them. Bissera stated that water transportation is not the only way to activate the Channel. Bissera said that the height is removed from the edges and that very little of the shadow effect covers the watersheet. Bissera added that she is advocating for balanced benefits.

Richard Henderson said that this is a planning document, which allows for the City to express to the State where the density and height should go. Richard said that he wonders if the document ought to reflect the statement that it is next to transit docks, South Station, and oriented toward the water.

Vivien Li said that the argument thus far has been that the density is appropriate because of the proximity to South Station, but the development has 500 parking spaces, so it seems confusing.

Bruce Berman said that it is a mixed-use development, and there is a difference between the people coming to stay in hotels and the commuter.

Vivien Li asked about the cash payment for transporting children to the Harbor Islands and whether there needs to be transportation from this part of the harbor as well. Vivien also said that there should be more specific language on the civic space. Vivien said that she would like to see these as more tangible things, and that it seems to be duplicating Fan Pier’s transportation.

Joy Conway said that the conversation earlier in the meeting seemed supportive of the idea to have cash for transporting Boston school children to the Harbor Islands. Joy asked Vivien to elaborate on why she did not think it was a good idea.

Richard McGuinness said that this is not proposing to have a route from Russia Wharf to the Harbor Islands. It would not establish a new terminal, but go to the Harbor Alliance.

Vivien Li said that it is certainly a good goal, but is it what the Committee really wants the limited amount of money to go to, or does it duplicate what is already required from Fan Pier. Vivien added that she is not sure if this is the best use of the money.

Joy Conway said that if the goal is to get every school student out to the Harbor Islands once a year, it's not clear how this money would make a dent in the total number.

Bruce Berman said that we could find out what the numbers are, since the Waterfront Learning Project might have some demand analysis, and then find out what some of the obstacles are. Bruce added that there is definitely a lot of demand.

Joy Conway said that this is very helpful, but the challenge it seems is in the writing in order to get the specificity.

Jamy Buchanan Madeja said she thought that Fan Pier's requirement was for the physical facilities, and that this would be the next step, providing the way to get them there. Jamy added that it would be good to look into the possibility of a letter of credit.

Bruce Berman said that the money is about improving the connections.

Jamy Buchanan Madeja said that Thompson Island provides so trips but not enough.

Vivien Li said that she does not deny that the need exists; she just doesn't know if this is the best utilization for the money. Vivien said that this was not a major push in the Watersheet Activation Plan.

Richard McGuinness said that this is an attempt to have components of both the water transportation policy and the Watersheet Activation Plan. Richard added that if the money went to the MBTA there is no guarantee that it would go back to the Fort Point Channel.

Vivien Li said that she would be more comfortable with something else, that this was not a major push, and that it seems as if a lot of stuff is getting lumped here. Vivien said that she would like to see more money, but see if the \$500,000 could go somewhere else. Vivien said that it is not consistent with the watersheet plan.

Alex Strycky said that with respect to the extended license term, it is not strictly part of the MHP, but really guidance to DEP in order for them to determine what license term to grant. Alex said that there are criteria, such as MHP guidance, long-term public benefits, and water transportation policy. Alex said that if the Committee is putting offsets into the license term, they should really be put as an offset that DEP would then be bound to require.

Chris Hart said that he is concerned with the Congress Street improvements. Chris said that he does not agree with the value presented unless the City and the developer have an understanding about the long-term maintenance. Chris added that these are not technically substitutions but are necessary for the operations of the hotel. Chris suggested reevaluating the numbers and turning the value into another offset.

Bob Kaye said that he had heard this comment and changed the write-up to have the additional costs related to the sidewalk and street repairs. Bob added that as to the overstated value, Equity is prepared to commit to the long-term maintenance. Bob said that at Rowes Wharf the sidewalk varies from 8-10 feet and it does not adversely affect operations of Rowes Wharf or of pedestrian circulation. Bob said that this is estimated at \$35/square foot. Bob added a comment on the City standard of brick and said that Equity is hoping to work on getting a material that is more suitable.

Chris Hart said that currently there is a process with Boston Public Works to rethink the surface on pedestrian rights of way, and that in many other cities in the US the maintenance is required to be done by the developer.

Bruce Berman said that it appears the developer is willing to take on the maintenance and that the brick is a problem the developer wants to work to solve.

Richard Henderson said that he agrees the developer would do this anyway, and that they are literally creating more open space off the property so this should be described better.

Shirley Kressel said that it seems as if the same thing is going on here as in the South Boston MHP, that a developer is going along with a project that is too big and buying its way out of the zoning. Shirley added that this “Friends of” project is concerning and that she would like to sit down and discuss it. Shirley said that “Friends of” groups are civic society, not development groups.

Jamy Buchanan Madeja said that in terms of the open space, nothing is being taken away from the public. Jamy said that it is technical language in Chapter 91 about open space that leaves a gap when a site does not meet 50%. Jamy said that the Committee needs to make sure that there are sidewalks and not substitutions for open space.

Bissera Antikarov said that she doesn’t think the developer would definitely fix the sidewalk, that it is a benefit. Bissera also said that public agencies want to balance the benefits as they address the impacts. Bissera added that she does not think that anything is being taken from the public, that the “Friends of” group will help in the implementation of public benefits.

Conway asked the Committee and audience to email Richard McGuinness with additional comments and thoughts.

Richard McGuinness said that at the May 14<sup>th</sup> meeting there will be a presentation by Charles Norris on the watershed activation implementation and management plan, and a presentation on Open Space coordination between 470 Atlantic Avenue, 500 Atlantic Avenue and Russia Wharf.

The meeting was adjourned at 5:10 p.m. The next meeting to discuss the Fort Point Downtown Waterfront MHP is Wednesday, May 14, 2003 at 3:00 p.m. in the Piemonte Room (5<sup>th</sup> Floor, Boston City Hall).

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Note: If anyone on the committee has any edits or comments with respect to this meeting summary, please submit them to Richard McGuinness in writing via fax (617-367-6087) or email ([Richard.McGuinness.bra@ci.boston.ma.us](mailto:Richard.McGuinness.bra@ci.boston.ma.us)) within seven (7) days of receipt. A copy of your comments will be placed with the records of the meeting.

**MUNICIPAL HARBOR PLAN ADVISORY COMMITTEE**  
**Meeting Summary**  
**May 14, 2003**

The meeting of the City's Municipal Harbor Plan Advisory Committee was called to order at approximately 3:00 p.m. in the BRA Board Room by Joy Conway, Committee Chair.

MHPAC Members Present: Bissera Antikarov, Bruce Berman, Dennis Callahan, Joy Conway (Chair), Jim Klocke, Vivien Li, Brad Swing, Neil Gordon

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Joy Conway, Committee Chair, opened the meeting and announced the schedule of upcoming MHPAC meetings. Joy said that the rest of the meetings will be to go over comments on the draft chapters. Joy said that today we would be going over the changes to the offsets and draft chapters 1-6.

Richard McGuinness explained that the staff had received several comments on the first offset for the Water Dependent Use Zone substitution that wanted to see it more associated with maritime industry. Richard also explained that a floating dock system was proposed from Congress Street down to docks in front of Russia Wharf.

Bob Kaye added that Equity is not sure exactly where it will go.

Kathy Bachman said that 500 Atlantic Avenue's written determination calls for a community process to see where the ramping system should go and Russia Wharf wants theirs to neatly fit in with 500 Atlantic's.

Neil Gordon asked if the \$250,000 figure was added or if it was taken away from another item.

Richard McGuinness said that it was added to the total amount for the WDUZ substitutions.

Bob Kaye added that the total has gone up by \$100,000, and that there are larger numbers on this draft than on previous drafts, and that he has the history of the numbers if anyone would like to see them.

Joy Conway asked if there were any additional questions about the offsets.

Brad Swing asked if there are any changes to the water transportation section.

Richard McGuinness said that they are taking comments today.

Brad Swing asked if it will be a subsidy or used for the kids and how it will be determined.

Richard McGuinness said that it would be determined through the licensing.



Brad Swing asked if there is a need at the time of licensing it could conceivably all go to water transportation.

Richard McGuinness said that there is that possibility.

Bob Kaye said that with this MHP there would be financing of an operations board for the Fort Point Channel, which would take on the responsibility of how best to allocate funds for water transportation.

Bruce Berman said that rather having those that do not know the area, we want the decisions to be made by the operations board. Bruce added that the hope is the operations board could inform and effect how DEP makes their decisions.

Joy Conway asked the Committee and audience if they wanted Richard to walk them through the offsets, or if they feel confident with them. Joy also asked for additional comments.

Jon Seward said that the "short term public dinghy docking" seems to be duplicated and asked why the numbers were different for each.

Bob Kaye answered that it must be a typo and that the \$250,000 understates the actual amount.

Bruce Berman said that there are 2 different items, not to confuse the conversation.

Kathy Bachman said that this meets with the \$2/square foot number. Kathy said that it is listed twice because it allocated different amounts.

Bob Kaye said it is unclear and that they will fix it to make it clearer. Bob added that the amount is correct and the \$250,000 is credited towards the \$2/square foot.

Jon Seward said that there is another typo, there should be a "to" under the other project benefits.

Alex Strycky asked if on the 2<sup>nd</sup> page where it lists "Friends of" support if that go to the management board.

Richard McGuinness said yes, any funds would go to the management board.

Joy Conway said that staff will get the offsets document updated.

Richard McGuinness said that this will be included in an additional chapter that the staff will be getting to the Committee with the changes today reflected.

Joy Conway said that any additional changes should be sent to Richard. Joy asked for any comments on draft Chapters 1-6.

Bruce Berman said he feels that these reflect accurately what the Committee has discussed.

Chris Hart said that Adaptive Environments will be getting comments in soon.

Bruce Berman said that the Fort Point Channel Watersheet Activation Plan was a collaborative process and that Thursday at 6 PM at the Children's Museum an update will be given on the Plan and what is happening on and around the Channel. Bruce added that the EPA wants to come before the Committee to make a presentation on the current plans to make changes to the water quality and it is something that is important for the Committee to be aware of.

Richard McGuinness added that the MWRA has also offered to come before the Committee and that the staff will give the EPA the same contact list.

Joy Conway said that at the next MHPAC meeting the Committee will be discussing draft chapters 8-11 and the Committee will be getting the additional chapter soon.

Neil Gordon asked for an agenda for the next meeting.

Richard McGuinness said that the Committee will be going over the draft chapters at the meeting on June 11<sup>th</sup> and the meetings on June 18<sup>th</sup> and 25<sup>th</sup> the Committee will be going over the additional chapters and staff will be taking comments.

Shirley asked for clarification on the upcoming meetings.

Richard McGuinness gave the schedule.

Beatrice Nessen also asked for any comments on Charles Norris' presentation on water transportation for the previous meeting.

Charles Norris said that draft chapter will be available by the end of the week.

Alice Boelter announced that the Seaport Festival is the next weekend.

Bruce Berman added that its starts Saturday and additional information is available on Conventures website or at [www.BostonIslands.com](http://www.BostonIslands.com).

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The meeting was adjourned at 3:45 p.m. The next meeting to discuss the Fort Point Downtown Waterfront MHP is Wednesday, June 11, 2003 at 3:00 p.m. in the Piemonte Room (5<sup>th</sup> Floor, Boston City Hall).

Note: If anyone on the committee has any edits or comments with respect to this meeting summary, please submit them to Richard McGuinness in writing via fax (617-367-6087) or email ([Richard.McGuinness.bra@ci.boston.ma.us](mailto:Richard.McGuinness.bra@ci.boston.ma.us)) within seven (7) days of receipt. A copy of your comments will be placed with the records of the meeting.

## MUNICIPAL HARBOR PLAN ADVISORY COMMITTEE

### Meeting Summary May 28, 2003

The meeting of the City's Municipal Harbor Plan Advisory Committee was called to order at approximately 3:00 p.m. in the BRA Board Room by Joy Conway, Committee Chair.

MHPAC Members Present: Bissera Antikarov, Bruce Berman, Dennis Callahan, Joy Conway (Chair), Jim Klocke, Vivien Li, Brad Swing, Neil Gordon

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Joy Conway, Committee Chair, opened the meeting and announced the schedule of upcoming MHPAC meetings. Joy said that the rest of the meetings will be to go over comments on the draft chapters. Joy said that today we would be going over the changes to the offsets and draft chapters 1-6.

Richard McGuinness explained that the staff had received several comments on the first offset for the Water Dependent Use Zone substitution that wanted to see it more associated with maritime industry. Richard also explained that a floating dock system was proposed from Congress Street down to docks in front of Russia Wharf.

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Neil Gordon asked if the \$250,000 figure was added or if it was taken away from another item.

Richard McGuinness said that it was added to the total amount for the WDUZ substitutions.

Bob Kaye added that the total has gone up by \$100,000, and that there are larger numbers on this draft than on previous drafts, and that he has the history of the numbers if anyone would like to see them.

Joy Conway asked if there were any additional questions about the offsets.

Brad Swing asked if there are any changes to the water transportation section.

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Brad Swing asked if it will be a subsidy or used for the kids and how it will be determined.

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Brad Swing asked if there is a need at the time of licensing it could conceivably all go to water transportation.

Richard McGuinness said that there is that possibility.

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current plans to make changes to the water quality and it is something that is important for the Committee to be aware of.

Richard McGuinness added that the MWRA has also offered to come before the Committee and that the staff will give the EPA the same contact list.

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Shirley asked for clarification on the upcoming meetings.

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The meeting was adjourned at 3:45 p.m. The next meeting to discuss the Fort Point Downtown Waterfront MHP is Wednesday, June 11, 2003 at 3:00 p.m. in the Piemonte Room (5<sup>th</sup> Floor, Boston City Hall).

Note: If anyone on the committee has any edits or comments with respect to this meeting summary, please submit them to Richard McGuinness in writing via fax (617-367-6087) or email ([Richard.McGuinness.bra@ci.boston.ma.us](mailto:Richard.McGuinness.bra@ci.boston.ma.us)) within seven (7) days of receipt. A copy of your comments will be placed with the records of the meeting.

## MUNICIPAL HARBOR PLAN ADVISORY COMMITTEE

### Meeting Summary June 11, 2003

The meeting of the City's Municipal Harbor Plan Advisory Committee was called to order at approximately 3:00 p.m. in the Piemonte Room by Joy Conway, Committee Chair.

MHPAC Members Present: Bissera Antikarov, Bruce Berman, Joy Conway (Chair), Jim Klocke, Vivien Li

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Joy Conway, Committee Chair, opened the meeting and asked Richard McGuinness to go over the handouts for today's meeting.

Richard McGuinness explained that Chapter 11 that was handed out at the last meeting is now Chapter 12. Richard said that today's handouts are draft chapters 7, 11 (with attachments), 12, 13 and 14 as well as the table of contents. Richard explained that the document will be 14 chapters in total.

Joy Conway announced that there are 2 more scheduled meetings of the MHPAC, next Wednesday, June 18<sup>th</sup> and Wednesday, June 25<sup>th</sup>, both at 3 PM in the BRA Board Room (9<sup>th</sup> floor, Boston City Hall). Joy said that the document is really beginning to take shape.

Joy Conway said that the Committee at this point should have a draft of the entire document, missing a few attachments and with a few holes to be filled in later.

Richard McGuinness said that the attachments to draft chapter 7 will be emailed or available in hard copy at the BRA shortly.

Joy Conway asked Isabel Kriegel to email the redlined versions of chapter 1-6 to the Committee as soon as possible.

Richard McGuinness added that the redlined versions should be available as soon as the staff receives a few more sets of comments.

Joy Conway said that today the Committee will be moving on to draft chapter 8-10 and not spending time on chapters 1-6.

Shirley Kressel said that there are 2 principles that should be better defined in the document, the first is to have a better definition of Transit Oriented Development, and maybe the place for that is on

page 32. Shirley said that second is to elaborate on what is meant by preserving and respecting the historic nature of Russia Wharf, in what capacity.

Richard McGuinness said that the offsets package is in the new Chapter 11, so the Committee has another chance to go through and look at that.

Joy Conway said that Chapter 7 is a version of the presentation given to the Committee by Charles Norris.

Richard McGuinness said the attachments will be sent out in the next week.

Vivien Li said that she is concerned about the Harborline and whether this is suggesting exemptions from the Harborline or changes to the actual Harborline.

Richard McGuinness said the language might be confusing because it is unclear what will be needed, whether it is an exemption or a modification, but the plan is not suggesting changing the Harborline.

Bruce Berman stated that the term “touch and go” is not appropriate for docking, that it should actually be “pick-up and discharge.”

Joy Conway said that chapter 7 is on the agenda for the next MHPAC meeting. Joy asked for any comments from the Committee on chapter 8.

Vivien Li asked if the list in section 8.3 was in order by priority, and suggested having the Committee go over it again if it is by priority.

Richard McGuinness said that the way it reads can be changed so it does not imply that the list is in order by priority.

Vivien Li asked if the *Watersheet Activation* list could be moved up. Vivien added that there is a concern that baseline and offsets are getting mixed up. Vivien suggested taking out what is baseline from the list and leaving in only offsets. Vivien said for example, *support of existing water dependent uses* is baseline.

Richard McGuinness said that this can be explained better.

Vivien Li also commented that the Committee needs to think about the next tier of Harborwalk and what we want for the future beyond what we have since this is a 10-year harbor plan.

Jim Klocke said that it seems we are talking about amplifications a little bit and so some of this might not fit into the offset listing.

Joy Conway commented that maybe this is where the presentation of the list comes in.

Bruce Berman said it has to do with the degree between baseline and offset. Bruce said that this is a menu from which we want the State to be informed and what we want the State to use. Bruce added that there needs to be more clarity, that the list isn't the issue.

Alice Boelter said that the Committee needs to think about who else is going to read this Plan and that it should be in the format of lists, not more text.

Bruce Berman said that *support of existing water dependent uses* could be many different things.

Vivien Li said the Committee should be clear about what it wants for offsets and that it is what is written here.

Joy Conway said that clarity is the goal as well as consistency. Joy said that there is a lot of repetition in the draft plan, and as the writing gets completed the Committee needs to pay attention to this.

Shirley Kressel had a question about offset guidelines, about why it says *offsets are required if a substitution results in impacts that adversely affect the public's interests in tidelands* and also says that offsets are a means of implementing the Watersheet Activation Plan. Shirley asked how they could do both since they are not the same thing. Shirley said that offsets should be related to the substitutions that they mitigate.

Bissera Antikarov said that for this section the language should be changed and clarified. Bissera added that we always strive to find offsets that best address the impacts of the substitutions.

Shirley Kressel asked if there are certain substitutions that are not allowed.

Bissera Antikarov said for this plan this is a specific area with specific parcels.

Vivien Li said that the Committee needs to strive to get consensus, because it can submit whatever it wants to submit, but it will just be at the Secretary's office longer. Vivien commented on section 8.3 where it reads "the goal of this MHP submittal is to employ offsets as another means of implementing the FPCWAP" and asked how this relates. Vivien said that it's not clear that this is factually correct. Vivien added that the first intent should be to find an offset that mitigates the substitution.

Richard McGuinness said we also must look at the entire planning area. Richard said that we are not suggesting that we have additional open space because there is enough open space surrounding the planning area with the Channel on one side and the Rose Kennedy Greenway on the other. Richard said that you could have too much open space, so things like having a art barge in the Channel could be great.

Vivien Li said there is not realistically going to be acres of open space.



Bruce Berman said that open space is good, but an art barge that would enhance the public realm is also good.

Vivien Li said she disagrees with that point. Vivien said in the final decision, it will relate to the impact, and the Committee wants to get something that is going to be approved by the Secretary in a timely fashion.

Richard McGuinness agreed that is a goal. Richard added that the Watersheet Activation Plan always has offered a menu of improvements which is not the same as in the South Boston or East Boston MHPs. Richard said in addition, 2 years worth of planning went into the Watersheet Activation Plan. Richard added that the State has been supportive up until this point in the municipal harbor planning process.

Bissera Antikarov said that this MHP is benefiting from the Watersheet Activation Plan which has identified where public benefits are needed. Bissera said that she only sees this as a positive thing, despite the fact that the language might not be perfect yet.

Shirley Kressel said she wants to clarify the nature of the Plan. Shirley said that this is not spot zoning, but just codifies design. Shirley asked if there are other projects that are in the Phase II planning area, will there be modifications to the MHP.

Richard McGuinness said if the project needs substitutions they would be considered in an amendment to the Phase II.

Joy Conway said that there is not enough time to debate this issue today, and that the Committee will soon see another draft.

Shirley Kressel asked what it would take to not grant a substitution.

Bissera Antikarov said that if you do not substitute, you stick to Chapter 91.

Bruce Berman said things that are appropriate are considered.

Maureen Gaffney said that in the case of the South Boston MHP, additional height was requested and the Secretary did not approve it.

Richard McGuinness said that there are no prescribed limits in the regulations.

Bissera Antikarov added that is the purpose of the MHP Advisory Committee.

Joy Conway said the purpose is to look beyond the regulations to see what works here. Joy added the Committee does the very best it can to give advice to the City, which writes the Plan, in order to get something to the State that can be approved.

Alice Boelter said she hopes the Committee will think about the benefit of having all the niceties without having anyone to enjoy them.

Vivien Li commented on section 8.3.2 and asked if *prioritize* could be taken out and if *Children's Wharf Programming* could be changed to *Children's Wharf Open Space and Programming*. Vivien added that she thinks the water taxi is doable in the next 2 years, but questioned the timing for the rest of the list.

Joy Conway asked what the timetable is.

Richard McGuinness said these dates are from the Watersheet Activation Plan and may be a bit outdated. Richard added the art basin is already being used as is the water taxi, but these schedules have slipped a little bit.

Joy Conway asked if 2003 is really what the date should be.

Richard McGuinness said that some things are already happening now.

Vivien Li said the problem is if there are things that are already existing on a list of offsets, then they are not offsets.

Bissera Antikarov said it would help to have where in the Watersheet Activation Plan these things are mentioned.

Richard McGuinness said that the staff will clarify this part and get it back to the Committee.

Joy Conway said that Chapter 9 is a very important chapter and asked the Committee for any comments on it.

Richard McGuinness said this includes the basic open space and Harborwalk guidelines.

Jim Klocke requested that language be added to the sustainability section to suggest cost and feasibility and reflect that some sustainable technologies may or may not be manageable costwise.

Joy Conway said that those who are expert in accessibility design should pay close attention to how this section is written. Joy asked that these sections be reviewed carefully by Stephen Spinetto and Adaptive Environments.

Vivien Li asked if Brad Swing could also look at this to make sure the language is consistent with the Mayor's on green building.

Bob Kaye said that Adaptive Environments believes strongly that brick is unsuitable as a paver and Equity is working with them to find alternatives that are sustainable. Bob added that everyone equates brick with quality and we are going to have to change that attitude.

Joy Conway said that would be a tremendous effort on behalf of the whole City. Joy said maybe there are ways to work this into the Plan.

Bruce Berman said that in the introduction it might be appropriate to mention a few things that are left out of the planning area, such as the Rose Kennedy Greenway, mentioned.

Joy Conway said that would be good and it shows up in another part of the document.

Vivien Li asked what the standard for open space in an area is. Vivien said that here there is creation of new residential, and the Central Artery barely deals with the open space that is required given that we are pushing so hard to have so many residential units. Vivien asked if these figures could be attained from Toni Pollak and Valerie Burns.

Bissera Antikarov said that the ratios for a mixed-use development or area should be used since it's not simply housing that is being created.

Joy Conway said this is a concern that might fit into section 9.2.

Vivien Li said in section 9.2.1, if the Harborwalk is going to accommodate all these needs, it will have to be a much wider Harborwalk.

Bruce Berman said the way he reads it, it's not just about the Harborwalk but also about access. Bruce suggested changing the language so this is clearer.

Vivien Li said the bullets in the *Public Access and Pedestrian Connections* section should be enhanced to include Children's Wharf park in some of them. Vivien said it does not seem like the sense is that the park is free and open to public, so maybe it should be a stand alone bullet. Vivien asked for clarification on the 5<sup>th</sup> bullet, what is the public pedestrian walkway.

Richard McGuinness said this refers to the activation of the Pearl Street extension. Richard explained that Russia Wharf would like to activate their edge and they are working with the Central Artery Project to figure out what can be done to make it inviting.

Vivien Li suggested putting in *such as* before the list of things that could be used to activate the passageway.

Bruce Berman asked about having pushcarts.

Joy Conway asked the Committee to reread this list after the meeting to make sure it makes sense.

Alice Boelter said the language should be made sure to indicate that the Pearl Street extension will not be opened up to vehicular traffic.

Richard McGuinness said that the language does need to be clarified, that this will not be on the City street system nor will it be for vehicles.

Vivien Li asked if *if feasible* could be changed to *strive to create* in the first and second bullet of the *Site-Specific Harborwalk Guidelines* list. Vivien also suggested adding a sentence to look at wider Harborwalk widths than 12 feet clear in the last bullet of the same list.

Bruce Berman said that it would be good, since the Harborwalk is implemented in phases, to have the language reflect that it would be great to have the Harborwalk done separately from the developments.

Bob Kaye said it should also allow for the fact that 470 Atlantic Avenue would like the opportunity to expand the Harborwalk onto the Channel. Bob said that this list should mention Channelwalk.

Vivien Li commented that the language should make clear that any interpretive signage should be consistent with the Historic Piers Network Plan.

Joy Conway added that “readable” should be added to the signage list.

Bruce Berman said that it would be great to have the Harborwalk Subcommittee meetings recommendations brought to the larger MHP Committee.

Vivien Li asked about the reference to spilling out from indoors to outdoors and whether this would become a paying issue. Vivien said the language should read that the Committee supports both that for paying customers and those that are not paying by having the idea of free being suggested here.

Bruce Berman said that we want to be clear that we are not talking about across the Channel.

Richard McGuinness said that it means streetways, not Channel, and it has been considered from Gillette to the Post Office.

Joy Conway asked that the staff play with the language so this is not misunderstood.

Vivien Li said that there are certain things/amenities that should be baseline.

Bruce Berman said like phones and bathrooms should be baselines and we expect them.

Jim Klocke said that this is really a procedural question, that the text needs to be consistent with what’s in the law when talking about baseline.

Vivien Li asked if in the list *Landside Public Realm Guidelines* recreational boating and fishing could be moved ahead of restaurant row.

Alice Boelter said it would also be good to specify the difference between having a toilet and having showers.

Shirley Kressel asked in relation to sections 9.2.6 and 9.2.7, what is the City's role in managing and policing the open spaces.

Richard McGuinness said it is the role of the City and DEP to enforce the regulations, and that they do not want these areas to become privatized. Richard added that the maintenance will be done by the property owners.

Bruce Berman added that the policing function would be like any other policing function on any private property in Boston.

Kathy Bachman said the public rights of access to Harborwalk is like an easement being given, but the property owners must maintain it. Kathy added that the police function is a civic function, and that the hope is that they would police the area.

Shirley Kressel asked if there would also be private security.

Kathy Bachman said that would be at the election of the owner.

Joy Conway asked Richard to give some thought to the comment to see if it needs to be addressed in the Plan.

Alice Boelter said that the floating walkways and the liability that comes along with them as well as the accessibility issues should be addressed.

Bruce Berman said it seems like the Friends of should come up with an umbrella policy for it.

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The meeting was adjourned at 5 p.m. The next meeting to discuss the Fort Point Downtown Waterfront MHP is Wednesday, June 18, 2003 at 3:00 p.m. in the BRA Board Room (9<sup>th</sup> Floor, Boston City Hall).

Note: If anyone on the committee has any edits or comments with respect to this meeting summary, please submit them to Richard McGuinness in writing via fax (617-367-6087) or email ([Richard.McGuinness.bra@ci.boston.ma.us](mailto:Richard.McGuinness.bra@ci.boston.ma.us)) within seven (7) days of receipt. A copy of your comments will be placed with the records of the meeting.

## MUNICIPAL HARBOR PLAN ADVISORY COMMITTEE

### **Meeting Summary June 18, 2003**

The meeting of the City's Municipal Harbor Plan Advisory Committee was called to order at approximately 3:00 p.m. in the BRA Board Room by Joy Conway, Committee Chair.

MHPAC Members Present: Bissera Antikarov, Valerie Burns, Dennis Callahan, Joy Conway (Chair), Neil Gordon, Jim Klocke, Vivien Li

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Joy Conway, Committee Chair, opened the meeting and said the Committee would be going over draft chapter 7. Joy also said the revised versions with redlining of chapters 1-6 are available.

Valerie Burns said that this MHP seems much denser and less clear in its text than either the East Boston or South Boston MHPs. Valerie said this shows in chapter 7 in particular. Valerie said that she does not want to overreach with this MHP since there is also the MEPA and Article 80 process. Valerie said she thinks the Committee should stay focused on what the MHP can do, since it now seems as if it's meeting too many agendas.

Beatrice Nessen said that the transportation management plan was part of the Notice to Proceed, which was not in the East Boston MHP.

Richard McGuinness said that this is an ambitious plan.

Valerie Burns said it's not typical to get into this level of detail of implementation. Valerie said that an implementation plan must be detailed, but this seems out of sync, and there seems to be a tension in this draft of the plan.

Richard McGuinness said this may need to be two separate things.

Maureen Gaffney said that the Watersheet Activation Plan makes this MHP different than South Boston or East Boston.

Valerie Burns asked if having the Watersheet Activation plan satisfies the Secretary.

Maureen Gaffney said the MHP is the thing that links the two together.

Richard McGuinness said that in the Request for Notice to Proceed and in the Notice to Proceed, the MHP would be the way to link the offsets from the Watersheet Activation Plan. Richard said that the City can meet with the State about the amount of detail they think is best. Richard added that this text is the harbor planning.

Valerie Burns said that the groups and the implementations reach beyond straight harbor planning. Valerie said that she is concerned that this document will be delayed, since when you get into creating entities it takes time. Valerie asked if it's necessary to have these entities specified in such detail.

Beatrice Nessen said the staff will go back and reexamine the level of detail. Beatrice added that if the plan is going to make recommendations, it needs to address the implementation.

Valerie Burns said it would be better if the chapter did not have such specific recommendations in case they are not the right solutions.

Richard McGuinness said part of the idea is that there will be shared resources, for example, the ADA ramp maintained by 500 Atlantic Avenue, but coordinated with 470 Atlantic Avenue and Russia Wharf. Richard said that the purpose of the management plan is to figure out who is going to manage and maintain them, basically having a greater oversight.

Valerie Burns suggested backing up and setting the stage for the specifics but not being explicit with the specifics.

Richard McGuinness said that the staff tries to meet with the State frequently to stay on track and the staff is setting up a meeting with the State soon.

Charles Norris said the watersheet is a public area, so the level of detail might be different than in other private places. Charles said it is like a public park with many different uses being proposed.

Valerie Burns said that is a fair and useful distinction to make.

Maureen Gaffney said to clarify, the State provides guidance but it is up to the Committee to get into the specific levels of detail.

Valerie Burns said it would be useful for the State to tell the Committee what it must do versus what it is choosing to do in the plan.

Jim Klocke said that his comfort level with the set-up of the plan is high, and he would not want to take it either more or less detailed.

Neil Gordon said a lot of work has gone into this part of the harbor and it is therefore appropriate that this document reflects that. Neil added that some of the details do need to be flushed out.

Joy Conway said she is concerned with the level of detail which would lock things in for a long period of time.

Valerie Burns questioned whether this is the right structure to put into an MHP when it will have to have an amendment to change anything. Valerie said she is concerned with setting a policy framework for the Channel with this much detail.

Joy Conway asked if it is problematic to do an amendment.

Richard McGuinness said the City prefers not to do them, but to have it done in the actual MHP.

Joy Conway asked what the specific concerns are from the Committee.

Richard McGuinness asked which entity is problematic.

Valerie Burns said that the management entities are confusing, listed are the operations board, the abutters group, the friends of. Valerie said it would make more sense to be more specific or less specific.

Joy Conway suggested going through the document page by page.

Vivien Li said that she has a different concern, that the chapter combines activities that are clearly water-dependent with those that are not. Vivien said it seems fuzzy about the changing of the harborline versus and exemption. Vivien added it would be helpful to have a discussion on the operations board so it can be written in such a way that it works better.

Valerie Burns said in the second paragraph of section 7.1, it should state that the City either will or will not, that is the sort of clarity the chapter needs.

Richard McGuinness said that since the City is not such what it will need in terms of the exemption from the harborline, modifications has been put in the text.

Valerie Burns asked to take out the word “need” in the sentence “The City will need to initiate new regulatory and planning measures such as exemptions or revisions to the harborline and establishment of new channels and fairways.”

Vivien Li said that the Old Northern Avenue Bridge needs to be addresses here, it is a major segment of this area and this plan.

Richard McGuinness said staff has language which can be updated. Rich said that it is less likely that the bridge will be demolished, but the City is instead looking at costs of different solutions, but it all comes down to money.

Vivien Li said maybe it should be part of this section.



Charles Norris said the figures that go along with this chapter are going to be modifications of the plans from 4 meetings ago.

Valerie Burns said it is hard to comment without seeing the figures.

Vivien Li commented on the key access elements in Figure 7.2, and said the first 4 bullets appear to be mean to implement while the rest of the list is substantive. Vivien suggested flipping the list to have the substantive first.

Charles Norris said the reason for the order is that these are pre-conditions to have activation.

Vivien Li said from the reader's perspective it would be better to have them the other way.

Valerie Burns asked if there is a reason why this does not set the context with the other side of the channel.

Bissera Antikarov said maybe it was done because the MHP planning area is the west side of the channel.

Richard McGuinness said that the watershed activation plan covers the entire channel.

Vivien Li asked if in section 7.2.1 "refuge for other vessels" could be changed to be better understood. Vivien added that it would be good to add "exemptions and/or modifications" when writing about the harborline. Vivien also asked for clarification on the term "area limits."

Charles Norris said the purpose of this is for any floating structure. Charles said that setting limits would allow for areas to be leftover for recreational boating. Charles added that this is consistent with the watershed activation plan, but it can be better defined.

Vivien Li asked if "marine infrastructure elements" could be clarified since leaving it as it is makes it sound water-dependent.

Valerie Burns asked if there needs to be better differentiation between seasonal and temporal floats.

Charles Norris said we do not want to have floats if they are going to interfere with the navigation of the channel.

Richard McGuinness said staff can break down the seasonal elements.

Charles Norris said that in the case of a floating theater, we still want to have that, we just don't want it to interfere.

Vivien Li asked if the phrase "that would conflict with the small recreational boating" in section 7.2.2. Vivien asked about the channel keeper, and said it has never been mentioned before.

Richard McGuinness said that in Phase I the Committee talked about a dock manager.

Vivien Li asked if the channel keeper is the same thing as the dock master, and if not, what is the channel keeper.

Charles Norris said that it would be some intermediate person responsible for oversight. Charles added that it would be someone who is in between the individual dock masters and the harbormaster.

Valerie Burns asked if it's someone with regulatory and enforcement capabilities.

Charles Norris said it is more of an advocate.

Neil Gordon asked if it is a volunteer position.

Charles Norris said it would be a part of the Friends group.

Richard McGuinness said it would be another level of management.

Joy Conway asked if this could be explained better in the text.

Vivien Li said this may not be the right bullet to have this in. Vivien added that there is going to be a lot of bureaucracy in a small channel. Vivien said she wants to revisit whether or not the Committee wants to have this.

Beatrice Nessen said that in this chapter Charles has pointed out that there is a need for a channel keeper, and the question is how the channel is going to be managed and this a the first crack at answering that.

Valerie Burns said it would be useful to distinguish between what we currently have to work with and what we need.

Neil Gordon said having regulatory and management next to each other is confusing.

Joy Conway said this section is complicated and will only be more complicated to those reading it.

Valerie Burns asked if these are actions we are going to take.

Vivien Li commented that in the specific recommended actions in section 7.2.2, the 100 foot from the shoreline seems like a big jump. Vivien asked if this could be taken out until after the discussions with the state. Vivien said that she's not sure if 100 feet is too much or too little.

Charles Norris said that is his recommendation.

Richard McGuinness said the staff is going to separate what is in the plan, what is proposed and who doing what.

Vivien Li said that #4 on the same list should be separated into 2 numbers. Vivien asked about a bullet under 7.2.3 and asked if museum related activities are water-dependent.

Richard McGuinness said in the case of the Tea Party Museum, part of it would be, and some parts of the Children's Museum in their master plan might be.

Charles Norris said it would be a floating concession or anything else on barges.

Richard McGuinness added that they can have examples.

Vivien Li asked about the reference to having historical vessels with the current bridge heights.

Richard McGuinness said that there are opportunities to have historic vessels.

Valerie Burns commented about section 7.2.3 number 3, and said it seems out of sync to have this here.

Vivien Li asked if the Committee wants to have pump out facilities encouraged here under "specific recommended actions."

Jharry Breed asked for clarification on the a bullet in section 7.2.3 about water-dependent business vessels.

Richard McGuinness said the idea is to have zones so that nothing could get near the intakes.

Jharry Breed asked how these would be created.

Richard McGuinness said the staff would have to work with the property owners.

Charles Norris said this is not meant to define businesses but zones, and the business zones are clearly protected.

Jon Seward stated that Hook Lobster has similar issues with dredging materials and revved engines.

Richard McGuinness said that is the objective of the zones.

Jon Seward asked for an assessment of the channel keeper.

Richard McGuinness said the issue of the channel keeper has been touched on and that it needs to be worked on.

Vivien Li said it makes sense to reference the Old Northern Avenue Bridge somewhere in section 7.2.4.

Richard McGuinness said something can be put in about the bridge as it related to public access.

Valerie Burns asked about the responsibility of things listed, for some it says the BRA, for others should it be assumed that the city will be responsible,

Richard McGuinness said that the staff will identify who is going to be responsible.

Chris Hart pointed out that “bridge structures” should not imply the Old Northern Avenue Bridge.

Jon Seward said that all the old piles were removed at Summer Street bridge at the time of renovation.

Vivien Li commented on the third bullet in the component descriptions in section 7.2.5 and asked what it means.

Richard McGuinness said the staff can work on it, right now it is not clear.

Vivien Li asked if a subsidy for the water transit and cultural loop can be in this section.

Richard McGuinness said that it can be included.

Vivien Li asked if there could be more emphasis on the free entertainment and events.

Charles Norris said that there are access issues.

Valerie Burns said this is almost entirely public property, so it’s most important to know who is going to be taking care of it. Valerie said it is not clear from the text what the process is going to be.

Richard McGuinness said that in some ways this could be included in the open space chapter.

Kathy Bachman said these should be thought of as guidelines, and that the administration in Chapter 91 licensing process follows from this.

Valerie Burns pointed out that section 7.2.7 does reference the bridge.

Vivien Li asked for clarification on the enhanced crosswalks on Congress Street.

Richard McGuinness said it would be curb cutting and striping.

Charles Norris said it could read modify sidewalks to be easier.

Richard McGuinness added that the staff can make this easier to understand.

Jon Seward said that it should be acknowledged in the text that Hook has truck access and that Harborwalk needs to coexist with Hook’s trucks.

Chris Hart said that the east crosswalk at the Congress Street bridge must be resolved and made accessible.

Vivien Li said that art-in-the-water, mentioned in 7.4, is not water dependent, and it's a slightly different issue of not what the programming is but the location and size of the barge.

Richard McGuinness said yes.

Vivien Li asked if "federal" could be added to city and state mandates in the first bullet in section 7.4.

Valerie Burns asked if "such as" could be added to the same bullet.

Shirley Kressel said in terms of the potential management entities, the third one is really the private sector.

Joy Conway said this could be fixed by language.

Bissera Antikarov said there will be other differences.

Jharry Breed suggested instead of using layers which prioritizes them, have entities.

Bissera Antikarov maybe it would work to come up with a second word that is not a repetition of the private sector.

Neil Gordon said it is confusing because it is describing another sector that is not a government nor private owner.

Valerie Burns said isn't the issue that they are property owners, and maybe it works to have a fourth bullet with the hybrid. Valerie asked if these ate management entities or not.

Richard McGuinness said this needs to be consistent in the text, but the modeling of the operations board on Rowes Wharf's board as a way to manage the funds in escrow for programming.

Valerie Burns asked if the board would have a regulatory role.

Richard McGuinness said that it would be more advisory, and although it would have a representative from the State and the City on the board it would not be regulatory.

Valerie Burns asked if it was public or private money. Valerie said that she was envisioning an operations board that was more regulatory. Valerie asked what the distinction between the operations board and the friends of group.

Vivien Li said the operations board at Rowes Wharf set the license fee structure and other operations stuff, but then there is also an advisory board.

Richard McGuinness said it all goes back to being required by Chapter 91 to do these things.

Valerie Burns said what is being proposed here will be different because it is dealing with multiple sites.

Neil Gordon said he is surprised by the language, because he thought it was going to be one representative from the Friends of, the City and DEP.

Richard McGuinness said that there is an importance to having the property owners represented.

Kathy Bachman said the idea is to have a cooperative effort with the property owners, not to have the Chapter 91 money go to the Friends group but to have a single operations board for the entire channel. Kathy said the idea is that the Friends of group would propose to the operations board for programs etc with a proposed budget.

Valerie Burns said it would make sense to have the operations board be clearly separate from the Friends of group in order to make it as clean and simple as possible and also to accomplish a goal.

Kathy Bachman said this is a very different view than the previous discussions.

Valerie Burns said the process has now become public, and it seems to make more sense to have the third representative be a representative of the property owners on the channel.

Bissera Antikarov said this person will be on the Friends of group.

Valerie Burns said it is different if the person is representing the property owners than the Friends of group.

Neil Gordon said that it would be better to go away and think and come back with some ideas and solutions.

Bissera Antikarov asked if the abutters group remains as an entity or if it becomes part of the Friends of group.

Jharry Breed said the abutters group has been working well on the watersheet activation plan, and the upland property owners should not be the only recipient of the funds.

Joy Conway asked staff to take this section and revise the language so that it is understood what the intention is.

Vivien Li said that the Committee wants to move Russia Wharf along as best we can, but she has concerns with the additional height and the offsets. Vivien said how does the Children's Museum relate to the Friends of group.

Joy Conway asked the members of the Committee to go down and look at the area between now and the next meeting and at the next meeting we will start with chapter 11.

Richard McGuinness said that we are scheduling an additional meeting and will pool the Committee on what dates work best.

Joy Conway added that the Committee should feed comments to Richard on the other chapters.

Bissera Antikarov asked if there is a target timeframe.

Richard McGuinness said we are hoping for early July but will take our time to make sure it all gets done.

Valerie Burns said we should be realistic with the calendar.

Joy Conway said the Committee should be able to wrap this up in one more meeting.

Valerie Burns said that rewrites need to be looked through.

Vivien Li said that whoever is here will have to keep on top of this.

Richard McGuinness said that maybe having the meeting on July 16<sup>th</sup> would work best for everyone.

Valerie Burns said that she can't make the numbers work in chapter 11 on page 11.

Shirley Kressel said that in order to not have a conflict of interest with the operations board there should be no one from the BRA or any of the property owners on it, just representatives from the city and state.

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The meeting was adjourned at 5 p.m. The next meeting to discuss the Fort Point Downtown Waterfront MHP is Wednesday, June 25, 2003 at 3:00 p.m. in the BRA Board Room (9<sup>th</sup> Floor, Boston City Hall).

## MUNICIPAL HARBOR PLAN ADVISORY COMMITTEE

### **Meeting Summary June 25, 2003**

The meeting of the City's Municipal Harbor Plan Advisory Committee was called to order at approximately 3:00 p.m. in the BRA Board Room by Joy Conway, Committee Chair.

MHPAC Members Present: Bissera Antikarov, Bruce Berman, Valerie Burns, Joy Conway (Chair), Jim Klocke, Vivien Li, David Spillane, Brad Swing

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Joy Conway, Committee Chair, said the meeting summaries from all of the meetings would be available to the Committee soon. Joy said that today the Committee will be commenting on draft chapter 11.

Richard McGuinness said the draft chapter was handed out to the Committee a few weeks ago and that several changes have been made since then, but the staff is looking to the Committee and audience for additional changes and comments.

Bruce Berman said that he was absent from the last meeting, but wants to comment that the channel keeper idea in draft chapter 7 seems complicated.

Richard McGuinness said the idea of the channel keeper has been shelved.

Joy Conway said that all of the 14 draft chapters have been handed out. Joy said BRA staff is meeting with CZM this week, to ensure that the plan is satisfying the Notice to Proceed. Joy added that the Committee should review draft chapters 12-14 independently and send comments to Richard McGuinness.

Richard McGuinness added that chapters 12-14 are almost boilerplate, but the staff is taking comments on everything.

Vivien Li said in the case of the South Boston MHP the zoning and the implementation were connected.

Richard McGuinness said that you don't typically put a timeframe, but just how it will be implemented.

Valerie Burns said there is a paragraph on the management board that she wants to discuss.

Brad Swing agreed.

Richard McGuinness said to strike "management" so it should just be "operations board." Richard explained that it would be made up of city, state and abutter representation.

Bruce Berman asked who would pick the abutter.

Richard McGuinness said he is not sure yet. Richard added that chapters 12-14 are being changed and updates will be sent to the Committee.



Vivien Li asked that “Wharf District” be added to section 11.1.1 .

Richard McGuinness said there had been similar comments on chapters 1-6 and it is not clear if the Horticulture parcels are in the Wharf District.

Bissera Antikarov said the Wharf District parcels do not include the Massachusetts Horticulture parcels. Bissera added the BRA refers to stretch from the Horticulture parcels to Dewey Square as the Financial District.

Vivien Li said in terms of the design and configuration, these buildings are similar to the Boston Wharf buildings. Vivien said she is referring not just to the term used by the Central Artery/Tunnel project.

Kathy Bachman said she has concerns about this since this site is in the Financial District and the wharf district is across the channel in South Boston.

Richard McGuinness said that staff has asked the parks department to clarify this and the staff will look into this comment.

Bruce Berman said that there are not a lot of 5 story buildings in this planning area.

Richard McGuinness said this relates to the planning context section.

Vivien Li said under section 11.1.2 to put “The” in front of “Boston Harbor Association” and mention the IAG meetings and members. Vivien added under the Historic Context “great fire” should be capitalized. Vivien asked about the structure being referred to in section 11.3.3, does it mean the vent tower or the hotel.

Richard McGuinness said that can be clarified. Richard added that the vents go up to 240-287 feet and the building’s last occupied floor is at 239 feet.

Vivien Li asked if the timetable under the MBTA Transitway section was still correct.

Richard McGuinness said it was supposed to be December 2003, but it can be changed to Spring 2004 since there is a 4-6 month delay.

Vivien Li said she is confused by the second paragraph in section 11.3.5 concerning zoning.

Richard McGuinness introduced Don Wiest, Land Use Council for the BRA.

Don Wiest said he is reluctant to comment on this before all of the facts are in. Don said it makes more sense to wait until after the BRA receives anything about a development plan to comment.

Vivien Li said that in light of the answer, could the text be changed to reflect that a PDA application is going to be submitted.

Shirley Kressel said the situation is known, no PDAs are allowed in this area, the PDA map stops before this site no matter what the project is. Shirley added that the MHP is going to be used as the planning to justify the IPOD, and the MHP will be used to extend the PDA eligible area.

Vivien Li suggested changing the language so it is neutral. Vivien said that it is not the MHPAC's job to weigh in on the PDA, and that there will be a process with public involvement for that.

Jim Klocke asked what Richard McGuinness thinks.

Richard McGuinness said all along Boston Harbor there is zoning that contradicts what Chapter 91 says and the MHP is the mechanism to revitalize the harbor.

Valerie Burns said it make sense to state what the zoning is today since the section is applicable zoning.

Don Wiest said any way Russia Wharf gets zoning relief will be a public process, and anything has to go through zoning commission. Don added that any language here would be advisory and it sounds like having the current zoning makes the most sense.

Bruce Berman said that zoning is a set of regulations. Bruce added the way he read this section, the BRA felt it was appropriate that the parcel be a PDA.

Vivien Li asked is Don thought it was best not to deal with the PDA here but just to talk about the applicable zoning.

Don Wiest said that there are two different things here, the Municipal Harbor Plan and the zoning.

Shirley Kressel said that in chapter 10, there is a sentence that reads "relatively modest in size," but Russia Wharf is 400 feet in a 125 foot zone.

Richard McGuinness said that the staff will be meeting with the state to make sure the plan is consistent with the Notice to Proceed and on the right track.

Joy Conway said she thinks it should be written about the applicable zoning and say that the implementation of the zoning will require a substantial public process.

Richard McGuinness said that the zoning staff will take a look at this.

Valerie Burns said that having the chapters and comments and rewrites, it is clear that there needs to be a consistency through the document.

Joy Conway said that the Committee will see the entire document revised.

Bruce Berman said that Equity has made a big effort to have appropriate design for the disabled and it should be referred to in the text.

Kathy Bachman said that Bob Kaye would say that Equity has been working with Adaptive Environments on this, and that in the Article 80 and design review they will further work on this.

Vivien Li said she has trouble understanding Nelson Court.

Kathy Bachman explained Nelson Court is a connection between the buildings and it will have a set of glass doors creating an interior space, but will remain a pedestrian corridor.

Vivien Li asked for further clarification on the glass doors.

Kathy Bachman said it is not fully an open space, but it has pedestrian access some sculptural elements and it will have access into the two buildings. Kathy added that Nelson Court is not added into the open space calculation.

Valerie Burns said she thought it was included as open space.

Kathy Bachman said the interior space is not included, but it is open to the sky on the south and north.

Bissera Antikarov said it is essentially partially open and partially closed.

Vivien Li said later in the chapter it reads like an offset, so she would like to understand the difference. Vivien also suggested changing the second paragraph in section 11.4.3 to read “It attempts to limit net new shadow” instead of “It limits net new shadow.”

Shirley Kressel said in her comment letter she notes that the building causes negative wind impacts in other areas around the building.

Valerie Burns said the numbers in table 11-1 do not compute, is this because it has bot the land and the waterside in the computation. Valerie asked if this could be clarified now.

Richard McGuinness pointed out the new chart in the revised chapter 11.

Valerie Burns asked if these numbers are in the DEIR.

Kathy Bachman said they are.

Valerie Burns said that Nelson Court is included in total.

Kathy Bachman said yes but not to be given credit.

Valerie Burns said it would be less confusing to have it in as a note instead of in the chart.

Kathy Bachman said it is about 3,000 square feet.

Vivien Li said in section 11.4.5 it's hard to figure out the benefits that are related to Chapter 91.

Richard McGuinness said these are listed as general public benefits that are not necessarily tied to the waterways program. Richard said this can be clarified in the text.

Valerie Burns said this list reaches too far outside the MHP process since it is really a list from a different document for a different purpose.

Joy Conway said it would be possible to split it, but it's still important to understand how the project is overall important.

Valerie Burns said it's not necessary to overreach and sell the project here. Valerie added it's not that they aren't legitimate, they just aren't relevant

Bruce Berman said the benefits need to be in proportion. Bruce added that he sat on the IAG for Russia Wharf and didn't fully understand the extent and scope. Bruce said these seem to be directly the type of benefits that Chapter 91 speaks to.

Bissera Antikarov said she supports leaving all of them there, but it would be better to categorize them.

Vivien Li said there is mention that this project is creating transit oriented development. Vivien asked how this is transit oriented development, and there is very little discussion about water transportation support and South Station, and there is the question of parking. Vivien said she thinks the Committee should look at the language.

Joy Conway said when people talk about LEED and green building, it's about picking locations close to public transit to build concentrated, dense development. Joy said parking is a separate issue, and this project meets with certain concepts of transit oriented development.

Richard McGuinness said that is the term is going to be in the text it should be defined.

David Spillane said if this development were done elsewhere it would require between 2,000 and 5,000 parking spaces.

Brad Swing said the bullet that states "investigating and possible use of co-generation for and electricity source" though far afield from the MHP, this bullet should be restating the environment department's interest in energy management planning.

Vivien Li said this is not a benefit, they are just investigating it.

Brad Swing said just investigating it is a benefit, they are pushing NStar.

Vivien Li said this is more wishy-washy than the other bullets.

Joy Conway said it pushes the project, and there is a strong interest on the part of the City and the project.

Valerie Burns asked if the Committee agreed that this is going to be annotated to show the Chapter 91 benefits.

Shirley Kressel asked for a definition of transit oriented development. Shirley also asked if the project is adaptive reuse, or if the building has to be abandoned for that to be the case.

Brad Swing said the landmarks department does not pre-suppose that the buildings are abandoned when they term them adaptive reuse.

Joy Conway added that it is a broader phrase because there are so many kinds of situations.

Richard McGuinness said he understands the confusion between the Chapter 91 benefits and the other benefits.

Kathy Bachman requested keeping the presentation since it applies to the open space requirement.

Jon Seward said in terms of transit oriented development and water transportation, he is concerned since waterside transportation is not in the MBTAs budget.

Kathy Bachman said for early access there would be dredging and allowing touch and go access. Kathy added that the supposition is not that the MBTA is going to provide service to the Russia Wharf shoreline.

Valerie Burns commented that section 11.4.7 is overreaching with the language. Valerie said she is concerned that it uses language which may lead to comparison. Valerie added that it is not a serious diminishment to describe it as covering the entire waterside pier and take out the word "large."

Shirley Kressel said it is important to distinguish between public and publicly accessible.

Kathy Bachman said it is owned by the owner, with a Mass Highway easement for Harborwalk.

Vivien Li said the reference to Nelson Court should be made consistent with what was previously discussed.

Valerie Burns asked about defining the type of jazz/blues club. Valerie said this is overly explicit, and too finely detailed. Valerie suggested changing it to "entertainment such as."

Vivien Li suggested adding the word “somewhat” to “creating a more appropriate passageway” in the *public access to the waterfront* section of 11.4.7.

Valerie Burns said that several adjectives could be eliminated from that same section.

Vivien Li said that in terms of Harborwalk, 15 feet width is not the most generous, and in the future would hope that the Committee would ask for more than 15 feet as the area continues to get planned. Vivien asked if there could be an emphasis on free programming in section 11.4.8. Vivien said since Equity has a record of doing free events they will most likely do them at this site and should take credit for them/

Bruce Berman agreed with Vivien and suggested it be explicit in the first bullet of the *cultural programming and signage* section.

Valerie Burns said somewhere in the signage section it should talk about coordinating with other abutters along the Harborwalk. Valerie said in order to make the signage work, there needs to be coordination.

Richard McGuinness said this is included in chapter 9 which is more general.

Valerie Burns said it might be good to repeat it here.

Bruce Berman said the correct term for boats is “berthed” not “moored.”

Valerie Burns asked if the hours for the bathrooms could be explicitly listed.

Kathy Bachman responded the bathrooms are going to be available 24 hours a day, 7 days a week.

Vivien Li suggested adding “regardless of patronage” to the section on bathrooms.

Valerie Burns asked if Nelson Court is open 24 hours. Valerie also suggested clarifying the language to reflect the hours.

Vivien Li asked if there will be chairs on the plaza.

Richard McGuinness said yes and the writing can be more explicit about this.

Vivien Li suggested adding transit oriented development to *sustainable designs and operations* and citing that the owner manages South Station.

Bruce Berman suggested also adding “best stormwater management” to this section.

Brad Swing commented on good energy policies.

Kathy Bachman said that Equity does sit elsewhere and wants to do it at Russia Wharf but has met with resistance.

Vivien Li asked if it could be phrased that it's part of Equity's national strategy.

Shirley Kressel said in terms of transit oriented development, it is not fair to compare this project to one in the suburbs.

Richard McGuinness said that BTM has approved the number of parking spaces.

Vivien Li suggested having what's happening at 470 Atlantic and 500 Atlantic tie into section 11.4.10.

Richard McGuinness said it states the coordination by having consistency with the Watersheet Activation Plan.

Jon Seward said at some point there should be acknowledging of dredging.

Kathy Bachman said that dredging is not part of the MHP, it was from before.

Vivien Li asked where the 35,000 square feet that is mentioned in section 11.4.11 comes from.

Kathy Bachman said it is more than the Chapter 91 build-out.

Richard McGuinness said section 11.5 is the planning principles from Phase I and what Russia Wharf proposes and its consistency to these principles.

Vivien Li said this is pretty vague, it could have more. Vivien also suggested taking "strategic" out of "strategic setbacks" under *building heights and massing*. Vivien also asked how the widening of Congress Street is an offset since the sidewalk is necessary.

Richard McGuinness said the 8 feet is all they have, it came from the parking lane at the Federal Reserve.

Vivien Li said it is not an offset, they would want to do it anyway.

Jim Klocke asked what the City standard is.

Richard McGuinness said he is not sure but can find out.

Jim Klocke said if it exceeds the City standard, then it should be considered an offset. Jim added the Chamber wants to say that it supports this project it thinks the planning and discussion has been extensive.

Vivien Li said it was incorrect to have “no substitution required” under 11.5.3. Vivien also suggested taking out “complies in all respects” from section 11.6. Vivien asked how the things listed under 11.6.1, such as the restaurants and bar, would relate to the water dependent use zone.

Richard McGuinness said the Tufts building is in the water dependent use zone, and these activities would spill out, such as seating, into the water dependent use zone.

Vivien Li asked if moveable free tables for the plaza could be added to this.

Valerie Burns asked if the numbers in the first paragraph of section 11.6.2 could be checked for accuracy.

Vivien Li said under section 11.6.3, she is concerned with setting a precedent by using the Federal Reserve Bank as a benchmark.

Bruce Berman said he agrees that this could set an unwanted precedent.

Vivien Li said she is not sure this is the building we should cite.

Jim Klocke said he likes keeping the Federal Reserve in the language, but maybe the number should be taken out.

Vivien Li suggested taking it out altogether and just saying “nearby office towers.”

Valerie Burns said it is important that the Federal Reserve is setback from the waterfront.

Bruce Berman said it is still in Chapter 91 jurisdiction.

Valerie Burns said it’s not clear that it is in jurisdiction.

Vivien Li added that the adjective “modest” referring to change should be taken out in the same section.

Valerie Burns agreed that modest should be taken out.

Richard McGuinness said that this is the boiler plate language for all harbor plans.

Shirley Kressel asked if the proponent is planning to address the alternatives.

Kathy Bachman said the proponent will comply with the standards of the FEIR and will address the inquiry of the Secretary on draft certificate.

Vivien Li said free tables should be added to the third bullet in section 11.7.1.



Valerie Burns said she is concerned about the language, that it is too broad. Valerie suggested seeing some sort of proportion between paid and free seating to make sure the free seating is not lost.

Kathy Bachman cited the Watersheet Activation Plan which states that there should be a tension between the paying and free. Kathy added that Equity is working hard to coordinate with its neighbors and they are working to have an open space plan. Kathy said the point of this it to express as a principle the balance between free and restaurant row.

Valerie Burns said this site is constrained with trying to have outdoor space and a connection to the interior.

Kathy Bachman pointed to the licensing process for further definition.

Valerie Burns said that Nelson Court is not included in the second bullet in section 11.7.2.

Vivien Li said the first bullet in that section is a ratio of 25%.

Richard McGuinness said they tried to simplify it, but maybe it made it more complicated. Richard added that in the revised version this was made into a chart.

Vivien Li said the first bullet in section 11.7.3, she is not sure if this substitution does the last sentence. Vivien also asked if the second ramping system in section 11.8.1 is ADA compliant.

Richard McGuinness said no, that one connects at the water transit stop, that this ramping system is from Congress Street and is not ADA compliant. Richard explained that they are trying to reduce the amount of watersheet coverage.

Vivien Li asked if the Committee wants this as a offset since this is not ADA compliant. Vivien asked if this is the best use of the money.

Bruce Berman said you get access to the watersheet where it is appropriate and at some tide cycles you would have ADA accessibility, but at others not.

Vivien Li suggested taking more money from interpretive signage to go to ramping, since here it is mitigating the water dependent use zone. Vivien said that the interpretive signage will be done anyway, maybe this should be an ADA compliant ramp.

Richard McGuinness said the reason why this is offered as offset is because there is an historic building in the water dependent use zone, so it relates.

Bissera Antikarov said this is the best of both worlds, while adding to the ramp is not getting anything better.

Valerie Burns said asked if the secondary ramping was going to be from funds put in escrow.

Richard McGuinness said no, it was a capital investment, it will be built.

Vivien Li said it would be good to have language that said what is an offset, what is baseline.

Valerie Burns said there needs to be consistency with the changes that have been made.

Vivien Li said she has concerns with having the Congress Street sidewalk as an offset and with having money go to the Friends of group. Vivien said this is trying to mitigate open space, and she thinks it should go to the Children's Wharf park.

Richard McGuinness said there has been a change to the third bullet in section 11.8.2, it now reads "held in escrow, managed by the operations board."

Valerie Burns said because it is an offset for open space, it is only appropriate that it be permanent, lasting open space. Valerie added that she is concerned about an offset going to a non-permanent thing not connected to any open space.

Joy Conway asked those who disagree with the allocation of money to put it in writing and send it to Richard.

Bruce Berman said that he thinks this is a well-balanced and generous package.

Joy Conway said that all the meeting summaries show that there has been thoughtful and clear discussion of the benefits package.

Vivien Li asked about who is paying for the lighting of the Congress Street Bridge.

Kathy Bachman said the City will pay for the modest cost of the lighting and the developer will put in the lights.

Valerie Burns asked if this could be out in the text and who is going to maintain it.

Bissera Antikarov asked if the Committee could get the latest version before it submits comments.

Joy Conway said there is one more meeting with totally revised chapters, and these will be sent to the Committee.

Valerie Burns asked about the civic space for the Friends of group in section 11.9.

Richard McGuinness said this combines the State's attempt at amplification for the extended license term for non-water dependent uses and our watershed activation plan.

Valerie Burns said this is too much money going into office space that could be going into programming which is much more likely to lead to activation.

Vivien Li agreed with this. Vivien added that she is concerned with water transit at 500 Atlantic Avenue, and concerned with spending money on kids going to the harbor islands.

Shirley Kressel asked if the Committee is saying this building should be 400 feet high.

Joy Conway said when the minutes are finished there will be many presentations and discussions of the project. Joy added that there are clearly differences in viewpoints, but people like this project.

Vivien Li said there are a variety of opinions, and liking the project does not mean necessarily liking the height.

Joy Conway added that this Committee is not voting on the project.

Vivien Li added that in South Boston the height that was recommended in the MHP was not approved by the Secretary.

Maureen Gaffney said the process weighs public comment heavily.

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The meeting was adjourned at 5:45 p.m. The next meeting to discuss the Fort Point Downtown Waterfront MHP is Wednesday, July 16, 2003 at 3:00 p.m. in the Piemonte Room (9<sup>th</sup> Floor, Boston City Hall).

Note: If anyone on the Committee has any edits or comments with respect to this meeting summary, please submit them to Richard McGuinness in writing via fax (617-367-6087) or email ([Richard.McGuinness.bra@ci.boston.ma.us](mailto:Richard.McGuinness.bra@ci.boston.ma.us)) within seven (7) days of receipt. A copy of your comments will be placed with the records of the meeting.

**Appendix 6-A, Terminal Facilities Conditions, Needs and Design Guidelines**

### 3.0 Terminal Facility Conditions, Needs and Design Guidelines

#### 3.1 Current Terminal Conditions: A Patchwork of Public and Private Landings

The inventory of existing terminal facilities revealed a wide variety of physical conditions, ownership and management characteristics, and accessibility levels. The existing conditions for the individual terminals are summarized in the Chapter 4 descriptions of the individual terminals.

Existing and potential terminal locations are shown in Figure 3.1. The sites are categorized according to function as described in the following terminal guidelines section. The existing terminal sites are summarized in Table 3.1 by functional category: 1) primary or hub sites, 2) secondary, or 3) as layover berthing or servicing. Fully accessible terminals are indicated with an asterisk. While other ferry landings exist in the harbor, such as water taxi stops, or excursion/charter docks, they are not included in the table, since they fall outside the report focus on transit related ferry services. By the same token, many of the existing terminals listed include excursion berthing and/or water taxi landings.

**Table 3.1: Summary of Existing Terminal Sites:**

Primary or Hub Sites:	Secondary Sites:	Layover Berthing and Servicing
<b>Downtown:</b> - Long Wharf */Central Wharf - Rowes Wharf  <b>South Boston:</b> - World Trade Center*  <b>East Boston:</b> - Logan South  <b>Charlestown:</b> - Pier 4/Navy Yard	- North Station/Lovejoy Wharf*  - Federal Courthouse* - Wharf 8* - Black Falcon/Reserved Channel  - Lewis Mall/East Boston*#  - Pier 1/Constitution	- Fish Pier - South Boston - Wharf 8 - South Boston - World Trade Center  - Massport Shipyard/Boston Marine - Pier 1/East Boston  - Pier 10/11 - Navy Yard

\* Denotes presence of at least one accessible terminal and float dock.

# Temporarily relocated to Little Brewster Island

**Terminal Facility Site Location Criteria and Design Guidelines:** The water transportation terminal facility plan is based on two complementary sets of guidelines: 1) terminal site selection criteria and 2) terminal facility design recommendations. The two sets of guidelines were developed to cover the inner harbor ferry terminal sites and facilities anticipated during the next ten years. The design guidelines are based on current vessel and dock technologies, which have evolved considerably since earlier harbor water transportation plans were completed. For example, the current Boston Harbor vessel fleet includes fast catamarans of different sizes which are both bow loading and side loading. Several successful, but

different, examples of fully accessible terminals now exist at inner harbor sites. Furthermore, new vessel technologies have proven to be successful in other contexts which may need to be accommodated in Boston Harbor, and new ramp, gangway, and float technologies are available commercially. Such new vessel and terminal access developments have been incorporated in the facility guidelines and standards proposed.

The marine environment in Boston Harbor includes a wide assortment of existing waterside and landside conditions at ferry terminal sites which need to be considered in facility guidelines. Waterside conditions include such variables as navigational constraints, wind and wave exposure, dredge depth, watersheet configuration, wave action, property ownership, pier and dock configuration, and current ferry use commitments. Landside conditions include such factors as intermodal access features including Harborwalk connections, view corridors, existing and proposed development, property ownership, pier or wharf deck height (which varies considerably at different inner harbor locations), bulkhead conditions, and site history regarding former pier configuration. Because of the many variables and special conditions from site to site, the site criteria and terminal design recommendations are generally presented as guidelines rather than as regulatory standards, with the exception of those requirements covered by city and state codes and licensing requirements.

### 3.2 Terminal Site Location Criteria

Terminal location selection is based on a combination of factors including primary market demand regarding trip origin and destination site requirements, in combination with ferry facility configuration needs. The site selection criteria were based on a combination of previous route and market demand studies, an evaluation of current route performance and expansion needs, and projection of new waterfront growth and development demands. Because of the wide range of ferry services and corresponding terminal docking needs, two new descriptive categories were defined to assist in the site selection process including; types of ferry service by functional use, and terminal facility designation by activity. Standard location assessments include such waterside factors as route functions, berthing demands, competing watersheet uses, visibility from public access points, fairway adjacency, weather or “fetch” exposure, and seasonal sun exposure. Landside locational factors include existing property conditions, projected adjacent landuses, intermodal connections, walking distance radii, transit connections and where applicable, parking availability. The criteria were used for screening and selecting sites as well as for designating roles and phased implementation.

- All terminals should, to the degree feasible, accommodate multiple ferry functions to provide intermodal transfer opportunities.
- All terminals will need to be fully accessible in accordance with current Massachusetts Architectural Access Board (MAAB) guidelines, consistent with the Americans with Disabilities Act (ADA) requirements, and meet other applicable harborwide guidelines and regulatory standards such as Chapter 91.
- Public landings and water taxi/Cultural Loop docks should be included and maintained at most primary and secondary terminals, where appropriate as navigation conditions, watersheet area, and dock management permits.
- Waterside support facilities should include vessel layover berthing, day to day servicing, and maintenance and repair resources within the inner harbor convenient to terminal facility sites.
- Landside support facilities should include ticketing, waiting, information and restrooms.
- Landside intermodal linkages should be provided wherever practical including all modes ranging from pedestrian and bicycle, to bus and taxi drop-offs, as well as MBTA subway and commuter rail

proximity. Parking requirements may vary with the specific sites and are not generally required for the inner harbor.

## B. Specific Terminal Facility Location Criteria:

**1. Terminal Functional Designations:** Terminals are characterized as being Primary, Secondary, Water Taxi/Cultural Loop/Public Landing, and Service/Layover Berthing, depending on site location and predominant service functions accommodated. Other types of terminals including cruise, charter, or turnaround excursion are not included in the functional categories for purposes of this plan. Site categories include the following:

- **Primary:** High volume, multiple use, hub/receiver location
- **Secondary:** Medium volume, limited use, spoke/feeder location
- **Water Taxi/Cultural Loop/Public Landing:** Low volume, limited use, may be combined with public landing for touch and go use, at multiple locations. While designated as a separate functional use, these facilities would be combined with primary or secondary sites, as appropriate, for purposes of this report. Separate facilities currently exist, but have not been included in the inventory or proposed terminal selections.
- **Layover Berthing:** No passenger volume, limited shared use, peripheral locations.
- **Service Berthing:** No passenger volume; specialized services may include fueling, pump-out, routine maintenance, supplies; limited shared use, peripheral locations; may be combined with layover berthing or separate. For purposes of this report in terms of maps and descriptions, service and layover berthing are combined into a single use category.

**2. Ferry Route Service Functions:** Route service functions are defined to differentiate terminal site needs as well as to determine the terminal facility program needs for each terminal site. Larger ferries and the longer distance routes will require larger scaled docks, higher float freeboards, and more ample landside access and support functions. Conversely the smaller capacity, inner harbor services will have different sized docks, freeboards and landside support.

- **Transit Ferry Services:** which provide point to point, scheduled, year round, peak hour plus off peak services including inner harbor services currently known as “shuttles”, outer harbor services currently known as “commuter” or “airport express”. While these services were once focused primarily on peak hour weekday periods, new work patterns and the inclusion of airport services are necessitating extending hours to off peak and weekend periods. Freeboard heights needed are generally 4'-0" for side loading and up to 7'-6" for bow loading catamarans.
- **Excursion Transit Services:** which provide point to point, scheduled, seasonal services including inner harbor, outer harbor (including harbor islands) and Massachusetts Bay (including north shore, south shore, Cape Cod and points beyond). These are generally focused on non-commuter groups for residents and visitors including such discretionary purposes as excursion, recreation, shopping, personal business, tourism and conventions. Other excursion services not providing a specific transit function (such as whale watch, dinner cruises, etc.) are not included in the needs assessment, but may use the some of the same facilities. Freeboard heights: Approximately 4'-0"(side loading) up to 7'-6" (bow loading) .
- **Water Taxi/Cultural Loop/Public Landing:** Three different uses would share a single landing site for smaller vessels (20 feet to 30 feet in length). Freeboard height: Approximately 2'-0".
  - **Water Taxi Services:** which provide on call, year round and seasonal, point to point inner harbor links.
  - **Cultural Loop Services:** which provide scheduled, seasonal, point to point inner harbor

links connecting cultural and historic destinations (such as the Childrens Museum, the New England Aquarium, the Freedom Trail, and the *USS Constitution*) as well as perimeter park and ride sites.

- **Public Landing:** which provides touch and go drop off/pick up for small recreational, small commercial, or small charter vessels at multiple locations on a space available basis. Water taxi or cultural loop services would take precedence over public landing rights.

**3. Terminal Docking Functions:** Ferry service functions at a given terminal will include passenger transit, passenger excursion, Cultural Loop, water taxi, layover berthing and servicing. In addition other related functions included in a terminal area might include a town landing, turnaround excursion, charter, and/or public water safety functions. Mixing of larger (commuter, excursion, off-shore) ferries and smaller vessels (water shuttle, water taxi, small charter, or small private) may not be appropriate at all terminal sites where the watersheet area is limited and traffic is heavy, or where wind and wave exposure precludes safe landings.

**4. Terminal Ferry Use Location Preferences:** Different terminal functions or ferry uses may have varying locational requirements. Designation of terminal vessel accommodations should consider such factors as vessel size and frequency of service, proximity needs, landside intermodal needs, and service and layover requirements.

- **Commuter Transit Ferries:**
  - North and south shore (open ocean passage) to downtown employment destinations with routes traversing ocean sea conditions: require medium to large (149-300 passenger), higher freeboard, off-shore capable vessels, downtown terminal within walking distance to work (average 7 min. walk radius) and transit links (max. 5 min walk)
  - Outer harbor (protected harbor passage) communities to downtown; require medium to large (149-300 passenger), medium freeboard vessels, downtown terminals within walking distance to work (average 7 min. walk radius) and transit links (max. 5 min walk)
  - Airport links: require walking distance to downtown and bus links at airport
- **Inner Harbor Shuttles:**
  - Serving downtown employment destinations: require average 7 min walk and transit links.
  - Serving other inner harbor district employment destinations: require average 7 min walk and transit links.
  - Airport links: require walking distance and transit links at downtown, and bus links at airport
- **Seasonal Excursion Transit Links:**
  - Mass Bay and beyond: require generally larger (250-300 passenger, 120 foot berth), high freeboard, off-shore capable vessels, parking and transit links.
  - Harbor Islands National Recreation Area: requires downtown primary/hub gateway site, medium vessel (149 passengers, 90 foot berth) with transit links and intermodal shuttle links to inner harbor neighborhoods.
- **Cultural Loop:** requires multiple terminal stops, in proximity to major attractions for smaller vessels (49 passengers, with 16 foot clearance for Fort Point channel, 50 foot berth), can be combined with water taxi or water shuttle berth.
- **Water Taxi:**
  - Single operator (current status): requires multiple stops (30 foot berth) with low freeboard access, and call phones.
  - Multiple operators (future): requires multiple stops (50 foot berth) with low freeboard access
- **Public Landings:**
  - Central location: requires low freeboard, clearly signed, dedicated berth space (60 feet) for touch and go use.



- Neighborhood location: requires low freeboard, clearly signed, berth space (60 feet) for touch and go use, can be combined with water taxi at some sites
- **Service and Layover Berthing:**
  - Service berthing: multiple sites for 1) fueling with dockside tank truck access,, and 2) repairs and maintenance with boatyard services.
  - Layover berthing: multiple sites for 1) provisioning, stores with truck access, 2) pumpout stations, 3) layover berthing for out of service vessels, 4) crew parking and locker room facilities.

### 3.3 Terminal Facility Design Guidelines

Boston Harbor ferry operations currently are served by a wide range of public and private ferry terminal facilities which have evolved over time. As many of the facilities were developed as private docks, or as temporary facilities for construction mitigation of various waterfront transportation and development projects by a multiplicity of owners and agencies, there is little or no consistency from one location to another. Current ferry riders and operators encounter many different configurations from one landing facility to another, with widely varying float sizes, gangway lengths and slopes, and limited user amenities.

Six ferry terminals in the Inner Harbor currently meet state (MAAB) and federal (ADA) standards for marine facility access in 1999. They include Lovejoy Wharf, the Harbor Express dock at Long Wharf North, Federal Courthouse, Lewis Mall, World Trade Center Marine Terminal, and the Wharf 8 shuttle dock. While technically in compliance, the World Trade Center shuttle terminal is not recommended because of its deficiencies in terms of configuration. The dock is too narrow (approximately 6 feet clear) for vessel loading and unloading, has only an open stair (subject to icing) instead of ramps to the float, and separate and unclear paths of travel. All other ferry terminals are deficient in terms of state MAAB regulations covering the Americans with Disabilities Act (ADA). While it is sometimes claimed that a dock is “partially accessible” during certain tide conditions, it is more accurate to describe a facility as accessible (at all required tide ranges) or not accessible as regards to meeting both MAAB and ADA definitions. Moreover, the non-compliant existing facilities leave much to be desired in terms of application of Universal Design access principles to the marine facilities, which are intended to create safe and easy to use access patterns and paths of travel for all users (including elderly, travelers with luggage, children, etc.).

In order to evaluate existing terminal conditions and future needs, this report includes a set of terminal facility design guidelines to improve and standardize the terminal facilities, focusing on those in the Inner Harbor. The design guidelines were developed to cover all general terminal facility design and projected berthing space needs by site and by use, and to encourage development of a consistent set of terminal and support facilities for the Boston Harbor. These guidelines are not intended as a prescriptive set of regulations, but rather are intended to encourage the orderly enhancement and expansion of public and private ferry facilities by different proponents. They are intended to accommodate different vessel needs, while also improving the quality and safety of the land to water transition for ferry riders. The guidelines address both the specific facility design needs as well as general aspects such as terminal management options, route management consistency, and terminal/watersheet management issues. The guidelines were developed based on several sources of information; document search of previous plan reports, inventory of existing facilities, interviews with current operators, and terminal design experience of the project team.

**A. Terminal Facility Design Objectives:** The objectives help define which terminals are intended to be included and covered by the design guidelines:

1. For each selected existing or new terminal site, there needs to be a future ferry use program with priority activities identified which best match the site conditions. Each terminal site should be assigned a terminal facility activity designation:

- Primary or Hub Site
- Secondary
- Service /Layover Berthing

2. Specific ferry route function definitions are used to determine the terminal facility program needs for each terminal site as described in the site criteria in the following categories:

- Transit Ferry Services
- Excursion Transit Services
- Water Taxi/Cultural Loop/Public Landing Services

3. Ferry terminals may often accommodate more than one type of use, as long as the watershed and landside conditions support multiple ferry activities.

4. All new terminals and new vessels should be designed to be ADA accessible. All existing terminals should be retrofitted to meet state MAAB and ADA standards to ensure maximum access and transfer ability of the total system. It should be noted that universally designed ADA access also meets the needs of travelers with luggage, parents with young children, and less mobile elderly, making such terminals and vessels more user friendly for all ferry riders.

5. All existing and new terminals should have Chapter 91 licenses and be consistent with the City of Boston Municipal Harbor Plan.

6. The aggregate network of existing and new terminals should be user friendly by incorporating common elements of access systems, visibility, signage and graphics, public facilities and furnishings, and safety standards. To the extent possible, these should be coordinated with Harborpark design standards.

## **B. Specific Terminal Facility Design Guidelines:**

### **1. Different ferry uses have varying float and ramp needs:**

- Low freeboard - Water taxi, cultural loop, and public landing: approximately 2'-0".
- Medium freeboard - Side loading ferries: approximately 3'-6" to 4"-0".
- High freeboard - End loading catamarans: approximately 6'-0" to 7'-6".

### **2. ADA Access (Required) and Universal Design Access (Recommended)**

**2.1 For access from landside deck or pier level to transfer float.** Floats are required for boarding, as opposed to access from the deck level of a full height pier, since many of the current and future fleet of vessels will have a single primary deck level, particularly as ADA standards for new vessel access are established. Existing terminals which serve as good models for access design are shown in Figure 3.8, which shows the Harbor Express terminal at Long Wharf, and figure 3.9, which shows the Lovejoy Wharf terminal at North Station. These represent two examples of combined fixed ramp and moveable gangway access to serve medium to high volume ferry operations. The alternative gangway and ramp-rider system is shown in Figure 3.10, which depicts the Federal Courthouse terminal. While other marine access systems may be considered other than those described, they must meet all required MAAB standards as well as vessel berthing program needs on a site by site basis.

- Access to meet MAAB and ADA requirements from sidewalk and deck level to boarding areas, usually floats, for a mean average tide range of 9'-6" (Boston Harbor). Required for all terminals except service and layover terminals. Includes all required signage, way finding and informational

systems. Several different access options may be used to accommodate different site conditions:

1) Moveable gangway and fixed ramps (maximum slopes vary from 1:12 (30 feet or less) to 1:20 (over 30 feet) depending on the length) A concept design for mixing the longer moveable gangway and shorter (30 foot maximum length) is shown in Figure 3.3. This is the preferred universal design solution since it has the greatest capacity for all users including those with disabilities and it has the same path of travel for all users. Wherever possible this approach should be used. This option generally requires a barge of approximately 100' by 25', in addition to 50' or longer gangways, depending on the elevation of the adjacent pier or wharf deck. Examples of such existing installations include Long North, Lovejoy Wharf, and Lewis Mall.

2) Moveable gangway (maximum recommended slope of 1:20) and rampalator. A concept design for combining the two is shown in Figures 3.4, and a manufacturers rendering (Ramprider) is shown in figure 3.5. To be used in locations where smaller volumes of passengers are to be accommodated (if initial tests in Washington State and at Federal Courthouse prove satisfactory) and/or where the watersheet area is limited. Only one or two persons can use the system at one time, and the system is not suitable terminals accommodating groups of persons with mobility disabilities. The current example of a such a system is at Federal Courthouse.

3) Moveable gangway (maximum slopes vary from 1:12 to 1:20 depending on the length) and elevator (Figure 3.4): to be used for shuttle ferries or smaller vessels only at sites where the available watersheet is too limited for the full fixed ramp and moveable gangway, or the rampalator and moveable gangway systems. The system has the same limitations for accommodating groups as option 2. The current example of such a system is at the World Trade Marine Terminal shuttle dock .

- Where ADA access Options 2 and 3 (limited capacity systems) are used, universal design access should also be provided to the greatest degree possible from sidewalk and deck level to boarding level for all patrons; use of ramps with gradual slopes to accommodate travelers with luggage, elderly and parents with children for all scheduled ferry services. Universal design would suggest maintaining moveable gangways of 50 feet or more, or fixed ramps of 1:12 with a maximum 30 foot length for the 9'- 6" tide range. In other words, provision of an elevator or a rampalator should not relieve the need to provide long gangways and fixed ramps. An existing example would be Federal Courthouse.

## 2.2 For access from floats to vessels.

- Access to meet MAAB and ADA requirements for boarding vessels to be achieved through a combination of standard freeboard heights on floats and transfer ramps or gangways: An example of a multiple freeboard float is shown in Figure 3.6. Differentials in heights from float to vessel should be minimized to correspond to MAAB transfer guidelines. This may require building up on top of standard freeboard floats to match specific vessel landing needs. For example, if a regularly scheduled side-loading catamaran with a 5'-0" freeboard portal needed to use a standard 4'-0" freeboard float, the operator might need to build a platform and ramp on the float to minimize the transfer difference. It should be noted that the recommended standard freeboard heights for floats are for the lowest common denominators at 2'-0", 4'-0", and 6'-6", so that built-up platforms can be installed for specific vessel boarding needs.

## 2.3 Universal Design as Preferred Access Design Solutions.

It has been demonstrated at several Boston terminals and others worldwide, that the application of broader access design principles beyond just technically meeting the MAAB and ADA requirements can benefit the broadest needs of transportation users. Designs should be simple and easy for users to understand, as well as physically accommodating to the broadest range of users. For example, providing a single path of

travel ramp and gangway solution as is currently used at the Harbor Express terminal at Long Wharf North or the MBTA terminal at Pier 4 in the Navy Yard, are not only a clearer for the users to understand, but also physically more manageable for elderly, children, or persons carrying luggage. By contrast a terminal which is hidden from view, and has separate and unclear paths of travel via a stair and elevator, such as the shuttle dock at World Trade Center, compromises the access needs for all users.

### 3. Dock/Ramp Equipment and Materials

Standard waterside equipment should include the following :

- Lighting and convenience outlet
- Non-skid surfaces
- Covered ramp
- Bollards, cleats, fenders, etc. for vessel tie-up
- Snow removal space and equipment
- Life preservers
- Ladder from water to float surface
- Schedule and information board

### 4. Deck/Pier Equipment

Standard landside equipment should include the following :

- Lighting and convenience outlet
- Non-skid surfaces on approach paths
- Covered waiting area
- Schedule and information board
- Emergency phone
- Flexible signage

### 5. Intermodal Connection Requirements for Terminal Sites

Different terminal sites and ferry functions will require multiple combinations of the following:

- Commuter Rail links to North and South Station; within a 5 minute walk.
- Rail Transit links at multiple inner harbor sites; within a 5 minute walk.
- Bus curbside stops; within a 3 minute walk.
- Taxi curbside capability at nearest public way.
- Parking; none required.
- Sidewalk or Harborwalk connection to first public way.
- Service/public safety access to dockside.
- Intermodal advertising for different public and privately operated services should be systematized and expanded from efforts initiated by the MBTA.
- Directional signage between modes needs to be expanded from current BRA Harborwalk initiatives, particularly through the duration of the Central Artery construction.

**C. Terminal Management Options:** Many variations of public and private management presently exist at inner harbor terminals, with the result that there are a limited number of ferry docks where both public dock ownership and management occur. Operators who do not have control over specific dock spaces have few options to secure landing space in the downtown waterfront area. An objective for future management would be to increase the number of publicly owned terminals and managed terminals to allow for more publicly available, competitively priced landing slips to accommodate the expected ferry industry growth.

The current pattern of publicly owned and privately leased spaces will undoubtedly continue, as will operators interests in owning key terminal locations. However, as additional terminal locations are developed, more diversity of management and slip availability will be needed to attract new routes and operators. Multiple ownership/management combinations are likely to continue.

- Public ownership/Public management: city or state ownership and management for primary and multi functional secondary sites.
- Public ownership/Private management: Minimum conditions for many state and federal funding assistance programs, acceptable for limited route terminals.
- Private ownership/Public management: Not eligible for state and federal funding assistance, appropriate for limited route terminals.
- Private ownership/Private management: acceptable for limited or single routes or franchise conditions.

**D. Route Management Consistency:** Most existing routes have different ownership and management jurisdictions at different terminals. Operators might benefit from more consistency of terminal and route franchise management to simplify franchise agreements and dock use, particularly for state subsidized operation contracts. Where multiple ownership remains necessary, methods for facilitating dock use, competitive slip pricing, and franchise agreements will be needed.

**E. Relationship of Terminals and Waterway use to Watersheet Management:** With the increased use of the inner harbor for recreational, ferry and other maritime activity, increased attention to watersheet management at the terminal level and at the harbor level will be needed.

- Fairway designation and cooperation between adjacent properties and conflicting water uses.
- Fairway standards are needed for various combinations of ferry and recreational vessel berthing needs:
  - One way channel = 2 x vessel beam; i.e. 30' beam requires 60' channel
  - Recreational vessel slip perpendicular to fairway requires 1.75 x boat length
  - Where no fairway exists between abutting properties, each property is responsible for 50% of the fairway.
- Channel and buffer zone watersheet guidelines are needed as traffic increases for purposes of public safety.
- Location of marinas, mooring fields, sailing schools and other recreational and small boat activities should avoid areas of heavy shipping and active ferry routes.
- Wake and speed guidelines should be reviewed and revised as appropriate for public safety and environmental protection as new vessel technologies are introduced.

### 3.4 Selected Terminal Sites for Concept Plan

The terminal sites were selected based on a combination of factors: site inventories conducted by the consultant team, previous route and demand studies, evaluation of current route performance and expansion needs, and interviews with stakeholders. In addition the site selection responded to new harborwide waterfront development projections for the coming decade. The selection of sites and identification of terminal needs were closely coordinated with waterfront district plans prepared by the BRA such as the Public Realm Plan for the South Boston Waterfront and the East Boston Master Plan, both of which were conducted in parallel with the water transportation plan, and with previous plans such as the Charlestown Navy Yard Master Plan and the Central Artery Boston Inner Harbor Water Transportation Study of 1994.

Specific terminal site location assessments included a variety of waterside and landside factors. Waterside location factors included route functions and corresponding vessel types, berthing demands, competing watersheet uses and navigation factors, dock visibility from public access points, fairway availability, site weather exposure, and harbor fetch. Landside location factors included existing and projected adjacent landuses, intermodal connections and transit proximity, walking distance radii, curbside dropoff, and parking availability.

**Selected Terminal Sites for Concept Plan:** The recommended terminal sites were selected through a process of evaluating alternative site options within each of the four Inner Harbor waterfront districts: Downtown Boston, South Boston, East Boston and Charlestown. A map of the proposed terminal sites is shown in Figure 1.32, which includes expansion of all of the existing sites. Passenger loading sites were divided into three categories based on their relative importance to each district and the volume of services either currently accommodated or projected:

- Primary or District Hub Sites
- Secondary Sites
- Layover Berthing and Servicing

**Table 3.2: Summary of Proposed Terminal Sites:**

Primary or Hub Sites:	Secondary Sites:	Layover Berthing and Servicing
<p><b>Downtown:</b>                      - Long Wharf /Central Wharf #                          Long North                          Long South                          Long/Central Shuttle                          Central Wharf*#</p> <p>- Rowes/400 Atlantic Ave #</p> <p><b>South Boston:</b>                      - World Trade Center #                          West Marine Terminal</p>	<p>- North Station/Lovejoy Wharf                      - South Station/Russia Wharf*</p> <p>- Museum Wharf</p>	<p>- Fish Pier - South Boston</p>



### 3.5 Proposed Routes and Intermodal Connections

There are two important types of intermodal connection proposed in the plan: ferry to land connections, and ferry to ferry connections. The ferry to land connections, as described in the guidelines, include transit connections, vehicular drop-off facilities, pedestrian links to the Harborwalk and to local street systems, and communications such as signage, radio, electronic and other information systems. The ferry to ferry connections can also play an important role in both commuter travel and seasonal excursion activity. For example, the three smallest capacity ferry links including water taxi, cultural loop and shuttle are all linked to larger commuter or excursion routes at multi-purpose terminals so that efficiencies can be gained between short haul, cross inner harbor trips and the longer trips to the north or south shore, or to the Harbor Islands National Recreation Area.

The proposed commuter routes with intermodal land transit connections are shown in Figure 3.6. The ferry to ferry intermodal connections are best shown in Figure 2.10 showing the convergence of longer distance outer harbor routes with the array of shorter hop services in the inner harbor. The primary or hub terminals serve as the major intermodal connection locations in each case.



**Appendix 11 A, List of Organizations Brief on the Russia Wharf Development Project**

## **List of Organizations Briefed on the Russia Wharf Development Project**

Adaptive Environments  
Artery Business Committee  
Artists for Humanity  
Boston Building Trades Council  
The Boston Harbor Association  
Boston Municipal Research Bureau  
Boston Preservation Alliance  
Boston Society of Architects  
Boston Tea Party Ship and Museum  
Conservation Law Foundation  
Dewey Square Group  
Downtown Crossing Association  
Federal Reserve Bank of Boston  
Fort Point Channel Abutters Group  
Friends of Fort Point Channel (Organizing Group)  
GE Capital  
Greater Boston Real Estate Board  
Greater Boston Chamber of Commerce  
Historic Neighborhoods  
Intell Boston  
Island Alliance  
Light Boston, Inc.  
Mobius  
Massachusetts Horticultural Society  
Massachusetts Renewable Energy Trust  
National Association of Industrial and Office Parks  
Russian Cultural Society  
Save the Harbor/Save the Bay  
The Children's Museum  
U.S. General Services Administration  
U.S. Post Office.  
Urban Arts Institute

**Appendix 11 B, Benefits of Russia Wharf**

## **Benefits of Russia Wharf Development Project**

### ***Project Design***

- Preservation and reuse of historic architecture elements of the Russia Building, Graphic Arts and Tufts Building , reconstitution of historic Nelson Court, and the creation of an urban design composition that links the present to the historic tradition of this part of the waterfront.
- Removal of existing surface parking from the waterfront
- Creation of a broad, landscaped public plaza along the waterfront with amenities to support year-round use and activated connections for the Harborwalk and new water-dependent uses
- Widening of the Congress Street sidewalk and implementation of streetscape improvements, and improvements along the Atlantic Avenue sidewalk
- Activation of adjacent sidewalks and waterfront plaza with Facilities of Public Accommodation, including a restaurant and café/blues club as part of “Restaurant Row”
- Design of new hotel and office building elements that areas spatially independent but visually compatible through massing that steps back from the waterfront and is well-suited to the site and the surrounding Financial District
- Provision of universal, barrier-free access

### ***Social and Environmental***

In addition to the restoration and adaptive reuse of the Russia Building for housing and the preservation of the historically significant portions of the Graphic Arts and Tufts Buildings including the Congress Street and waterfront façades, other benefits include:

- Preservation of existing views of the water and objects of scenic, historic, and cultural importance
- Provision of historic interpretive exhibits and signage, way-finding signage, banners, and visitor information.
- Provision of space for non-profit purposes that directly support the activation program for the Fort Point Channel.
- Provision and support of of public art including a sculpture garden in the Nelso Court public open space and gallery space for local artists and a venue for live music (a jazz/blues club).
- Creation of a family-friendly, mixed-use development to support cultural facilities in the Fort Point area.
- Promotion of sustainable building design and operations through participation in the US EPA Energy Star program ,the employment of energy-efficient mechanical and electrical systems, and the possible use of co-generation for an electricity source.

***Economic***

- Contribution to affordable housing through the Boston linkage program.
- Provision of affordable housing units on site (10 percent).
- Contribution to the City of Boston Jobs Training linkage program.
- Creation of construction and permanent full time employment.
- Generation of increased real estate and sales tax revenues.
- Effective use of public investment in transportation and infrastructure in the area through the creation of transit-oriented development with the associated environmental benefits on a regional scale.
- Support for economic growth and business retention through construction of office space in Downtown Boston and the creation of hotel rooms within walking distance of the new Massachusetts Convention Center.

**Appendix 11 C, Draft Maintenance**

## **Appendix 2: Maintenance Standards**

**Draft For Discussion**

**Draft For Discussion**

### **Municipal Harbor Plan Maintenance Standards for Public Realm Land and Water's Edge**

prepared by Rod Macdonald, Greg Ketchen and Valerie Burns,  
sub-committee of the Municipal Harbor Plan Advisory Committee  
February 9, 2000

#### **General Recommendations for Baseline Maintenance**

1. Each property owner prepares an annual maintenance and management plan which addresses the specific elements of streets, walkways, parks, landscape, surface and water's edge of their development. The maintenance plans should be in keeping with the public realm of standard Class A development such as Post Office Square and Rowes Wharf. These plans must be accompanied by executed contracts that will implement the plans. In addition a capital plan with schedule and funding sources should be prepared to insure quality of the public realm over time.
2. A Public Realm Management Committee be created to oversee the implementation and coordination of the various maintenance and management plans. The Committee should consist of representatives of the state, city and nonprofit advocacy/neighborhood groups and representatives of the property owners. The Committee, in addition to its monitoring function, can serve as an information sharing and problem solving entity that works for the coordination of maintenance and management of the Public Realm into a cohesive system. The Rowes Wharf Management Committee is predecessor of such an entity.
3. Property owners should participate in the newly formed Harbor Debris Cleanup Initiative that is working to maintain Boston Harbor and its edge in a safe, healthy and navigable condition.

#### **Maintenance Recommendations**

##### **Maintenance of parks, harborwalk, streets, sidewalks and other public areas**

Each public space will have its own unique characteristics such as landscape plantings and choices of pavement, lighting, furniture, and signage, etc. The goal of the maintenance standards is to ensure public spaces that are useable, attractive, inviting, safe and secure. The following addresses basic maintenance elements which all plans must include:

1. Inspection: On a seven day a week basis, site to be inspected twice daily; additional inspection for high traffic areas.

## 2. Trash, Litter and Animal Waste:

Trash receptacles should be provided in all public areas such as parks, harborwalk, and sidewalks and placed in areas of high use and so as not to impede pedestrian circulation.

Empty all trash containers daily. Trash containers in areas of high activity may be needed to be emptied two - four times a day or more. Wind blown trash is a major source of debris in the water. Attentive maintenance of trash receptacles has both land and water impacts. Additional trash receptacles should be provided during special events such as festivals and during high use periods.

Inspect all sites for strewn trash at least daily.

Street cleaning by hand or machine from April through October on a twice weekly basis, November through March on a weekly basis as weather permits.

Provide dispensers for plastic bags for dog owners to dispose of their animals' waste into appropriate receptacles. Keep plastic bag dispenser filled and waste receptacles emptied daily.

## 3. Landscape Areas:

Furnish all labor and materials necessary to provide complete and continuous maintenance of all landscape area in order to keep such areas in a healthy, groomed and growing condition, including the following:

Lawn care to include: watering, fertilizing; weed, disease and pest control, aeration, de-thatching, over-seeding, leaf pick-up and removal; edging of plant beds and lawn edges, and mowing. The frequency of these items will be determined by the type, extent and use of the lawn areas. For example, Post Office Square Park has 55 lawn mowings a year.

Tree and Shrub Care to include: watering, fertilizing, deep root fertilizing, disease and pest control, pruning, cabling, and replacement of trees and shrubs as necessary.

Plantings (annuals and perennials) to include: watering, fertilizing, mulching, weeding, lime applications, dead heading, dividing, transplanting and planting of bulbs and annual plants and replacement as necessary.

## 4. Pavement:

Paving materials in parks and harborwalk and sidewalks will vary and require specific treatments. Pavement maintenance should include daily litter pickup, sweeping, pressure washing, graffiti removal and prompt replacement of broken or ruptured surfaces.

Snow removal from all streets and walkways. Efforts should be made to use only sand and to minimize salt use to protect landscape and water quality.



**Cleanout/ repair of storm sewer/runoff drains as necessary.**

**5. Park and sidewalk furniture; public restrooms:**

**Daily inspection of park and sidewalk furniture with maintenance items to include graffiti removal, repair of broken or damaged elements.**

**Restrooms to be inspected regularly, stocked and cleaned daily, more often in high traffic areas and during events.**

**6. Lighting:**

**Harborwalk, floats, dock's and water's edge should be well lighted and consistently lighted to invite public activity after daytime hours.**

**Maintain all lighting fixtures in park, on streets and walkways in good working order. Based on daily inspection, replace all broken or damaged poles, luminaries, bulbs or other components daily.**

**7. Waterfront; watersheet:**

**Furnish all labor and materials necessary to provide complete and continuous maintenance of all piers, floats and walkways.**

**8. Other:**

**Additional elements requiring maintenance may include drinking fountains, bicycle racks, ornamental fountains, public art, play equipment, and directional, regulatory and interpretive signage.**

**Water's Edge Maintenance**

**The Boston Harbor Debris Cleanup Initiative is developing standards and practices to keep the water's edge free of debris and safe for users. Property owners, boat operators, regulators and advocates are working together to find shared solutions. As new developments are built, the planning, construction and maintenance of the water's edge should be informed by this group.**

**Maintenance of waterside conditions should include maintenance of the seawall in a safe and secure condition; maintaining depth of water to allow safe navigation at mean low water of public and private vessels with draft up to 15 feet; removal of large obstructions; maintenance of floats, docks and wave attenuation structures to allow safe vessel operation.**

**Note: Committee recommends creation and maintenance of drop off/pick up locations for private boats (5 minute maximum).**

**Appendix 11D, Pedestrian Comfort Wind Tunnel Test Report and Supplemental Materials  
Provided to MHPAC**



**FINAL REPORT  
PEDESTRIAN WIND STUDY  
RUSSIA WHARF  
BOSTON, MASSACHUSETTS**

**Project Number:** 03-1106  
**Date:** February 24, 2003  
**Submitted By:** Rowan Williams Davies & Irwin Inc.  
Project Engineer - Hanqing Wu, Ph.D., P.Eng.  
Project Manager - Deborah Near  
Project Director - Colin Williams, Ph.D, P.Eng.

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**Submitted to:** Vanasse Hangen Brustlin, Inc.

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# Ottawa  
# Guelph  
# Sudbury  
# Calgary  
# Vancouver

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## 1. INTRODUCTION

A pedestrian wind study was conducted for the proposed Russia Wharf Redevelopment located in Boston, Massachusetts. The objectives of the study were to determine the potential pedestrian level wind conditions at the project site and in the vicinity, and to identify areas where wind speeds are expected to exceed acceptable levels.

The study involved wind simulations using a 1:400 scale model of the proposed building and surroundings. These simulations were conducted in a boundary-layer wind tunnel, for the purposes of quantifying local wind speed conditions and comparing to appropriate criteria for gauging wind comfort in pedestrian areas. The criteria recommended by the Boston Redevelopment Authority (BRA) were used in this study. This report describes the methods and presents the results of the wind tunnel simulations.

## 2. OVERVIEW

Major buildings, especially those that protrude above their surroundings, often cause increased local wind speeds at the pedestrian level. Typically, wind speeds increase with elevation above the ground surface, and taller buildings intercept these faster winds and deflect them down to the pedestrian level. The funnelling of wind through gaps between buildings and the acceleration of wind around corners of buildings may also cause increases in wind speed. Conversely, if a building is surrounded by others of equivalent height, it may be protected from the prevailing upper-level winds, resulting in no significant changes to the local pedestrian-level wind environment. The most effective way to assess potential pedestrian-level wind impacts around a proposed new building is to conduct scale model tests in a wind tunnel.

The consideration of wind in planning outdoor activity areas is important since high winds in an area tend to deter pedestrian use. For example, winds should be light or relatively light in areas where people would be sitting, such as outdoor cafes or playgrounds. For bus stops and other locations where people would be standing, somewhat higher wind speeds can be tolerated. For frequently used sidewalks, where people are primarily walking, stronger winds are acceptable. For

infrequently used areas, the wind comfort criteria can be relaxed even further. The actual effects of wind can range from pedestrian inconvenience, due to the blowing of dust and other loose material in a moderate breeze, to severe difficulty with walking due to the wind forces on the pedestrian.

As this area of Boston develops over time, wind conditions are going to change. Some channeling of wind along streets can be expected as taller buildings are added. However, unlike many Boston locales, the region around Russia Wharf will have a wind environment conducive to pedestrian activity and public enjoyment of outdoor amenities. The foregoing wind tunnel study found that the Russia Wharf Redevelopment project will have only a minor influence on pedestrian wind conditions. Under full development, as compared to existing wind conditions, there was a decrease or an imperceptible increase (i.e., no more than 10%) in wind speed at 31 of 72 measurement locations. Of the 41 locations which showed an increase in mean wind speed, the wind environment for the majority remained comfortable for pedestrian activity. Only 8 locations displayed uncomfortable conditions for one or more seasons. Two of these can be directly attributed to the Russia Wharf Redevelopment Project; the remainder was either existing wind conditions or created under the 2010 No Build Condition. There was also very little variance between the Chapter 91 massing and the preferred alternative for the Russia Wharf Redevelopment.

### **3. METHODOLOGY**

Information concerning the site and surroundings was derived from site photographs, information on surrounding buildings, site plans and elevations of the proposed development provided by the design team. The following building configurations were simulated to assess the phasing of development in the area:

#### **(A) 2002 Existing Condition**

All existing buildings on and around the site, including the existing Russia Building, the Graphic Arts Building and the Tufts Building, Ventilation Building #3 on the 500 Atlantic Avenue site, the small vent building in front of the Federal Reserve Bank Building, and the existing buildings at South Station (Figures 1 and 7).

**(B) 2010 No-Build Condition**

This condition includes the Existing Condition, as well as the full-build of the 500 Atlantic Avenue development, the Garden under Glass Buildings and the Boston South Station project which includes a tower element (Figures 2 and 8).

**(C) 2010 Build Condition**

This condition includes the 2010 No-Build Condition and the Preferred Alternative for the Russia Wharf Redevelopment (Figures 3 and 9).

**(D) Chapter 91 Configuration**

This condition includes the 2010 No-Build Condition plus the Chapter 91 Building volume.

The wind simulations were conducted in an 8ft wide by 6ft high boundary-layer wind tunnel, the smaller of two such wind tunnels at RWDI's laboratory in Guelph, Ontario, Canada. A 150 hp axial fan at the upwind end of the tunnel produces wind speeds in excess of 35mph. Unwanted fan turbulence is removed by means of screens and honeycombs, and a realistic simulation of atmospheric turbulence is provided in the long working section by means of spires at the upwind end and roughness blocks on the floor. The spires and roughness are selected to represent either open, suburban or urban terrain depending on the site and the wind direction being tested. The working section is followed by the test section, where the scale model sits on a motorized turntable embedded in the wind tunnel floor.

The scale model was equipped with 72 specially designed wind speed sensors that were connected to the wind tunnel's data acquisition system to record the mean and fluctuating components of wind speed at a full-scale height of 5 feet above grade. Wind speeds were measured for 36 wind directions, in 10 degree increments, starting from true north. The measurements at each sensor location were recorded in the form of ratios of local mean and gust speeds to the reference wind speed in the free stream above the model. The results were then combined with long-term meteorological data, recorded during the years 1945 to 1998 at Boston's Logan International Airport, in order to predict full scale wind conditions. The analysis was performed separately for each of the four seasons and for the entire year.

Figures 4, 5 and 6 present "wind roses", summarizing the annual and seasonal wind climates in the Boston area, based on the data from Logan Airport. The left-hand wind roses, in Figures 4 and 5, are based on all observed wind readings for the given season, and the right-hand wind roses are based on strong winds for one percent of the time. The upper wind roses in Figure 4, for example, summarize the spring (March, April, and May) wind data. The prevailing winds at this time of year are from the west-northwest, northwest, west, southwest and east. In the case of annual strong winds, however, the most common wind directions are northeasterly and west.

In general, the most common wind directions are those between southwest and northwest. Winds from the east are also relatively common. In the case of strong winds, northeast and west-northwest are the dominant wind directions, as indicated in Figure 6.

This study involved state-of-the-art measurement and analysis techniques to predict wind conditions at the study site. However, some uncertainty remains in predicting wind comfort, and this must be kept in mind. For example, the sensation of comfort among individuals can be quite variable. Variations in age, health, clothing, and other human factors can change a particular response of an individual. The comfort limits used in this report represent an average for the total population. Also, unforeseen changes in the project area, such as the construction or removal of buildings, can affect the conditions experienced at the site. Finally, the prediction of wind speeds is necessarily a statistical procedure. The wind speeds reported are for the frequency of occurrence stated (one percent of the time). Higher wind speeds may occur but on a less frequent basis.



#### 4. PEDESTRIAN WIND COMFORT CRITERIA

The BRA has adopted two standards for assessing the relative wind comfort of pedestrians. First, the BRA wind design guidance criterion states that an effective gust velocity (hourly mean wind speed +1.5 times the root-mean-square wind speed) of 31 mph should not be exceeded more than one percent of the time. The second set of criteria used by the BRA to determine the acceptability of specific locations is based on the work of Melbourne<sup>1</sup>. This set of criteria is used to determine the relative level of pedestrian wind comfort for activities such as sitting, standing, or walking. The criteria are expressed in terms of benchmarks for the 1-hour mean wind speed exceeded 1% of the time (i.e., the 99-percentile mean wind speed). They are as follows:

**Table A:** BRA Mean Wind Criteria\*

Dangerous	> 27 mph
Uncomfortable for Walking	>19 and ≤27 mph
Comfortable for Walking	>15 and ≤19 mph
Comfortable for Standing	>12 and ≤15 mph
Comfortable for Sitting	≤12 mph
* Applicable to the hourly mean wind speed exceeded one percent of the time.	

The wind climate found in a typical downtown location in Boston is generally comfortable for the pedestrian use of sidewalks and thoroughfares and meets the BRA effective gust velocity criterion of 31mph. However, the general wind climate in Boston is likely to be frequently uncomfortable for more passive activities such as sitting.

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1 Melbourne, W.H., 1978, "Criteria for Environmental Wind Conditions", Journal of Industrial Aerodynamics, 3 (1978) 241 - 249.

## 5. TEST RESULTS

Table 1, at the end of the report, presents the mean and effective gust wind speeds for each season and annually at all measurement locations. These locations were selected based on the available design information to measure the representative wind conditions on the project site and surrounding areas and were approved by the BRA. Table 2 summarizes the various locations with uncomfortable and/or unacceptable wind conditions. Figures 7 through 9 illustrate the wind comfort conditions at each wind measurement location based on the annual winds. Typically, the summer and fall winds are more comfortable than the annual winds, while the winter and spring winds are less comfortable than the annual winds. The following discussions on wind conditions focus on the annual conditions (Figures 7 through 9), followed by the seasonal variations (Tables 1 and 2). While the results for all three test configurations are included in the report, the emphasis is on the Build Configuration.

**Table 2: Locations with Uncomfortable Mean Speeds and/or Unacceptable Gust Speeds**

Season	Uncomfortable Mean Speed		
	A - 2002 Existing	B - 2010 No-Build	C - 2010 Build
Spring	15, 23, 26	15, 16, 17, 23, 63	15, 16, 23, 62, 63, 64
Summer	-	-	-
Fall	23	16, 63	16, 62, 63
Winter	15, 23, 26	2, 15, 16, 17, 23, 63, 64	15, 16, 17, 23, 62, 63, 64, 74
Annual	23	16, 63	16, 23, 62, 63

Note: Location 4 was tested without the benefit of the building canopy in place. Comfortable wind conditions would be anticipated at this location with the canopy over Nelson Court.

One reading during the winter showed an unacceptable gust speed at Location 62 which is mid block on the south side of Congress Street, on a lightly travelled sidewalk

Note that no location was predicted to have dangerous wind conditions in any season for any of the three tested building configurations.

## **5.1 2002 Existing Condition**

Sensors 13 and 14 were covered by the existing Russia Wharf Building, and Sensors 50 and 51 malfunctioned during the testing. As a result, data were not available at these locations (Table 1 and Figure 7).

As indicated in Figure 7, the annual wind conditions were generally comfortable for standing or sitting in the waterfront area and along Atlantic Avenue and Congress Street. Higher wind speeds were detected in localized areas around building corners and between buildings, resulting in annual wind conditions being comfortable for walking. All locations were found to have wind conditions comfortable for walking or better throughout the year, except Location 23 where wind speeds were uncomfortable for walking for every season but summer, and Locations 15 and 26 in the spring and winter (Tables 1 and 2). This is caused by the acceleration of the prevailing winds at the corners of the existing Harbor Plaza (Locations 23 and 26), and between the existing Russia Wharf Building and the small building to its immediate north (Location 15).

All the tested locations passed the BRA's effective gust criterion throughout the year (Table 2).

## **5.2 2010 No-Build Condition**

With the 500 Atlantic Avenue project, the Garden under Glass Buildings and the Boston South Station project in place, the wind conditions are different from those that currently exist, as shown in Figures 7 and 8. While most of the tested locations remained comfortable for pedestrian walking or better, increased wind activity was noted along east-west thoroughfares, such as the 500 Atlantic / MassHighway Access Way and Congress Street.

The 500 Atlantic / MassHighway Access Way, between 500 Atlantic Avenue and the existing Russia Wharf building was found to have uncomfortable wind conditions, predominantly during the spring and winter seasons (refer to Locations 15, 16 and 17 of Figure 8). Location 16 was rated as uncomfortable on an annual basis. This would be a result of prevailing winds accelerating as they are channelled between the buildings.

Redirection of wind flow around the Federal Reserve Bank Building resulted in a slight increase in wind speed at Locations 63 and 64. Location 63 was uncomfortable on an annual basis (20 mph compared to the threshold of 19 mph).

All the tested locations passed the BRA's effective gust criterion throughout the year (Table 2).

### **5.3 2010 Build Condition**

The annual wind conditions immediately south of the proposed development (Locations 1 to 7 in Figure 9) were primarily comfortable for walking, which is considered to be appropriate for sidewalks, but too windy for major building entrances where a comfort rating of standing is typically desired. For instance, Location 4, which is close to a building entrance, was found to have wind conditions uncomfortable for walking during the spring and winter seasons, and comfortable for walking in the summer and fall seasons as well as annually. The planned inclusion of a large canopy over Nelson Court should create more suitable wind conditions. A canopy will protect the hotel entrance on this side of the building. Wind conditions at Location 2 improved for the winter season with the addition of the Russia Wharf Redevelopment.

Wind speeds along the 500 Atlantic / MassHighway Access Way (Locations 12 to 17) between the proposed Russia Wharf Redevelopment and the 500 Atlantic Avenue project were not significantly altered by the addition of the Preferred Alternative for the Russia Wharf Redevelopment.

The wind conditions in the waterfront areas were not significantly affected by the proposed development and they are generally comfortable for pedestrian sitting or standing during the summer and fall seasons (Table 1).

The Office structure of the proposed Russia Wharf Redevelopment Project redirects the prevailing easterly wind flow resulting in a limited impact on the south side of Congress Street near the Federal Reserve Bank Building. This localized effect is represented by Sensor 62 measuring uncomfortable wind conditions in the spring, fall and winter as well as annually. In addition, Location 62 was unacceptable in the winter (Table 2), with the effective gust speed being 32 mph, slightly above the threshold speed of 31 mph. However, pedestrians travelling along Congress Street may avoid this wind flow by using the north sidewalk.

Uncomfortable wind conditions around Locations 23 and 74 to the north of the Russia Wharf Redevelopment project are a result of 2010 No-Build Conditions.

## **6. CHAPTER 91 CONDITION**

A separate test was carried out in which the Russia Wharf Redevelopment was replaced by the building massing compliant with the Chapter 91 requirements (Figures 10 and 11). Sensors 5, 13 and 14 were covered by the Chapter 91 building massing and Sensors 50 and 51 malfunctioned during the testing, and as such, data were not available.

Table 3, at the end of the report, presents the mean and effective gust wind speeds for each season and annually at all measurement locations for the Chapter 91 and Build Configurations. Wind conditions were similar between the Chapter 91 and Build Configurations. Table 4 lists the number of measurement locations with the annual wind conditions in each wind comfort category. As shown in Figure 11, uncomfortable wind conditions were predicted at Locations 16, 17 and 63 on an annual basis. These locations represent the same windy areas which were predicted for the Build Configuration.

**Table 4:** Number of Locations with Annual Wind Conditions in Each Comfort Category

<b>Comfort Category</b>	<b>Build</b>	<b>Chapter 91</b>
Sitting	15	16
Standing	30	26
Walking	23	24
Uncomfortable	4	3
<b>Total</b>	<b>72</b>	<b>69</b>

## 7. CONCLUSIONS

A pedestrian wind study was conducted in the wind tunnel for three analysis conditions representing the anticipated building schedule of projects in the Russia Wharf vicinity. No location was predicted to have dangerous wind conditions in any season for any of the three tested building configurations. All the tested locations passed the BRA's effective gust criterion throughout the year, with the exception of one location. At Location 62, for the Build Configuration, an effective gust speed of 32 mph was measured for the winter, slightly above the threshold speed of 31mph.

Wind conditions for the Build Configuration were similar to those for the Chapter 91 Configuration. These speeds were slightly higher than those that currently exist on and around the development site, but remained comfortable for pedestrian use at most measurement locations. Uncomfortable wind conditions were found in localized areas on Congress Street, the 500 Atlantic / MassHighway Access Way and Atlantic Avenue, due to the wind acceleration between both the No-Build and the Build Condition. Wind control measures, in the form of canopies along Congress Street and Atlantic Avenue, will be installed to ensure that pedestrian level wind conditions are acceptable in these areas.

Based on the study results, it has been determined that the Russia Wharf project has a minor influence on pedestrian comfort in the surrounding neighborhood and conditions comfortable for walking or better will prevail.

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## **TABLES**

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**Table 1: Pedestrian Wind Comfort and Safety Categories - Multiple Seasons**

BRA Criteria			Mean Wind Speed			Effective Gust Wind Speed		
Loc.	Config.	Season	Speed(mph)	%Change	RATING	Speed(mph)	%Change	RATING
1	A	Spring	12		Sitting	20		Acceptable
		Summer	10		Sitting	17		Acceptable
		Fall	11		Sitting	19		Acceptable
		Winter	13		Standing	22		Acceptable
		Annual	12		Sitting	20		Acceptable
	B	Spring	14	+17%	Standing	23	+15%	Acceptable
		Summer	12	+20%	Sitting	19	+12%	Acceptable
		Fall	14	+27%	Standing	22	+16%	Acceptable
		Winter	16	+23%	Walking	25	+14%	Acceptable
		Annual	14	+17%	Standing	23	+15%	Acceptable
	C	Spring	13		Standing	20		Acceptable
		Summer	10		Sitting	16		Acceptable
		Fall	12		Sitting	19		Acceptable
		Winter	14		Standing	21		Acceptable
		Annual	12		Sitting	20		Acceptable
2	A	Spring	14		Standing	22		Acceptable
		Summer	12		Sitting	20		Acceptable
		Fall	13		Standing	21		Acceptable
		Winter	14		Standing	23		Acceptable
		Annual	13		Standing	21		Acceptable
	B	Spring	19	+36%	Walking	28	+27%	Acceptable
		Summer	17	+42%	Walking	25	+25%	Acceptable
		Fall	18	+38%	Walking	27	+29%	Acceptable
		Winter	21	+50%	Uncomfortable	31	+35%	Acceptable
		Annual	19	+46%	Walking	28	+33%	Acceptable
	C	Spring	19	+36%	Walking	25	+14%	Acceptable
		Summer	16	+33%	Walking	20		Acceptable
		Fall	17	+31%	Walking	23	+10%	Acceptable
		Winter	19	+36%	Walking	25		Acceptable
		Annual	18	+38%	Walking	23	+10%	Acceptable
3	A	Spring	14		Standing	22		Acceptable
		Summer	12		Sitting	19		Acceptable
		Fall	13		Standing	21		Acceptable
		Winter	15		Standing	23		Acceptable
		Annual	14		Standing	22		Acceptable
	B	Spring	17	+21%	Walking	26	+18%	Acceptable
		Summer	13		Standing	21	+11%	Acceptable
		Fall	16	+23%	Walking	24	+14%	Acceptable
		Winter	18	+20%	Walking	27	+17%	Acceptable
		Annual	16	+14%	Walking	25	+14%	Acceptable
	C	Spring	19	+36%	Walking	25	+14%	Acceptable
		Summer	15	+25%	Standing	20		Acceptable
		Fall	17	+31%	Walking	23	+10%	Acceptable
		Winter	19	+27%	Walking	26	+13%	Acceptable
		Annual	17	+21%	Walking	23		Acceptable

Notes: 1) Wind speeds are for a 1% probability of exceedance, and  
 2) %Change is based on comparison with Configuration A and only those that are greater than 10% are listed.

Configurations

A - Existing  
 B - No-Build  
 C - Build

Mean Wind Speed Criteria

Comfortable for Sitting: ≤ 12 mph  
 Comfortable for Standing: > 12 and ≤ 15 mph  
 Comfortable for Walking: > 15 and ≤ 19 mph  
 Uncomfortable for Walking: > 19 and ≤ 27 mph  
 Dangerous Conditions: > 27 mph

Effective Gust Criteria

Acceptable: ≤ 31 mph  
 Unacceptable: > 31 mph



**Table 1: Pedestrian Wind Comfort and Safety Categories - Multiple Seasons**

BRA Criteria			Mean Wind Speed			Effective Gust Wind Speed		
Loc.	Config.	Season	Speed(mph)	%Change	RATING	Speed(mph)	%Change	RATING
4	A	Spring	13		Standing	20		Acceptable
		Summer	11		Sitting	17		Acceptable
		Fall	12		Sitting	19		Acceptable
		Winter	13		Standing	21		Acceptable
		Annual	12		Sitting	19		Acceptable
	B	Spring	18	+38%	Walking	26	+30%	Acceptable
		Summer	14	+27%	Standing	20	+18%	Acceptable
		Fall	17	+42%	Walking	24	+26%	Acceptable
		Winter	19	+46%	Walking	26	+24%	Acceptable
		Annual	17	+42%	Walking	24	+26%	Acceptable
	C	Spring	21	+62%	Uncomfortable	28	+40%	Acceptable
		Summer	17	+55%	Walking	22	+29%	Acceptable
		Fall	19	+58%	Walking	25	+32%	Acceptable
		Winter	21	+62%	Uncomfortable	28	+33%	Acceptable
		Annual	19	+58%	Walking	26	+37%	Acceptable
5	A	Spring	11		Sitting	18		Acceptable
		Summer	9		Sitting	15		Acceptable
		Fall	11		Sitting	17		Acceptable
		Winter	12		Sitting	20		Acceptable
		Annual	11		Sitting	18		Acceptable
	B	Spring	11		Sitting	18		Acceptable
		Summer	9		Sitting	15		Acceptable
		Fall	10		Sitting	17		Acceptable
		Winter	11		Sitting	19		Acceptable
		Annual	10		Sitting	17		Acceptable
	C	Spring	15	+36%	Standing	21	+17%	Acceptable
		Summer	12	+33%	Sitting	17	+13%	Acceptable
		Fall	13	+18%	Standing	20	+18%	Acceptable
		Winter	15	+25%	Standing	22	+10%	Acceptable
		Annual	14	+27%	Standing	20	+11%	Acceptable
6	A	Spring	14		Standing	21		Acceptable
		Summer	12		Sitting	17		Acceptable
		Fall	13		Standing	20		Acceptable
		Winter	15		Standing	22		Acceptable
		Annual	14		Standing	21		Acceptable
	B	Spring	18	+29%	Walking	26	+24%	Acceptable
		Summer	15	+25%	Standing	22	+29%	Acceptable
		Fall	17	+31%	Walking	24	+20%	Acceptable
		Winter	19	+27%	Walking	27	+23%	Acceptable
		Annual	17	+21%	Walking	25	+19%	Acceptable
	C	Spring	18	+29%	Walking	26	+24%	Acceptable
		Summer	15	+25%	Standing	21	+24%	Acceptable
		Fall	17	+31%	Walking	24	+20%	Acceptable
		Winter	19	+27%	Walking	26	+18%	Acceptable
		Annual	17	+21%	Walking	24	+14%	Acceptable

Notes: 1) Wind speeds are for a 1% probability of exceedance, and  
 2) %Change is based on comparison with Configuration A and only those that are greater than 10% are listed.

**Configurations**

- A - Existing
- B - No-Build
- C - Build

**Mean Wind Speed Criteria**

- Comfortable for Sitting: ≤ 12 mph
- Comfortable for Standing: > 12 and ≤ 15 mph
- Comfortable for Walking: > 15 and ≤ 19 mph
- Uncomfortable for Walking: > 19 and ≤ 27 mph
- Dangerous Conditions: > 27 mph

**Effective Gust Criteria**

- Acceptable: ≤ 31 mph
- Unacceptable: > 31 mph

**Table 1: Pedestrian Wind Comfort and Safety Categories - Multiple Seasons**

BRA Criteria			Mean Wind Speed			Effective Gust Wind Speed		
Loc.	Config.	Season	Speed(mph)	%Change	RATING	Speed(mph)	%Change	RATING
7	A	Spring	16		Walking	25		Acceptable
		Summer	12		Sitting	19		Acceptable
		Fall	15		Standing	23		Acceptable
		Winter	16		Walking	25		Acceptable
		Annual	15		Standing	23		Acceptable
	B	Spring	17		Walking	24		Acceptable
		Summer	14	+17%	Standing	20		Acceptable
		Fall	16		Walking	23		Acceptable
		Winter	17		Walking	25		Acceptable
		Annual	16		Walking	23		Acceptable
	C	Spring	18	+13%	Walking	26	+11%	Acceptable
		Summer	15	+25%	Standing	21		Acceptable
		Fall	17	+13%	Walking	24		Acceptable
		Winter	19	+19%	Walking	27		Acceptable
		Annual	18	+20%	Walking	25		Acceptable
8	A	Spring	17		Walking	24		Acceptable
		Summer	12		Sitting	18		Acceptable
		Fall	15		Standing	22		Acceptable
		Winter	16		Walking	24		Acceptable
		Annual	15		Standing	22		Acceptable
	B	Spring	17		Walking	24		Acceptable
		Summer	13		Standing	19		Acceptable
		Fall	16		Walking	22		Acceptable
		Winter	17		Walking	24		Acceptable
		Annual	16		Walking	22		Acceptable
	C	Spring	17		Walking	24		Acceptable
		Summer	13		Standing	19		Acceptable
		Fall	16		Walking	23		Acceptable
		Winter	17		Walking	25		Acceptable
		Annual	16		Walking	23		Acceptable
9	A	Spring	15		Standing	22		Acceptable
		Summer	11		Sitting	16		Acceptable
		Fall	13		Standing	20		Acceptable
		Winter	14		Standing	22		Acceptable
		Annual	14		Standing	20		Acceptable
	B	Spring	16		Walking	22		Acceptable
		Summer	12		Sitting	17		Acceptable
		Fall	15	+15%	Standing	21		Acceptable
		Winter	16	+14%	Walking	23		Acceptable
		Annual	15		Standing	21		Acceptable
	C	Spring	14		Standing	21		Acceptable
		Summer	11		Sitting	16		Acceptable
		Fall	13		Standing	19		Acceptable
		Winter	14		Standing	21		Acceptable
		Annual	13		Standing	20		Acceptable

Notes: 1) Wind speeds are for a 1% probability of exceedance, and  
 2) %Change is based on comparison with Configuration A and only those that are greater than 10% are listed.

Configurations

- A - Existing
- B - No-Build
- C - Build

Mean Wind Speed Criteria

- Comfortable for Sitting: ≤ 12 mph
- Comfortable for Standing: > 12 and ≤ 15 mph
- Comfortable for Walking: > 15 and ≤ 19 mph
- Uncomfortable for Walking: > 19 and ≤ 27 mph
- Dangerous Conditions: > 27 mph

Effective Gust Criteria

- Acceptable: ≤ 31 mph
- Unacceptable: > 31 mph

**Table 1: Pedestrian Wind Comfort and Safety Categories - Multiple Seasons**

BRA Criteria			Mean Wind Speed			Effective Gust Wind Speed		
Loc.	Config.	Season	Speed(mph)	%Change	RATING	Speed(mph)	%Change	RATING
10	A	Spring	13		Standing	20		Acceptable
		Summer	10		Sitting	15		Acceptable
		Fall	12		Sitting	18		Acceptable
		Winter	13		Standing	20		Acceptable
		Annual	12		Sitting	19		Acceptable
	B	Spring	15	+15%	Standing	22	+10%	Acceptable
		Summer	11	+10%	Sitting	16		Acceptable
		Fall	13		Standing	20	+11%	Acceptable
		Winter	15	+15%	Standing	22	+10%	Acceptable
		Annual	14	+17%	Standing	21	+11%	Acceptable
	C	Spring	18	+38%	Walking	26	+30%	Acceptable
		Summer	13	+30%	Standing	20	+33%	Acceptable
		Fall	16	+33%	Walking	24	+33%	Acceptable
		Winter	18	+38%	Walking	27	+35%	Acceptable
		Annual	16	+33%	Walking	25	+32%	Acceptable
11	A	Spring	16		Walking	23		Acceptable
		Summer	12		Sitting	17		Acceptable
		Fall	15		Standing	21		Acceptable
		Winter	16		Walking	24		Acceptable
		Annual	15		Standing	22		Acceptable
	B	Spring	14	-12%	Standing	21		Acceptable
		Summer	11		Sitting	16		Acceptable
		Fall	13	-12%	Standing	20		Acceptable
		Winter	15		Standing	22		Acceptable
		Annual	14		Standing	21		Acceptable
	C	Spring	15		Standing	22		Acceptable
		Summer	11		Sitting	17		Acceptable
		Fall	14		Standing	21		Acceptable
		Winter	15		Standing	23		Acceptable
		Annual	14		Standing	21		Acceptable
12	A	Spring	17		Walking	25		Acceptable
		Summer	13		Standing	18		Acceptable
		Fall	15		Standing	23		Acceptable
		Winter	17		Walking	25		Acceptable
		Annual	16		Walking	23		Acceptable
	B	Spring	18		Walking	24		Acceptable
		Summer	13		Standing	19		Acceptable
		Fall	16		Walking	23		Acceptable
		Winter	18		Walking	25		Acceptable
		Annual	17		Walking	23		Acceptable
	C	Spring	18		Walking	25		Acceptable
		Summer	14		Standing	20	+11%	Acceptable
		Fall	16		Walking	23		Acceptable
		Winter	18		Walking	25		Acceptable
		Annual	16		Walking	23		Acceptable

Notes: 1) Wind speeds are for a 1% probability of exceedance, and  
 2) %Change is based on comparison with Configuration A and only those that are greater than 10% are listed.

**Configurations**

- A - Existing
- B - No-Build
- C - Build

**Mean Wind Speed Criteria**

- Comfortable for Sitting: ≤ 12 mph
- Comfortable for Standing: > 12 and ≤ 15 mph
- Comfortable for Walking: > 15 and ≤ 19 mph
- Uncomfortable for Walking: > 19 and ≤ 27 mph
- Dangerous Conditions: > 27 mph

**Effective Gust Criteria**

- Acceptable: ≤ 31 mph
- Unacceptable: > 31 mph

**Table 1: Pedestrian Wind Comfort and Safety Categories - Multiple Seasons**

BRA Criteria			Mean Wind Speed			Effective Gust Wind Speed						
Loc.	Config.	Season	Speed(mph)	%Change	RATING	Speed(mph)	%Change	RATING				
13	A	Spring	DATA NOT AVAILABLE									
		Summer	DATA NOT AVAILABLE									
		Fall	DATA NOT AVAILABLE									
		Winter	DATA NOT AVAILABLE									
		Annual	DATA NOT AVAILABLE									
	B	Spring	DATA NOT AVAILABLE									
		Summer	DATA NOT AVAILABLE									
		Fall	DATA NOT AVAILABLE									
		Winter	DATA NOT AVAILABLE									
		Annual	DATA NOT AVAILABLE									
	C	Spring	18		Walking					23		Acceptable
		Summer	14		Standing					18		Acceptable
		Fall	16		Walking					22		Acceptable
		Winter	18		Walking					24		Acceptable
		Annual	17		Walking					22		Acceptable
14	A	Spring	DATA NOT AVAILABLE									
		Summer	DATA NOT AVAILABLE									
		Fall	DATA NOT AVAILABLE									
		Winter	DATA NOT AVAILABLE									
		Annual	DATA NOT AVAILABLE									
	B	Spring	DATA NOT AVAILABLE									
		Summer	DATA NOT AVAILABLE									
		Fall	DATA NOT AVAILABLE									
		Winter	DATA NOT AVAILABLE									
		Annual	DATA NOT AVAILABLE									
	C	Spring	10		Sitting	15		Acceptable				
		Summer	8		Sitting	12		Acceptable				
		Fall	9		Sitting	14		Acceptable				
		Winter	11		Sitting	17		Acceptable				
		Annual	10		Sitting	15		Acceptable				
15	A	Spring	21		Uncomfortable	28		Acceptable				
		Summer	15		Standing	20		Acceptable				
		Fall	19		Walking	26		Acceptable				
		Winter	21		Uncomfortable	28		Acceptable				
		Annual	19		Walking	26		Acceptable				
	B	Spring	21		Uncomfortable	27		Acceptable				
		Summer	17	+13%	Walking	21		Acceptable				
		Fall	18		Walking	24		Acceptable				
		Winter	21		Uncomfortable	27		Acceptable				
		Annual	19		Walking	25		Acceptable				
	C	Spring	20		Uncomfortable	26		Acceptable				
		Summer	17	+13%	Walking	21		Acceptable				
		Fall	18		Walking	24		Acceptable				
		Winter	21		Uncomfortable	27		Acceptable				
		Annual	19		Walking	25		Acceptable				

Notes: 1) Wind speeds are for a 1% probability of exceedance, and  
 2) %Change is based on comparison with Configuration A and only those that are greater than 10% are listed.

Configurations

- A - Existing
- B - No-Build
- C - Build

Mean Wind Speed Criteria

- Comfortable for Sitting: ≤ 12 mph
- Comfortable for Standing: > 12 and ≤ 15 mph
- Comfortable for Walking: > 15 and ≤ 19 mph
- Uncomfortable for Walking: > 19 and ≤ 27 mph
- Dangerous Conditions: > 27 mph

Effective Gust Criteria

- Acceptable: ≤ 31 mph
- Unacceptable: > 31 mph

**Table 1: Pedestrian Wind Comfort and Safety Categories - Multiple Seasons**

BRA Criteria			Mean Wind Speed			Effective Gust Wind Speed		
Loc.	Config.	Season	Speed(mph)	%Change	RATING	Speed(mph)	%Change	RATING
16	A	Spring	16		Walking	24		Acceptable
		Summer	11		Sitting	17		Acceptable
		Fall	14		Standing	21		Acceptable
		Winter	15		Standing	23		Acceptable
		Annual	14		Standing	22		Acceptable
	B	Spring	22	+38%	Uncomfortable	28	+17%	Acceptable
		Summer	18	+64%	Walking	22	+29%	Acceptable
		Fall	20	+43%	Uncomfortable	25	+19%	Acceptable
		Winter	22	+47%	Uncomfortable	28	+22%	Acceptable
		Annual	20	+43%	Uncomfortable	25	+14%	Acceptable
	C	Spring	22	+38%	Uncomfortable	28	+17%	Acceptable
		Summer	18	+64%	Walking	22	+29%	Acceptable
		Fall	20	+43%	Uncomfortable	26	+24%	Acceptable
		Winter	23	+52%	Uncomfortable	29	+26%	Acceptable
		Annual	21	+50%	Uncomfortable	26	+18%	Acceptable
17	A	Spring	15		Standing	23		Acceptable
		Summer	11		Sitting	16		Acceptable
		Fall	13		Standing	21		Acceptable
		Winter	14		Standing	22		Acceptable
		Annual	13		Standing	21		Acceptable
	B	Spring	21	+40%	Uncomfortable	27	+17%	Acceptable
		Summer	17	+55%	Walking	21	+31%	Acceptable
		Fall	19	+46%	Walking	25	+19%	Acceptable
		Winter	21	+50%	Uncomfortable	28	+27%	Acceptable
		Annual	19	+46%	Walking	25	+19%	Acceptable
	C	Spring	19	+27%	Walking	26	+13%	Acceptable
		Summer	15	+36%	Standing	20	+25%	Acceptable
		Fall	18	+38%	Walking	24	+14%	Acceptable
		Winter	20	+43%	Uncomfortable	27	+23%	Acceptable
		Annual	18	+38%	Walking	24	+14%	Acceptable
18	A	Spring	14		Standing	21		Acceptable
		Summer	10		Sitting	15		Acceptable
		Fall	13		Standing	19		Acceptable
		Winter	14		Standing	21		Acceptable
		Annual	13		Standing	20		Acceptable
	B	Spring	18	+29%	Walking	25	+19%	Acceptable
		Summer	14	+40%	Standing	20	+33%	Acceptable
		Fall	16	+23%	Walking	23	+21%	Acceptable
		Winter	18	+29%	Walking	26	+24%	Acceptable
		Annual	17	+31%	Walking	24	+20%	Acceptable
	C	Spring	15		Standing	22		Acceptable
		Summer	12	+20%	Sitting	17	+13%	Acceptable
		Fall	14		Standing	21	+11%	Acceptable
		Winter	16	+14%	Walking	23	+10%	Acceptable
		Annual	14		Standing	21		Acceptable

Notes: 1) Wind speeds are for a 1% probability of exceedance, and  
 2) %Change is based on comparison with Configuration A and only those that are greater than 10% are listed.

Configurations

- A - Existing
- B - No-Build
- C - Build

Mean Wind Speed Criteria

- Comfortable for Sitting: ≤ 12 mph
- Comfortable for Standing: > 12 and ≤ 15 mph
- Comfortable for Walking: > 15 and ≤ 19 mph
- Uncomfortable for Walking: > 19 and ≤ 27 mph
- Dangerous Conditions: > 27 mph

Effective Gust Criteria

- Acceptable: ≤ 31 mph
- Unacceptable: > 31 mph

**Table 1: Pedestrian Wind Comfort and Safety Categories - Multiple Seasons**

BRA Criteria			Mean Wind Speed			Effective Gust Wind Speed		
Loc.	Config.	Season	Speed(mph)	%Change	RATING	Speed(mph)	%Change	RATING
19	A	Spring	14		Standing	21		Acceptable
		Summer	10		Sitting	16		Acceptable
		Fall	13		Standing	19		Acceptable
		Winter	14		Standing	22		Acceptable
		Annual	13		Standing	20		Acceptable
	B	Spring	18	+29%	Walking	25	+19%	Acceptable
		Summer	14	+40%	Standing	19	+19%	Acceptable
		Fall	17	+31%	Walking	23	+21%	Acceptable
		Winter	19	+36%	Walking	26	+18%	Acceptable
		Annual	17	+31%	Walking	24	+20%	Acceptable
	C	Spring	13		Standing	19		Acceptable
		Summer	10		Sitting	16		Acceptable
		Fall	12		Sitting	18		Acceptable
		Winter	13		Standing	20		Acceptable
		Annual	12		Sitting	18		Acceptable
20	A	Spring	16		Walking	23		Acceptable
		Summer	12		Sitting	17		Acceptable
		Fall	15		Standing	21		Acceptable
		Winter	16		Walking	23		Acceptable
		Annual	15		Standing	22		Acceptable
	B	Spring	14	-12%	Standing	21		Acceptable
		Summer	10	-16%	Sitting	15	-11%	Acceptable
		Fall	13	-12%	Standing	19		Acceptable
		Winter	14	-12%	Standing	21		Acceptable
		Annual	13	-12%	Standing	20		Acceptable
	C	Spring	14	-12%	Standing	21		Acceptable
		Summer	11		Sitting	16		Acceptable
		Fall	13	-12%	Standing	20		Acceptable
		Winter	15		Standing	22		Acceptable
		Annual	14		Standing	20		Acceptable
21	A	Spring	15		Standing	22		Acceptable
		Summer	11		Sitting	16		Acceptable
		Fall	14		Standing	20		Acceptable
		Winter	15		Standing	23		Acceptable
		Annual	14		Standing	21		Acceptable
	B	Spring	6	-58%	Sitting	9	-58%	Acceptable
		Summer	4	-63%	Sitting	7	-55%	Acceptable
		Fall	6	-56%	Sitting	9	-54%	Acceptable
		Winter	6	-58%	Sitting	10	-56%	Acceptable
		Annual	6	-56%	Sitting	9	-56%	Acceptable
	C	Spring	6	-58%	Sitting	10	-54%	Acceptable
		Summer	4	-63%	Sitting	7	-55%	Acceptable
		Fall	6	-56%	Sitting	9	-54%	Acceptable
		Winter	7	-52%	Sitting	10	-56%	Acceptable
		Annual	6	-56%	Sitting	10	-51%	Acceptable

Notes: 1) Wind speeds are for a 1% probability of exceedance, and  
 2) %Change is based on comparison with Configuration A and only those that are greater than 10% are listed.

Configurations

- A - Existing
- B - No-Build
- C - Build

Mean Wind Speed Criteria

- Comfortable for Sitting: ≤ 12 mph
- Comfortable for Standing: > 12 and ≤ 15 mph
- Comfortable for Walking: > 15 and ≤ 19 mph
- Uncomfortable for Walking: > 19 and ≤ 27 mph
- Dangerous Conditions: > 27 mph

Effective Gust Criteria

- Acceptable: ≤ 31 mph
- Unacceptable: > 31 mph

**Table 1: Pedestrian Wind Comfort and Safety Categories - Multiple Seasons**

BRA Criteria			Mean Wind Speed			Effective Gust Wind Speed		
Loc.	Config.	Season	Speed(mph)	%Change	RATING	Speed(mph)	%Change	RATING
22	A	Spring	19		Walking	26		Acceptable
		Summer	14		Standing	19		Acceptable
		Fall	17		Walking	24		Acceptable
		Winter	19		Walking	27		Acceptable
		Annual	18		Walking	24		Acceptable
	B	Spring	9	-52%	Sitting	14	-45%	Acceptable
		Summer	7	-49%	Sitting	11	-41%	Acceptable
		Fall	8	-52%	Sitting	13	-45%	Acceptable
		Winter	9	-52%	Sitting	15	-43%	Acceptable
		Annual	8	-55%	Sitting	14	-41%	Acceptable
	C	Spring	8	-57%	Sitting	13	-49%	Acceptable
		Summer	6	-56%	Sitting	9	-52%	Acceptable
		Fall	8	-52%	Sitting	12	-49%	Acceptable
		Winter	8	-57%	Sitting	13	-51%	Acceptable
		Annual	8	-55%	Sitting	12	-49%	Acceptable
23	A	Spring	22		Uncomfortable	30		Acceptable
		Summer	17		Walking	23		Acceptable
		Fall	20		Uncomfortable	27		Acceptable
		Winter	23		Uncomfortable	30		Acceptable
		Annual	21		Uncomfortable	28		Acceptable
	B	Spring	21		Uncomfortable	28		Acceptable
		Summer	16		Walking	21		Acceptable
		Fall	19		Walking	26		Acceptable
		Winter	21		Uncomfortable	29		Acceptable
		Annual	19		Walking	26		Acceptable
	C	Spring	21		Uncomfortable	28		Acceptable
		Summer	16		Walking	22		Acceptable
		Fall	19		Walking	26		Acceptable
		Winter	22		Uncomfortable	29		Acceptable
		Annual	20		Uncomfortable	27		Acceptable
24	A	Spring	13		Standing	19		Acceptable
		Summer	11		Sitting	16		Acceptable
		Fall	12		Sitting	18		Acceptable
		Winter	13		Standing	20		Acceptable
		Annual	12		Sitting	18		Acceptable
	B	Spring	17	+31%	Walking	23	+21%	Acceptable
		Summer	14	+27%	Standing	18	+13%	Acceptable
		Fall	15	+25%	Standing	21	+17%	Acceptable
		Winter	17	+31%	Walking	23	+15%	Acceptable
		Annual	15	+25%	Standing	21	+17%	Acceptable
	C	Spring	18	+38%	Walking	23	+21%	Acceptable
		Summer	15	+36%	Standing	19	+19%	Acceptable
		Fall	16	+33%	Walking	21	+17%	Acceptable
		Winter	17	+31%	Walking	23	+15%	Acceptable
		Annual	16	+33%	Walking	21	+17%	Acceptable

Notes: 1) Wind speeds are for a 1% probability of exceedance, and  
 2) %Change is based on comparison with Configuration A and only those that are greater than 10% are listed.

Configurations

- A - Existing
- B - No-Build
- C - Build

Mean Wind Speed Criteria

- Comfortable for Sitting: ≤ 12 mph
- Comfortable for Standing: > 12 and ≤ 15 mph
- Comfortable for Walking: > 15 and ≤ 19 mph
- Uncomfortable for Walking: > 19 and ≤ 27 mph
- Dangerous Conditions: > 27 mph

Effective Gust Criteria

- Acceptable: ≤ 31 mph
- Unacceptable: > 31 mph

**Table 1: Pedestrian Wind Comfort and Safety Categories - Multiple Seasons**

BRA Criteria			Mean Wind Speed			Effective Gust Wind Speed		
Loc.	Config.	Season	Speed(mph)	%Change	RATING	Speed(mph)	%Change	RATING
25	A	Spring	10		Sitting	16		Acceptable
		Summer	8		Sitting	13		Acceptable
		Fall	9		Sitting	15		Acceptable
		Winter	11		Sitting	17		Acceptable
		Annual	10		Sitting	16		Acceptable
	B	Spring	15	+50%	Standing	23	+44%	Acceptable
		Summer	11	+38%	Sitting	17	+31%	Acceptable
		Fall	13	+44%	Standing	21	+40%	Acceptable
		Winter	15	+36%	Standing	23	+35%	Acceptable
		Annual	14	+40%	Standing	21	+31%	Acceptable
	C	Spring	16	+60%	Walking	24	+50%	Acceptable
		Summer	13	+63%	Standing	18	+38%	Acceptable
		Fall	15	+67%	Standing	22	+47%	Acceptable
		Winter	17	+55%	Walking	24	+41%	Acceptable
		Annual	15	+50%	Standing	22	+38%	Acceptable
26	A	Spring	20		Uncomfortable	29		Acceptable
		Summer	16		Walking	22		Acceptable
		Fall	18		Walking	26		Acceptable
		Winter	20		Uncomfortable	29		Acceptable
		Annual	19		Walking	27		Acceptable
	B	Spring	16	-19%	Walking	25	-13%	Acceptable
		Summer	12	-24%	Sitting	18	-17%	Acceptable
		Fall	15	-16%	Standing	23	-11%	Acceptable
		Winter	16	-19%	Walking	25	-13%	Acceptable
		Annual	15	-20%	Standing	23	-14%	Acceptable
	C	Spring	15	-24%	Standing	23	-20%	Acceptable
		Summer	11	-30%	Sitting	17	-22%	Acceptable
		Fall	13	-27%	Standing	21	-18%	Acceptable
		Winter	15	-24%	Standing	23	-20%	Acceptable
		Annual	13	-31%	Standing	21	-21%	Acceptable
27	A	Spring	16		Walking	25		Acceptable
		Summer	14		Standing	21		Acceptable
		Fall	15		Standing	23		Acceptable
		Winter	16		Walking	25		Acceptable
		Annual	15		Standing	23		Acceptable
	B	Spring	10	-37%	Sitting	16	-35%	Acceptable
		Summer	7	-49%	Sitting	12	-42%	Acceptable
		Fall	9	-39%	Sitting	15	-34%	Acceptable
		Winter	10	-37%	Sitting	17	-31%	Acceptable
		Annual	9	-39%	Sitting	16	-29%	Acceptable
	C	Spring	9	-43%	Sitting	16	-35%	Acceptable
		Summer	7	-49%	Sitting	12	-42%	Acceptable
		Fall	8	-46%	Sitting	15	-34%	Acceptable
		Winter	9	-43%	Sitting	16	-35%	Acceptable
		Annual	8	-46%	Sitting	15	-34%	Acceptable

Notes: 1) Wind speeds are for a 1% probability of exceedance, and  
 2) %Change is based on comparison with Configuration A and only those that are greater than 10% are listed.

Configurations

- A - Existing
- B - No-Build
- C - Build

Mean Wind Speed Criteria

- Comfortable for Sitting: ≤ 12 mph
- Comfortable for Standing: > 12 and ≤ 15 mph
- Comfortable for Walking: > 15 and ≤ 19 mph
- Uncomfortable for Walking: > 19 and ≤ 27 mph
- Dangerous Conditions: > 27 mph

Effective Gust Criteria

- Acceptable: ≤ 31 mph
- Unacceptable: > 31 mph



**Table 1: Pedestrian Wind Comfort and Safety Categories - Multiple Seasons**

BRA Criteria			Mean Wind Speed			Effective Gust Wind Speed		
Loc.	Config.	Season	Speed(mph)	%Change	RATING	Speed(mph)	%Change	RATING
28	A	Spring	16		Walking	24		Acceptable
		Summer	13		Standing	20		Acceptable
		Fall	15		Standing	22		Acceptable
		Winter	16		Walking	25		Acceptable
		Annual	15		Standing	23		Acceptable
	B	Spring	8	-49%	Sitting	14	-41%	Acceptable
		Summer	6	-52%	Sitting	11	-44%	Acceptable
		Fall	8	-46%	Sitting	13	-40%	Acceptable
		Winter	9	-43%	Sitting	14	-43%	Acceptable
		Annual	8	-46%	Sitting	13	-42%	Acceptable
	C	Spring	9	-43%	Sitting	14	-41%	Acceptable
		Summer	7	-45%	Sitting	11	-44%	Acceptable
		Fall	8	-46%	Sitting	13	-40%	Acceptable
		Winter	9	-43%	Sitting	15	-39%	Acceptable
		Annual	8	-46%	Sitting	14	-38%	Acceptable
29	A	Spring	19		Walking	27		Acceptable
		Summer	14		Standing	20		Acceptable
		Fall	17		Walking	24		Acceptable
		Winter	19		Walking	27		Acceptable
		Annual	18		Walking	25		Acceptable
	B	Spring	13	-31%	Standing	22	-18%	Acceptable
		Summer	10	-28%	Sitting	16	-19%	Acceptable
		Fall	12	-28%	Sitting	20	-16%	Acceptable
		Winter	13	-31%	Standing	22	-18%	Acceptable
		Annual	12	-32%	Sitting	20	-19%	Acceptable
	C	Spring	13	-31%	Standing	21	-21%	Acceptable
		Summer	10	-28%	Sitting	16	-19%	Acceptable
		Fall	12	-28%	Sitting	19	-20%	Acceptable
		Winter	13	-31%	Standing	21	-21%	Acceptable
		Annual	12	-32%	Sitting	20	-19%	Acceptable
30	A	Spring	15		Standing	23		Acceptable
		Summer	12		Sitting	17		Acceptable
		Fall	14		Standing	21		Acceptable
		Winter	15		Standing	24		Acceptable
		Annual	14		Standing	22		Acceptable
	B	Spring	11	-26%	Sitting	18	-21%	Acceptable
		Summer	9	-24%	Sitting	14	-17%	Acceptable
		Fall	10	-28%	Sitting	17	-18%	Acceptable
		Winter	11	-26%	Sitting	19	-20%	Acceptable
		Annual	10	-28%	Sitting	17	-22%	Acceptable
	C	Spring	10	-32%	Sitting	16	-29%	Acceptable
		Summer	8	-32%	Sitting	12	-28%	Acceptable
		Fall	9	-35%	Sitting	15	-28%	Acceptable
		Winter	10	-32%	Sitting	17	-28%	Acceptable
		Annual	9	-35%	Sitting	15	-31%	Acceptable

Notes: 1) Wind speeds are for a 1% probability of exceedance, and  
 2) %Change is based on comparison with Configuration A and only those that are greater than 10% are listed.

**Configurations**

- A - Existing
- B - No-Build
- C - Build

**Mean Wind Speed Criteria**

- Comfortable for Sitting: ≤ 12 mph
- Comfortable for Standing: > 12 and ≤ 15 mph
- Comfortable for Walking: > 15 and ≤ 19 mph
- Uncomfortable for Walking: > 19 and ≤ 27 mph
- Dangerous Conditions: > 27 mph

**Effective Gust Criteria**

- Acceptable: ≤ 31 mph
- Unacceptable: > 31 mph

**Table 1: Pedestrian Wind Comfort and Safety Categories - Multiple Seasons**

BRA Criteria			Mean Wind Speed			Effective Gust Wind Speed		
Loc.	Config.	Season	Speed(mph)	%Change	RATING	Speed(mph)	%Change	RATING
31	A	Spring	15		Standing	23		Acceptable
		Summer	11		Sitting	17		Acceptable
		Fall	14		Standing	21		Acceptable
		Winter	15		Standing	23		Acceptable
		Annual	14		Standing	21		Acceptable
	B	Spring	14		Standing	23		Acceptable
		Summer	11		Sitting	18		Acceptable
		Fall	13		Standing	21		Acceptable
		Winter	15		Standing	24		Acceptable
		Annual	13		Standing	22		Acceptable
	C	Spring	14		Standing	22		Acceptable
		Summer	10		Sitting	16		Acceptable
		Fall	13		Standing	20		Acceptable
		Winter	14		Standing	22		Acceptable
		Annual	13		Standing	21		Acceptable
32	A	Spring	14		Standing	21		Acceptable
		Summer	10		Sitting	16		Acceptable
		Fall	13		Standing	20		Acceptable
		Winter	14		Standing	22		Acceptable
		Annual	13		Standing	20		Acceptable
	B	Spring	15		Standing	22		Acceptable
		Summer	12	+20%	Sitting	18	+13%	Acceptable
		Fall	14		Standing	20		Acceptable
		Winter	15		Standing	23		Acceptable
		Annual	14		Standing	21		Acceptable
	C	Spring	16	+14%	Walking	24	+14%	Acceptable
		Summer	11	+10%	Sitting	17		Acceptable
		Fall	14		Standing	22	+10%	Acceptable
		Winter	16	+14%	Walking	24		Acceptable
		Annual	14		Standing	22	+10%	Acceptable
33	A	Spring	12		Sitting	20		Acceptable
		Summer	9		Sitting	15		Acceptable
		Fall	11		Sitting	18		Acceptable
		Winter	12		Sitting	20		Acceptable
		Annual	11		Sitting	19		Acceptable
	B	Spring	13		Standing	21		Acceptable
		Summer	11	+22%	Sitting	17	+13%	Acceptable
		Fall	12		Sitting	19		Acceptable
		Winter	13		Standing	22	+10%	Acceptable
		Annual	12		Sitting	20		Acceptable
	C	Spring	14	+17%	Standing	21		Acceptable
		Summer	10	+11%	Sitting	15		Acceptable
		Fall	12		Sitting	20	+11%	Acceptable
		Winter	14	+17%	Standing	22	+10%	Acceptable
		Annual	13	+18%	Standing	20		Acceptable

Notes: 1) Wind speeds are for a 1% probability of exceedance, and  
 2) %Change is based on comparison with Configuration A and only those that are greater than 10% are listed.

Configurations

A - Existing  
 B - No-Build  
 C - Build

Mean Wind Speed Criteria

Comfortable for Sitting: ≤ 12 mph  
 Comfortable for Standing: > 12 and ≤ 15 mph  
 Comfortable for Walking: > 15 and ≤ 19 mph  
 Uncomfortable for Walking: > 19 and ≤ 27 mph  
 Dangerous Conditions: > 27 mph

Effective Gust Criteria

Acceptable: ≤ 31 mph  
 Unacceptable: > 31 mph

**Table 1: Pedestrian Wind Comfort and Safety Categories - Multiple Seasons**

BRA Criteria			Mean Wind Speed			Effective Gust Wind Speed		
Loc.	Config.	Season	Speed(mph)	%Change	RATING	Speed(mph)	%Change	RATING
34	A	Spring	15		Standing	23		Acceptable
		Summer	11		Sitting	17		Acceptable
		Fall	14		Standing	21		Acceptable
		Winter	15		Standing	23		Acceptable
		Annual	14		Standing	22		Acceptable
	B	Spring	17	+13%	Walking	25		Acceptable
		Summer	15	+36%	Standing	21	+24%	Acceptable
		Fall	16	+14%	Walking	24	+14%	Acceptable
		Winter	18	+20%	Walking	26	+13%	Acceptable
		Annual	17	+21%	Walking	24		Acceptable
	C	Spring	18	+20%	Walking	26	+13%	Acceptable
		Summer	14	+27%	Standing	19	+12%	Acceptable
		Fall	17	+21%	Walking	24	+14%	Acceptable
		Winter	19	+27%	Walking	27	+17%	Acceptable
		Annual	17	+21%	Walking	25	+14%	Acceptable
35	A	Spring	13		Standing	20		Acceptable
		Summer	10		Sitting	16		Acceptable
		Fall	12		Sitting	19		Acceptable
		Winter	13		Standing	21		Acceptable
		Annual	12		Sitting	19		Acceptable
	B	Spring	13		Standing	21		Acceptable
		Summer	10		Sitting	17		Acceptable
		Fall	12		Sitting	20		Acceptable
		Winter	13		Standing	22		Acceptable
		Annual	12		Sitting	20		Acceptable
	C	Spring	15	+15%	Standing	22	+10%	Acceptable
		Summer	11	+10%	Sitting	16		Acceptable
		Fall	14	+17%	Standing	21	+11%	Acceptable
		Winter	15	+15%	Standing	23	+10%	Acceptable
		Annual	14	+17%	Standing	21	+11%	Acceptable
36	A	Spring	14		Standing	21		Acceptable
		Summer	10		Sitting	16		Acceptable
		Fall	13		Standing	19		Acceptable
		Winter	14		Standing	21		Acceptable
		Annual	13		Standing	20		Acceptable
	B	Spring	16	+14%	Walking	24	+14%	Acceptable
		Summer	12	+20%	Sitting	19	+19%	Acceptable
		Fall	15	+15%	Standing	23	+21%	Acceptable
		Winter	16	+14%	Walking	25	+19%	Acceptable
		Annual	15	+15%	Standing	23	+15%	Acceptable
	C	Spring	18	+29%	Walking	26	+24%	Acceptable
		Summer	13	+30%	Standing	18	+13%	Acceptable
		Fall	16	+23%	Walking	23	+21%	Acceptable
		Winter	18	+29%	Walking	26	+24%	Acceptable
		Annual	17	+31%	Walking	24	+20%	Acceptable

Notes: 1) Wind speeds are for a 1% probability of exceedance, and  
 2) %Change is based on comparison with Configuration A and only those that are greater than 10% are listed.

Configurations

- A - Existing
- B - No-Build
- C - Build

Mean Wind Speed Criteria

- Comfortable for Sitting: ≤ 12 mph
- Comfortable for Standing: > 12 and ≤ 15 mph
- Comfortable for Walking: > 15 and ≤ 19 mph
- Uncomfortable for Walking: > 19 and ≤ 27 mph
- Dangerous Conditions: > 27 mph

Effective Gust Criteria

- Acceptable: ≤ 31 mph
- Unacceptable: > 31 mph

**Table 1: Pedestrian Wind Comfort and Safety Categories - Multiple Seasons**

BRA Criteria			Mean Wind Speed			Effective Gust Wind Speed		
Loc.	Config.	Season	Speed(mph)	%Change	RATING	Speed(mph)	%Change	RATING
37	A	Spring	13		Standing	20		Acceptable
		Summer	10		Sitting	15		Acceptable
		Fall	12		Sitting	19		Acceptable
		Winter	13		Standing	20		Acceptable
		Annual	12		Sitting	19		Acceptable
	B	Spring	13		Standing	21		Acceptable
		Summer	11	+10%	Sitting	16		Acceptable
		Fall	12		Sitting	19		Acceptable
		Winter	13		Standing	21		Acceptable
		Annual	12		Sitting	19		Acceptable
	C	Spring	14		Standing	20		Acceptable
		Summer	10		Sitting	15		Acceptable
		Fall	12		Sitting	18		Acceptable
		Winter	14		Standing	20		Acceptable
		Annual	13		Standing	19		Acceptable
38	A	Spring	11		Sitting	17		Acceptable
		Summer	8		Sitting	14		Acceptable
		Fall	10		Sitting	16		Acceptable
		Winter	11		Sitting	17		Acceptable
		Annual	10		Sitting	16		Acceptable
	B	Spring	12		Sitting	19	+12%	Acceptable
		Summer	9	+13%	Sitting	15		Acceptable
		Fall	11	+10%	Sitting	18	+13%	Acceptable
		Winter	12		Sitting	20	+18%	Acceptable
		Annual	11	+10%	Sitting	18	+13%	Acceptable
	C	Spring	13	+18%	Standing	20	+18%	Acceptable
		Summer	9	+13%	Sitting	14		Acceptable
		Fall	12	+20%	Sitting	18	+13%	Acceptable
		Winter	13	+18%	Standing	20	+18%	Acceptable
		Annual	12	+20%	Sitting	18	+13%	Acceptable
39	A	Spring	13		Standing	20		Acceptable
		Summer	10		Sitting	15		Acceptable
		Fall	12		Sitting	18		Acceptable
		Winter	13		Standing	20		Acceptable
		Annual	12		Sitting	19		Acceptable
	B	Spring	13		Standing	20		Acceptable
		Summer	9		Sitting	15		Acceptable
		Fall	12		Sitting	18		Acceptable
		Winter	13		Standing	20		Acceptable
		Annual	12		Sitting	19		Acceptable
	C	Spring	15	+15%	Standing	22	+10%	Acceptable
		Summer	10		Sitting	16		Acceptable
		Fall	13		Standing	20	+11%	Acceptable
		Winter	15	+15%	Standing	22	+10%	Acceptable
		Annual	14	+17%	Standing	20		Acceptable

Notes: 1) Wind speeds are for a 1% probability of exceedance, and  
 2) %Change is based on comparison with Configuration A and only those that are greater than 10% are listed.

Configurations

- A - Existing
- B - No-Build
- C - Build

Mean Wind Speed Criteria

- Comfortable for Sitting: ≤ 12 mph
- Comfortable for Standing: > 12 and ≤ 15 mph
- Comfortable for Walking: > 15 and ≤ 19 mph
- Uncomfortable for Walking: > 19 and ≤ 27 mph
- Dangerous Conditions: > 27 mph

Effective Gust Criteria

- Acceptable: ≤ 31 mph
- Unacceptable: > 31 mph

**Table 1: Pedestrian Wind Comfort and Safety Categories - Multiple Seasons**

BRA Criteria			Mean Wind Speed			Effective Gust Wind Speed		
Loc.	Config.	Season	Speed(mph)	%Change	RATING	Speed(mph)	%Change	RATING
40	A	Spring	12		Sitting	19		Acceptable
		Summer	9		Sitting	14		Acceptable
		Fall	11		Sitting	17		Acceptable
		Winter	12		Sitting	19		Acceptable
		Annual	11		Sitting	18		Acceptable
	B	Spring	14	+17%	Standing	21	+11%	Acceptable
		Summer	10	+11%	Sitting	16	+14%	Acceptable
		Fall	12		Sitting	19	+12%	Acceptable
		Winter	14	+17%	Standing	21	+11%	Acceptable
		Annual	13	+18%	Standing	19		Acceptable
	C	Spring	14	+17%	Standing	21	+11%	Acceptable
		Summer	11	+22%	Sitting	15		Acceptable
		Fall	13	+18%	Standing	19	+12%	Acceptable
		Winter	14	+17%	Standing	21	+11%	Acceptable
		Annual	13	+18%	Standing	19		Acceptable
41	A	Spring	13		Standing	20		Acceptable
		Summer	10		Sitting	15		Acceptable
		Fall	12		Sitting	18		Acceptable
		Winter	13		Standing	20		Acceptable
		Annual	13		Standing	19		Acceptable
	B	Spring	14		Standing	21		Acceptable
		Summer	10		Sitting	15		Acceptable
		Fall	13		Standing	19		Acceptable
		Winter	14		Standing	21		Acceptable
		Annual	13		Standing	19		Acceptable
	C	Spring	15	+15%	Standing	21		Acceptable
		Summer	11	+10%	Sitting	16		Acceptable
		Fall	13		Standing	19		Acceptable
		Winter	15	+15%	Standing	21		Acceptable
		Annual	13		Standing	19		Acceptable
42	A	Spring	13		Standing	20		Acceptable
		Summer	10		Sitting	16		Acceptable
		Fall	12		Sitting	19		Acceptable
		Winter	13		Standing	20		Acceptable
		Annual	12		Sitting	19		Acceptable
	B	Spring	15	+15%	Standing	22	+10%	Acceptable
		Summer	11	+10%	Sitting	17		Acceptable
		Fall	13		Standing	20		Acceptable
		Winter	15	+15%	Standing	22	+10%	Acceptable
		Annual	13		Standing	20		Acceptable
	C	Spring	15	+15%	Standing	22	+10%	Acceptable
		Summer	11	+10%	Sitting	17		Acceptable
		Fall	14	+17%	Standing	20		Acceptable
		Winter	15	+15%	Standing	22	+10%	Acceptable
		Annual	14	+17%	Standing	20		Acceptable

Notes: 1) Wind speeds are for a 1% probability of exceedance, and  
 2) %Change is based on comparison with Configuration A and only those that are greater than 10% are listed.

Configurations

A - Existing  
 B - No-Build  
 C - Build

Mean Wind Speed Criteria

Comfortable for Sitting: ≤ 12 mph  
 Comfortable for Standing: > 12 and ≤ 15 mph  
 Comfortable for Walking: > 15 and ≤ 19 mph  
 Uncomfortable for Walking: > 19 and ≤ 27 mph  
 Dangerous Conditions: > 27 mph

Effective Gust Criteria

Acceptable: ≤ 31 mph  
 Unacceptable: > 31 mph

**Table 1: Pedestrian Wind Comfort and Safety Categories - Multiple Seasons**

BRA Criteria			Mean Wind Speed			Effective Gust Wind Speed		
Loc.	Config.	Season	Speed(mph)	%Change	RATING	Speed(mph)	%Change	RATING
43	A	Spring	14		Standing	21		Acceptable
		Summer	10		Sitting	16		Acceptable
		Fall	13		Standing	20		Acceptable
		Winter	14		Standing	22		Acceptable
		Annual	13		Standing	20		Acceptable
	B	Spring	14		Standing	21		Acceptable
		Summer	11	+10%	Sitting	17		Acceptable
		Fall	13		Standing	19		Acceptable
		Winter	14		Standing	22		Acceptable
		Annual	13		Standing	20		Acceptable
	C	Spring	14		Standing	20		Acceptable
		Summer	11	+10%	Sitting	15		Acceptable
		Fall	13		Standing	18		Acceptable
		Winter	14		Standing	21		Acceptable
		Annual	13		Standing	19		Acceptable
44	A	Spring	16		Walking	23		Acceptable
		Summer	12		Sitting	18		Acceptable
		Fall	14		Standing	21		Acceptable
		Winter	15		Standing	23		Acceptable
		Annual	14		Standing	21		Acceptable
	B	Spring	17		Walking	24		Acceptable
		Summer	13		Standing	19		Acceptable
		Fall	15		Standing	22		Acceptable
		Winter	17	+13%	Walking	24		Acceptable
		Annual	15		Standing	22		Acceptable
	C	Spring	15		Standing	20	-12%	Acceptable
		Summer	11		Sitting	15	-16%	Acceptable
		Fall	13		Standing	18	-13%	Acceptable
		Winter	15		Standing	20	-12%	Acceptable
		Annual	13		Standing	19		Acceptable
45	A	Spring	17		Walking	25		Acceptable
		Summer	13		Standing	19		Acceptable
		Fall	15		Standing	23		Acceptable
		Winter	17		Walking	26		Acceptable
		Annual	16		Walking	23		Acceptable
	B	Spring	19	+12%	Walking	26		Acceptable
		Summer	15	+15%	Standing	20		Acceptable
		Fall	17	+13%	Walking	24		Acceptable
		Winter	19	+12%	Walking	27		Acceptable
		Annual	17		Walking	24		Acceptable
	C	Spring	19	+12%	Walking	26		Acceptable
		Summer	15	+15%	Standing	20		Acceptable
		Fall	17	+13%	Walking	23		Acceptable
		Winter	19	+12%	Walking	26		Acceptable
		Annual	18	+13%	Walking	24		Acceptable

Notes: 1) Wind speeds are for a 1% probability of exceedance, and  
 2) %Change is based on comparison with Configuration A and only those that are greater than 10% are listed.

Configurations

- A - Existing
- B - No-Build
- C - Build

Mean Wind Speed Criteria

- Comfortable for Sitting: ≤ 12 mph
- Comfortable for Standing: > 12 and ≤ 15 mph
- Comfortable for Walking: > 15 and ≤ 19 mph
- Uncomfortable for Walking: > 19 and ≤ 27 mph
- Dangerous Conditions: > 27 mph

Effective Gust Criteria

- Acceptable: ≤ 31 mph
- Unacceptable: > 31 mph

**Table 1: Pedestrian Wind Comfort and Safety Categories - Multiple Seasons**

BRA Criteria			Mean Wind Speed			Effective Gust Wind Speed		
Loc.	Config.	Season	Speed(mph)	%Change	RATING	Speed(mph)	%Change	RATING
46	A	Spring	15		Standing	21		Acceptable
		Summer	11		Sitting	16		Acceptable
		Fall	13		Standing	19		Acceptable
		Winter	14		Standing	21		Acceptable
		Annual	13		Standing	20		Acceptable
	B	Spring	14		Standing	21		Acceptable
		Summer	11		Sitting	16		Acceptable
		Fall	13		Standing	18		Acceptable
		Winter	14		Standing	21		Acceptable
		Annual	13		Standing	19		Acceptable
	C	Spring	17	+13%	Walking	24	+14%	Acceptable
		Summer	13	+18%	Standing	18	+13%	Acceptable
		Fall	15	+15%	Standing	21	+11%	Acceptable
		Winter	17	+21%	Walking	24	+14%	Acceptable
		Annual	16	+23%	Walking	22	+10%	Acceptable
47	A	Spring	13		Standing	21		Acceptable
		Summer	10		Sitting	16		Acceptable
		Fall	12		Sitting	19		Acceptable
		Winter	14		Standing	22		Acceptable
		Annual	13		Standing	20		Acceptable
	B	Spring	14		Standing	22		Acceptable
		Summer	11	+10%	Sitting	16		Acceptable
		Fall	13		Standing	20		Acceptable
		Winter	15		Standing	23		Acceptable
		Annual	13		Standing	21		Acceptable
	C	Spring	15	+15%	Standing	23	+10%	Acceptable
		Summer	12	+20%	Sitting	18	+13%	Acceptable
		Fall	14	+17%	Standing	21	+11%	Acceptable
		Winter	16	+14%	Walking	24		Acceptable
		Annual	14		Standing	22	+10%	Acceptable
48	A	Spring	14		Standing	21		Acceptable
		Summer	10		Sitting	15		Acceptable
		Fall	12		Sitting	19		Acceptable
		Winter	13		Standing	21		Acceptable
		Annual	13		Standing	20		Acceptable
	B	Spring	14		Standing	21		Acceptable
		Summer	10		Sitting	16		Acceptable
		Fall	12		Sitting	20		Acceptable
		Winter	14		Standing	22		Acceptable
		Annual	13		Standing	20		Acceptable
	C	Spring	15		Standing	23	+10%	Acceptable
		Summer	11	+10%	Sitting	17	+13%	Acceptable
		Fall	14	+17%	Standing	21	+11%	Acceptable
		Winter	15	+15%	Standing	23	+10%	Acceptable
		Annual	14		Standing	22	+10%	Acceptable

Notes: 1) Wind speeds are for a 1% probability of exceedance, and  
 2) %Change is based on comparison with Configuration A and only those that are greater than 10% are listed.

**Configurations**

- A - Existing
- B - No-Build
- C - Build

**Mean Wind Speed Criteria**

- Comfortable for Sitting: ≤ 12 mph
- Comfortable for Standing: > 12 and ≤ 15 mph
- Comfortable for Walking: > 15 and ≤ 19 mph
- Uncomfortable for Walking: > 19 and ≤ 27 mph
- Dangerous Conditions: > 27 mph

**Effective Gust Criteria**

- Acceptable: ≤ 31 mph
- Unacceptable: > 31 mph

**Table 1: Pedestrian Wind Comfort and Safety Categories - Multiple Seasons**

BRA Criteria			Mean Wind Speed			Effective Gust Wind Speed		
Loc.	Config.	Season	Speed(mph)	%Change	RATING	Speed(mph)	%Change	RATING
49	A	Spring	17		Walking	24		Acceptable
		Summer	13		Standing	18		Acceptable
		Fall	15		Standing	22		Acceptable
		Winter	17		Walking	24		Acceptable
		Annual	16		Walking	22		Acceptable
	B	Spring	17		Walking	24		Acceptable
		Summer	13		Standing	19		Acceptable
		Fall	15		Standing	22		Acceptable
		Winter	17		Walking	24		Acceptable
		Annual	16		Walking	23		Acceptable
	C	Spring	18		Walking	25	+11%	Acceptable
		Summer	14		Standing	20		Acceptable
		Fall	16		Walking	23		Acceptable
		Winter	17		Walking	24		Acceptable
		Annual	16		Walking	23		Acceptable
50	A	Spring	DATA NOT AVAILABLE					
		Summer	DATA NOT AVAILABLE					
		Fall	DATA NOT AVAILABLE					
		Winter	DATA NOT AVAILABLE					
		Annual	DATA NOT AVAILABLE					
	B	Spring	DATA NOT AVAILABLE					
		Summer	DATA NOT AVAILABLE					
		Fall	DATA NOT AVAILABLE					
		Winter	DATA NOT AVAILABLE					
		Annual	DATA NOT AVAILABLE					
	C	Spring	DATA NOT AVAILABLE					
		Summer	DATA NOT AVAILABLE					
		Fall	DATA NOT AVAILABLE					
		Winter	DATA NOT AVAILABLE					
		Annual	DATA NOT AVAILABLE					
51	A	Spring	DATA NOT AVAILABLE					
		Summer	DATA NOT AVAILABLE					
		Fall	DATA NOT AVAILABLE					
		Winter	DATA NOT AVAILABLE					
		Annual	DATA NOT AVAILABLE					
	B	Spring	DATA NOT AVAILABLE					
		Summer	DATA NOT AVAILABLE					
		Fall	DATA NOT AVAILABLE					
		Winter	DATA NOT AVAILABLE					
		Annual	DATA NOT AVAILABLE					
	C	Spring	DATA NOT AVAILABLE					
		Summer	DATA NOT AVAILABLE					
		Fall	DATA NOT AVAILABLE					
		Winter	DATA NOT AVAILABLE					
		Annual	DATA NOT AVAILABLE					

Notes: 1) Wind speeds are for a 1% probability of exceedance, and  
 2) %Change is based on comparison with Configuration A and only those that are greater than 10% are listed.

Configurations

- A - Existing
- B - No-Build
- C - Build

Mean Wind Speed Criteria

- Comfortable for Sitting: ≤ 12 mph
- Comfortable for Standing: > 12 and ≤ 15 mph
- Comfortable for Walking: > 15 and ≤ 19 mph
- Uncomfortable for Walking: > 19 and ≤ 27 mph
- Dangerous Conditions: > 27 mph

Effective Gust Criteria

- Acceptable: ≤ 31 mph
- Unacceptable: > 31 mph



**Table 1: Pedestrian Wind Comfort and Safety Categories - Multiple Seasons**

BRA Criteria			Mean Wind Speed			Effective Gust Wind Speed		
Loc.	Config.	Season	Speed(mph)	%Change	RATING	Speed(mph)	%Change	RATING
52	A	Spring	18		Walking	25		Acceptable
		Summer	12		Sitting	18		Acceptable
		Fall	16		Walking	23		Acceptable
		Winter	17		Walking	25		Acceptable
		Annual	16		Walking	23		Acceptable
	B	Spring	17		Walking	25		Acceptable
		Summer	13		Standing	18		Acceptable
		Fall	16		Walking	23		Acceptable
		Winter	17		Walking	25		Acceptable
		Annual	16		Walking	23		Acceptable
	C	Spring	16	-10%	Walking	24		Acceptable
		Summer	12		Sitting	17		Acceptable
		Fall	15		Standing	22		Acceptable
		Winter	16		Walking	24		Acceptable
		Annual	15		Standing	22		Acceptable
53	A	Spring	15		Standing	21		Acceptable
		Summer	11		Sitting	15		Acceptable
		Fall	13		Standing	19		Acceptable
		Winter	15		Standing	21		Acceptable
		Annual	14		Standing	19		Acceptable
	B	Spring	16		Walking	22		Acceptable
		Summer	11		Sitting	16		Acceptable
		Fall	14		Standing	20		Acceptable
		Winter	15		Standing	22		Acceptable
		Annual	14		Standing	21	+11%	Acceptable
	C	Spring	14		Standing	21		Acceptable
		Summer	10		Sitting	15		Acceptable
		Fall	13		Standing	18		Acceptable
		Winter	14		Standing	20		Acceptable
		Annual	13		Standing	19		Acceptable
54	A	Spring	17		Walking	23		Acceptable
		Summer	12		Sitting	17		Acceptable
		Fall	15		Standing	21		Acceptable
		Winter	17		Walking	23		Acceptable
		Annual	15		Standing	22		Acceptable
	B	Spring	18		Walking	25		Acceptable
		Summer	13		Standing	19	+12%	Acceptable
		Fall	16		Walking	23	+10%	Acceptable
		Winter	18		Walking	25		Acceptable
		Annual	17	+13%	Walking	23		Acceptable
	C	Spring	17		Walking	24		Acceptable
		Summer	13		Standing	17		Acceptable
		Fall	16		Walking	22		Acceptable
		Winter	17		Walking	24		Acceptable
		Annual	16		Walking	22		Acceptable

Notes: 1) Wind speeds are for a 1% probability of exceedance, and  
 2) %Change is based on comparison with Configuration A and only those that are greater than 10% are listed.

Configurations

- A - Existing
- B - No-Build
- C - Build

Mean Wind Speed Criteria

- Comfortable for Sitting: ≤ 12 mph
- Comfortable for Standing: > 12 and ≤ 15 mph
- Comfortable for Walking: > 15 and ≤ 19 mph
- Uncomfortable for Walking: > 19 and ≤ 27 mph
- Dangerous Conditions: > 27 mph

Effective Gust Criteria

- Acceptable: ≤ 31 mph
- Unacceptable: > 31 mph

**Table 1: Pedestrian Wind Comfort and Safety Categories - Multiple Seasons**

BRA Criteria			Mean Wind Speed			Effective Gust Wind Speed		
Loc.	Config.	Season	Speed(mph)	%Change	RATING	Speed(mph)	%Change	RATING
55	A	Spring	12		Sitting	19		Acceptable
		Summer	9		Sitting	14		Acceptable
		Fall	11		Sitting	17		Acceptable
		Winter	12		Sitting	19		Acceptable
		Annual	11		Sitting	18		Acceptable
	B	Spring	12		Sitting	19		Acceptable
		Summer	9		Sitting	14		Acceptable
		Fall	11		Sitting	18		Acceptable
		Winter	12		Sitting	20		Acceptable
		Annual	11		Sitting	18		Acceptable
	C	Spring	13		Standing	20		Acceptable
		Summer	9		Sitting	14		Acceptable
		Fall	11		Sitting	18		Acceptable
		Winter	13		Standing	20		Acceptable
		Annual	12		Sitting	19		Acceptable
56	A	Spring	15		Standing	22		Acceptable
		Summer	11		Sitting	16		Acceptable
		Fall	14		Standing	20		Acceptable
		Winter	15		Standing	22		Acceptable
		Annual	14		Standing	20		Acceptable
	B	Spring	15		Standing	22		Acceptable
		Summer	11		Sitting	16		Acceptable
		Fall	14		Standing	20		Acceptable
		Winter	15		Standing	22		Acceptable
		Annual	14		Standing	20		Acceptable
	C	Spring	16		Walking	23		Acceptable
		Summer	11		Sitting	17		Acceptable
		Fall	14		Standing	21		Acceptable
		Winter	16		Walking	22		Acceptable
		Annual	15		Standing	21		Acceptable
57	A	Spring	17		Walking	24		Acceptable
		Summer	13		Standing	19		Acceptable
		Fall	15		Standing	22		Acceptable
		Winter	16		Walking	24		Acceptable
		Annual	16		Walking	23		Acceptable
	B	Spring	18		Walking	26		Acceptable
		Summer	16	+23%	Walking	21	+11%	Acceptable
		Fall	16		Walking	23		Acceptable
		Winter	17		Walking	25		Acceptable
		Annual	17		Walking	24		Acceptable
	C	Spring	18		Walking	25		Acceptable
		Summer	15	+15%	Standing	20		Acceptable
		Fall	16		Walking	23		Acceptable
		Winter	17		Walking	25		Acceptable
		Annual	17		Walking	24		Acceptable

Notes: 1) Wind speeds are for a 1% probability of exceedance, and  
 2) %Change is based on comparison with Configuration A and only those that are greater than 10% are listed.

Configurations

- A - Existing
- B - No-Build
- C - Build

Mean Wind Speed Criteria

- Comfortable for Sitting: ≤ 12 mph
- Comfortable for Standing: > 12 and ≤ 15 mph
- Comfortable for Walking: > 15 and ≤ 19 mph
- Uncomfortable for Walking: > 19 and ≤ 27 mph
- Dangerous Conditions: > 27 mph

Effective Gust Criteria

- Acceptable: ≤ 31 mph
- Unacceptable: > 31 mph

**Table 1: Pedestrian Wind Comfort and Safety Categories - Multiple Seasons**

BRA Criteria			Mean Wind Speed			Effective Gust Wind Speed		
Loc.	Config.	Season	Speed(mph)	%Change	RATING	Speed(mph)	%Change	RATING
58	A	Spring	13		Standing	20		Acceptable
		Summer	9		Sitting	15		Acceptable
		Fall	12		Sitting	18		Acceptable
		Winter	13		Standing	20		Acceptable
		Annual	12		Sitting	19		Acceptable
	B	Spring	13		Standing	21		Acceptable
		Summer	11	+22%	Sitting	17	+13%	Acceptable
		Fall	12		Sitting	19		Acceptable
		Winter	13		Standing	21		Acceptable
		Annual	12		Sitting	20		Acceptable
	C	Spring	13		Standing	21		Acceptable
		Summer	10	+11%	Sitting	16		Acceptable
		Fall	12		Sitting	20	+11%	Acceptable
		Winter	14		Standing	22	+10%	Acceptable
		Annual	13		Standing	20		Acceptable
59	A	Spring	13		Standing	19		Acceptable
		Summer	9		Sitting	14		Acceptable
		Fall	12		Sitting	18		Acceptable
		Winter	13		Standing	20		Acceptable
		Annual	12		Sitting	18		Acceptable
	B	Spring	13		Standing	21	+11%	Acceptable
		Summer	10	+11%	Sitting	17	+21%	Acceptable
		Fall	12		Sitting	19		Acceptable
		Winter	13		Standing	21		Acceptable
		Annual	12		Sitting	20	+11%	Acceptable
	C	Spring	13		Standing	20		Acceptable
		Summer	10	+11%	Sitting	16	+14%	Acceptable
		Fall	12		Sitting	19		Acceptable
		Winter	13		Standing	21		Acceptable
		Annual	12		Sitting	19		Acceptable
60	A	Spring	11		Sitting	18		Acceptable
		Summer	8		Sitting	13		Acceptable
		Fall	10		Sitting	17		Acceptable
		Winter	11		Sitting	18		Acceptable
		Annual	10		Sitting	17		Acceptable
	B	Spring	11		Sitting	18		Acceptable
		Summer	8		Sitting	14		Acceptable
		Fall	10		Sitting	17		Acceptable
		Winter	11		Sitting	18		Acceptable
		Annual	10		Sitting	17		Acceptable
	C	Spring	12		Sitting	19		Acceptable
		Summer	9	+13%	Sitting	15	+15%	Acceptable
		Fall	11	+10%	Sitting	18		Acceptable
		Winter	12		Sitting	20	+11%	Acceptable
		Annual	11	+10%	Sitting	18		Acceptable

Notes: 1) Wind speeds are for a 1% probability of exceedance, and  
 2) %Change is based on comparison with Configuration A and only those that are greater than 10% are listed.

Configurations

A - Existing  
 B - No-Build  
 C - Build

Mean Wind Speed Criteria

Comfortable for Sitting: ≤ 12 mph  
 Comfortable for Standing: > 12 and ≤ 15 mph  
 Comfortable for Walking: > 15 and ≤ 19 mph  
 Uncomfortable for Walking: > 19 and ≤ 27 mph  
 Dangerous Conditions: > 27 mph

Effective Gust Criteria

Acceptable: ≤ 31 mph  
 Unacceptable: > 31 mph

**Table 1: Pedestrian Wind Comfort and Safety Categories - Multiple Seasons**

BRA Criteria			Mean Wind Speed			Effective Gust Wind Speed		
Loc.	Config.	Season	Speed(mph)	%Change	RATING	Speed(mph)	%Change	RATING
61	A	Spring	14		Standing	22		Acceptable
		Summer	10		Sitting	16		Acceptable
		Fall	13		Standing	20		Acceptable
		Winter	15		Standing	23		Acceptable
		Annual	13		Standing	21		Acceptable
	B	Spring	14		Standing	21		Acceptable
		Summer	11	+10%	Sitting	17		Acceptable
		Fall	14		Standing	20		Acceptable
		Winter	16		Walking	23		Acceptable
		Annual	14		Standing	21		Acceptable
	C	Spring	15		Standing	22		Acceptable
		Summer	12	+20%	Sitting	17		Acceptable
		Fall	14		Standing	21		Acceptable
		Winter	16		Walking	24		Acceptable
		Annual	15	+15%	Standing	22		Acceptable
62	A	Spring	13		Standing	20		Acceptable
		Summer	10		Sitting	16		Acceptable
		Fall	12		Sitting	19		Acceptable
		Winter	13		Standing	21		Acceptable
		Annual	12		Sitting	19		Acceptable
	B	Spring	18	+38%	Walking	26	+30%	Acceptable
		Summer	14	+40%	Standing	20	+25%	Acceptable
		Fall	17	+42%	Walking	24	+26%	Acceptable
		Winter	19	+46%	Walking	27	+29%	Acceptable
		Annual	17	+42%	Walking	25	+32%	Acceptable
	C	Spring	24	+85%	Uncomfortable	31	+55%	Acceptable
		Summer	19	+90%	Walking	24	+50%	Acceptable
		Fall	22	+83%	Uncomfortable	28	+47%	Acceptable
		Winter	24	+85%	Uncomfortable	32	+52%	Unacceptable
		Annual	22	+83%	Uncomfortable	29	+52%	Acceptable
63	A	Spring	18		Walking	26		Acceptable
		Summer	15		Standing	21		Acceptable
		Fall	17		Walking	24		Acceptable
		Winter	19		Walking	27		Acceptable
		Annual	17		Walking	25		Acceptable
	B	Spring	21	+17%	Uncomfortable	29	+12%	Acceptable
		Summer	17	+13%	Walking	23	+10%	Acceptable
		Fall	20	+18%	Uncomfortable	27	+13%	Acceptable
		Winter	22	+16%	Uncomfortable	30	+11%	Acceptable
		Annual	20	+18%	Uncomfortable	28	+12%	Acceptable
	C	Spring	22	+22%	Uncomfortable	30	+15%	Acceptable
		Summer	18	+20%	Walking	24	+14%	Acceptable
		Fall	20	+18%	Uncomfortable	28	+17%	Acceptable
		Winter	22	+16%	Uncomfortable	31	+15%	Acceptable
		Annual	21	+24%	Uncomfortable	28	+12%	Acceptable

Notes: 1) Wind speeds are for a 1% probability of exceedance, and  
 2) %Change is based on comparison with Configuration A and only those that are greater than 10% are listed.

Configurations

- A - Existing
- B - No-Build
- C - Build

Mean Wind Speed Criteria

- Comfortable for Sitting: ≤ 12 mph
- Comfortable for Standing: > 12 and ≤ 15 mph
- Comfortable for Walking: > 15 and ≤ 19 mph
- Uncomfortable for Walking: > 19 and ≤ 27 mph
- Dangerous Conditions: > 27 mph

Effective Gust Criteria

- Acceptable: ≤ 31 mph
- Unacceptable: > 31 mph

**Table 1: Pedestrian Wind Comfort and Safety Categories - Multiple Seasons**

BRA Criteria			Mean Wind Speed			Effective Gust Wind Speed		
Loc.	Config.	Season	Speed(mph)	%Change	RATING	Speed(mph)	%Change	RATING
64	A	Spring	18		Walking	26		Acceptable
		Summer	15		Standing	20		Acceptable
		Fall	17		Walking	24		Acceptable
		Winter	19		Walking	27		Acceptable
		Annual	17		Walking	25		Acceptable
	B	Spring	19		Walking	28		Acceptable
		Summer	16		Walking	22	+10%	Acceptable
		Fall	18		Walking	26		Acceptable
		Winter	20		Uncomfortable	29		Acceptable
		Annual	18		Walking	27		Acceptable
	C	Spring	20	+11%	Uncomfortable	29	+12%	Acceptable
		Summer	16		Walking	23	+15%	Acceptable
		Fall	18		Walking	27	+13%	Acceptable
		Winter	20		Uncomfortable	30	+11%	Acceptable
		Annual	19	+12%	Walking	27		Acceptable
65	A	Spring	17		Walking	25		Acceptable
		Summer	13		Standing	19		Acceptable
		Fall	16		Walking	23		Acceptable
		Winter	17		Walking	25		Acceptable
		Annual	16		Walking	24		Acceptable
	B	Spring	17		Walking	25		Acceptable
		Summer	14		Standing	20		Acceptable
		Fall	16		Walking	23		Acceptable
		Winter	18		Walking	26		Acceptable
		Annual	17		Walking	24		Acceptable
	C	Spring	17		Walking	24		Acceptable
		Summer	14		Standing	20		Acceptable
		Fall	16		Walking	23		Acceptable
		Winter	18		Walking	25		Acceptable
		Annual	16		Walking	23		Acceptable
66	A	Spring	15		Standing	23		Acceptable
		Summer	12		Sitting	18		Acceptable
		Fall	14		Standing	21		Acceptable
		Winter	15		Standing	23		Acceptable
		Annual	14		Standing	22		Acceptable
	B	Spring	16		Walking	25		Acceptable
		Summer	13		Standing	20	+11%	Acceptable
		Fall	15		Standing	23	+10%	Acceptable
		Winter	17	+13%	Walking	25		Acceptable
		Annual	15		Standing	23		Acceptable
	C	Spring	16		Walking	24		Acceptable
		Summer	13		Standing	19		Acceptable
		Fall	15		Standing	22		Acceptable
		Winter	16		Walking	24		Acceptable
		Annual	15		Standing	22		Acceptable

Notes: 1) Wind speeds are for a 1% probability of exceedance, and  
 2) %Change is based on comparison with Configuration A and only those that are greater than 10% are listed.

Configurations

- A - Existing
- B - No-Build
- C - Build

Mean Wind Speed Criteria

- Comfortable for Sitting: ≤ 12 mph
- Comfortable for Standing: > 12 and ≤ 15 mph
- Comfortable for Walking: > 15 and ≤ 19 mph
- Uncomfortable for Walking: > 19 and ≤ 27 mph
- Dangerous Conditions: > 27 mph

Effective Gust Criteria

- Acceptable: ≤ 31 mph
- Unacceptable: > 31 mph

**Table 1: Pedestrian Wind Comfort and Safety Categories - Multiple Seasons**

BRA Criteria			Mean Wind Speed			Effective Gust Wind Speed		
Loc.	Config.	Season	Speed(mph)	%Change	RATING	Speed(mph)	%Change	RATING
67	A	Spring	15		Standing	23		Acceptable
		Summer	12		Sitting	18		Acceptable
		Fall	13		Standing	21		Acceptable
		Winter	14		Standing	23		Acceptable
		Annual	14		Standing	21		Acceptable
	B	Spring	10	-32%	Sitting	17	-25%	Acceptable
		Summer	8	-32%	Sitting	13	-27%	Acceptable
		Fall	9	-30%	Sitting	16	-23%	Acceptable
		Winter	10	-28%	Sitting	17	-25%	Acceptable
		Annual	9	-35%	Sitting	16	-23%	Acceptable
	C	Spring	11	-26%	Sitting	19	-16%	Acceptable
		Summer	8	-32%	Sitting	14	-21%	Acceptable
		Fall	11	-14%	Sitting	18	-13%	Acceptable
		Winter	11	-20%	Sitting	19	-16%	Acceptable
		Annual	11	-20%	Sitting	18	-13%	Acceptable
68	A	Spring	15		Standing	22		Acceptable
		Summer	12		Sitting	18		Acceptable
		Fall	13		Standing	21		Acceptable
		Winter	15		Standing	23		Acceptable
		Annual	14		Standing	21		Acceptable
	B	Spring	13	-12%	Standing	20		Acceptable
		Summer	10	-16%	Sitting	16	-10%	Acceptable
		Fall	12		Sitting	19		Acceptable
		Winter	13	-12%	Standing	21		Acceptable
		Annual	12	-13%	Sitting	19		Acceptable
	C	Spring	16		Walking	24		Acceptable
		Summer	13		Standing	19		Acceptable
		Fall	15	+15%	Standing	22		Acceptable
		Winter	16		Walking	24		Acceptable
		Annual	15		Standing	22		Acceptable
69	A	Spring	15		Standing	23		Acceptable
		Summer	12		Sitting	17		Acceptable
		Fall	14		Standing	22		Acceptable
		Winter	15		Standing	24		Acceptable
		Annual	14		Standing	22		Acceptable
	B	Spring	19	+27%	Walking	29	+26%	Acceptable
		Summer	15	+25%	Standing	23	+35%	Acceptable
		Fall	17	+21%	Walking	27	+23%	Acceptable
		Winter	18	+20%	Walking	29	+21%	Acceptable
		Annual	17	+21%	Walking	27	+23%	Acceptable
	C	Spring	16		Walking	24		Acceptable
		Summer	13		Standing	19	+12%	Acceptable
		Fall	14		Standing	22		Acceptable
		Winter	16		Walking	25		Acceptable
		Annual	15		Standing	22		Acceptable

Notes: 1) Wind speeds are for a 1% probability of exceedance, and  
 2) %Change is based on comparison with Configuration A and only those that are greater than 10% are listed.

Configurations

- A - Existing
- B - No-Build
- C - Build

Mean Wind Speed Criteria

- Comfortable for Sitting: ≤ 12 mph
- Comfortable for Standing: > 12 and ≤ 15 mph
- Comfortable for Walking: > 15 and ≤ 19 mph
- Uncomfortable for Walking: > 19 and ≤ 27 mph
- Dangerous Conditions: > 27 mph

Effective Gust Criteria

- Acceptable: ≤ 31 mph
- Unacceptable: > 31 mph

**Table 1: Pedestrian Wind Comfort and Safety Categories - Multiple Seasons**

BRA Criteria			Mean Wind Speed			Effective Gust Wind Speed		
Loc.	Config.	Season	Speed(mph)	%Change	RATING	Speed(mph)	%Change	RATING
70	A	Spring	12		Sitting	19		Acceptable
		Summer	9		Sitting	14		Acceptable
		Fall	11		Sitting	18		Acceptable
		Winter	12		Sitting	20		Acceptable
		Annual	11		Sitting	18		Acceptable
	B	Spring	10	-16%	Sitting	17	-10%	Acceptable
		Summer	8	-10%	Sitting	14		Acceptable
		Fall	9	-17%	Sitting	16	-10%	Acceptable
		Winter	10	-16%	Sitting	17	-14%	Acceptable
		Annual	9	-17%	Sitting	16	-10%	Acceptable
	C	Spring	11		Sitting	18		Acceptable
		Summer	9		Sitting	15		Acceptable
		Fall	10		Sitting	17		Acceptable
		Winter	11		Sitting	19		Acceptable
		Annual	11		Sitting	18		Acceptable
71	A	Spring	13		Standing	21		Acceptable
		Summer	10		Sitting	16		Acceptable
		Fall	12		Sitting	19		Acceptable
		Winter	13		Standing	21		Acceptable
		Annual	12		Sitting	19		Acceptable
	B	Spring	11	-14%	Sitting	18	-13%	Acceptable
		Summer	8	-19%	Sitting	13	-18%	Acceptable
		Fall	10	-16%	Sitting	17	-10%	Acceptable
		Winter	11	-14%	Sitting	18	-13%	Acceptable
		Annual	10	-16%	Sitting	17	-10%	Acceptable
	C	Spring	17	+31%	Walking	26	+24%	Acceptable
		Summer	13	+30%	Standing	19	+19%	Acceptable
		Fall	15	+25%	Standing	23	+21%	Acceptable
		Winter	16	+23%	Walking	25	+19%	Acceptable
		Annual	15	+25%	Standing	23	+21%	Acceptable
72	A	Spring	15		Standing	23		Acceptable
		Summer	11		Sitting	17		Acceptable
		Fall	14		Standing	21		Acceptable
		Winter	15		Standing	23		Acceptable
		Annual	14		Standing	22		Acceptable
	B	Spring	13	-12%	Standing	21		Acceptable
		Summer	10		Sitting	16		Acceptable
		Fall	12	-13%	Sitting	19		Acceptable
		Winter	13	-12%	Standing	22		Acceptable
		Annual	12	-13%	Sitting	20		Acceptable
	C	Spring	16		Walking	23		Acceptable
		Summer	11		Sitting	17		Acceptable
		Fall	14		Standing	21		Acceptable
		Winter	16		Walking	23		Acceptable
		Annual	14		Standing	22		Acceptable

Notes: 1) Wind speeds are for a 1% probability of exceedance, and  
 2) %Change is based on comparison with Configuration A and only those that are greater than 10% are listed.

Configurations

- A - Existing
- B - No-Build
- C - Build

Mean Wind Speed Criteria

- Comfortable for Sitting: ≤ 12 mph
- Comfortable for Standing: > 12 and ≤ 15 mph
- Comfortable for Walking: > 15 and ≤ 19 mph
- Uncomfortable for Walking: > 19 and ≤ 27 mph
- Dangerous Conditions: > 27 mph

Effective Gust Criteria

- Acceptable: ≤ 31 mph
- Unacceptable: > 31 mph

**Table 1: Pedestrian Wind Comfort and Safety Categories - Multiple Seasons**

BRA Criteria			Mean Wind Speed			Effective Gust Wind Speed		
Loc.	Config.	Season	Speed(mph)	%Change	RATING	Speed(mph)	%Change	RATING
73	A	Spring	17		Walking	24		Acceptable
		Summer	12		Sitting	17		Acceptable
		Fall	15		Standing	22		Acceptable
		Winter	16		Walking	23		Acceptable
		Annual	15		Standing	22		Acceptable
	B	Spring	18		Walking	28	+17%	Acceptable
		Summer	14	+17%	Standing	21	+24%	Acceptable
		Fall	16		Walking	25	+14%	Acceptable
		Winter	18	+13%	Walking	28	+22%	Acceptable
		Annual	17	+13%	Walking	26	+18%	Acceptable
	C	Spring	18		Walking	27	+13%	Acceptable
		Summer	14	+17%	Standing	21	+24%	Acceptable
		Fall	16		Walking	24		Acceptable
		Winter	18	+13%	Walking	27	+17%	Acceptable
		Annual	17	+13%	Walking	25	+14%	Acceptable
74	A	Spring	18		Walking	26		Acceptable
		Summer	13		Standing	19		Acceptable
		Fall	16		Walking	23		Acceptable
		Winter	18		Walking	25		Acceptable
		Annual	17		Walking	24		Acceptable
	B	Spring	18		Walking	27		Acceptable
		Summer	13		Standing	20		Acceptable
		Fall	17		Walking	25		Acceptable
		Winter	19		Walking	28	+12%	Acceptable
		Annual	18		Walking	26		Acceptable
	C	Spring	18		Walking	27		Acceptable
		Summer	13		Standing	19		Acceptable
		Fall	17		Walking	25		Acceptable
		Winter	20	+11%	Uncomfortable	28	+12%	Acceptable
		Annual	18		Walking	26		Acceptable

Notes: 1) Wind speeds are for a 1% probability of exceedance, and  
 2) %Change is based on comparison with Configuration A and only those that are greater than 10% are listed.

Configurations

- A - Existing
- B - No-Build
- C - Build

Mean Wind Speed Criteria

- Comfortable for Sitting: ≤ 12 mph
- Comfortable for Standing: > 12 and ≤ 15 mph
- Comfortable for Walking: > 15 and ≤ 19 mph
- Uncomfortable for Walking: > 19 and ≤ 27 mph
- Dangerous Conditions: > 27 mph

Effective Gust Criteria

- Acceptable: ≤ 31 mph
- Unacceptable: > 31 mph



**Table 3: Pedestrian Wind Comfort and Safety Categories - Multiple Seasons**

BRA Criteria			Mean Wind Speed			Effective Gust Wind Speed			
Loc.	Config.	Season	Speed(mph)	%Change	RATING	Speed(mph)	%Change	RATING	
1	A	Spring	16		Walking	24		Acceptable	
		Summer	14		Standing	21		Acceptable	
		Fall	15		Standing	23		Acceptable	
		Winter	17		Walking	25		Acceptable	
		Annual	15		Standing	23		Acceptable	
	B	Spring	13	-18%	Standing	20	-16%	Acceptable	
		Summer	10	-28%	Sitting	16	-23%	Acceptable	
		Fall	12	-19%	Sitting	19	-16%	Acceptable	
		Winter	14	-17%	Standing	21	-15%	Acceptable	
		Annual	12	-19%	Sitting	20	-12%	Acceptable	
	2	A	Spring	18		Walking	27		Acceptable
			Summer	16		Walking	23		Acceptable
			Fall	17		Walking	25		Acceptable
			Winter	19		Walking	28		Acceptable
Annual			18		Walking	26		Acceptable	
B		Spring	19		Walking	25		Acceptable	
		Summer	16	-12%	Walking	20	-12%	Acceptable	
		Fall	17		Walking	23		Acceptable	
		Winter	19	-10%	Walking	25	-10%	Acceptable	
		Annual	18	-11%	Walking	23	-11%	Acceptable	
3	A	Spring	19		Walking	28		Acceptable	
		Summer	16		Walking	23		Acceptable	
		Fall	18		Walking	26		Acceptable	
		Winter	20		Uncomfortable	28		Acceptable	
		Annual	18		Walking	26		Acceptable	
	B	Spring	19		Walking	25	-10%	Acceptable	
		Summer	15	-24%	Standing	20	-12%	Acceptable	
		Fall	17	-11%	Walking	23	-11%	Acceptable	
		Winter	19		Walking	26		Acceptable	
		Annual	17	-11%	Walking	23	-11%	Acceptable	
4	A	Spring	17		Walking	24		Acceptable	
		Summer	13		Standing	19		Acceptable	
		Fall	16		Walking	23		Acceptable	
		Winter	17		Walking	25		Acceptable	
		Annual	16		Walking	23		Acceptable	
	B	Spring	21	+24%	Uncomfortable	28	+17%	Acceptable	
		Summer	17	+31%	Walking	22	+16%	Acceptable	
		Fall	19	+19%	Walking	25		Acceptable	
		Winter	21	+24%	Uncomfortable	28	+12%	Acceptable	
		Annual	19	+19%	Walking	26	+13%	Acceptable	

Notes: 1) Wind speeds are for a 1% probability of exceedance, and  
 2) %Change is based on comparison with Configuration A and only those that are greater than 10% are listed.

Configurations  
 A - Chapter 91  
 B - Build

Mean Wind Speed Criteria  
 Comfortable for Sitting: ≤ 12 mph  
 Comfortable for Standing: > 12 and ≤ 15 mph  
 Comfortable for Walking: > 15 and ≤ 19 mph  
 Uncomfortable for Walking: > 19 and ≤ 27 mph  
 Dangerous Conditions: > 27 mph

Effective Gust Criteria  
 Acceptable: ≤ 31 mph  
 Unacceptable: > 31 mph

**Table 3: Pedestrian Wind Comfort and Safety Categories - Multiple Seasons**

BRA Criteria			Mean Wind Speed			Effective Gust Wind Speed		
Loc.	Config.	Season	Speed(mph)	%Change	RATING	Speed(mph)	%Change	RATING
5	A	Spring	DATA NOT AVAILABLE					
		Summer	DATA NOT AVAILABLE					
		Fall	DATA NOT AVAILABLE					
		Winter	DATA NOT AVAILABLE					
		Annual	DATA NOT AVAILABLE					
	B	Spring	15		Standing	21		Acceptable
		Summer	12		Sitting	17		Acceptable
		Fall	13		Standing	20		Acceptable
		Winter	15		Standing	22		Acceptable
		Annual	14		Standing	20		Acceptable
6	A	Spring	17		Walking	26		Acceptable
		Summer	14		Standing	20		Acceptable
		Fall	16		Walking	24		Acceptable
		Winter	18		Walking	26		Acceptable
		Annual	17		Walking	24		Acceptable
	B	Spring	18		Walking	26		Acceptable
		Summer	15		Standing	21		Acceptable
		Fall	17		Walking	24		Acceptable
		Winter	19		Walking	26		Acceptable
		Annual	17		Walking	24		Acceptable
7	A	Spring	18		Walking	26		Acceptable
		Summer	14		Standing	21		Acceptable
		Fall	16		Walking	23		Acceptable
		Winter	18		Walking	26		Acceptable
		Annual	17		Walking	24		Acceptable
	B	Spring	18		Walking	26		Acceptable
		Summer	15		Standing	21		Acceptable
		Fall	17		Walking	24		Acceptable
		Winter	19		Walking	27		Acceptable
		Annual	18		Walking	25		Acceptable
8	A	Spring	17		Walking	23		Acceptable
		Summer	13		Standing	19		Acceptable
		Fall	15		Standing	22		Acceptable
		Winter	17		Walking	24		Acceptable
		Annual	16		Walking	22		Acceptable
	B	Spring	17		Walking	24		Acceptable
		Summer	13		Standing	19		Acceptable
		Fall	16		Walking	23		Acceptable
		Winter	17		Walking	25		Acceptable
		Annual	16		Walking	23		Acceptable

Notes: 1) Wind speeds are for a 1% probability of exceedance, and  
 2) %Change is based on comparison with Configuration A and only those that are greater than 10% are listed.

Configurations  
 A - Chapter 91  
 B - Build

Mean Wind Speed Criteria  
 Comfortable for Sitting: ≤ 12 mph  
 Comfortable for Standing: > 12 and ≤ 15 mph  
 Comfortable for Walking: > 15 and ≤ 19 mph  
 Uncomfortable for Walking: > 19 and ≤ 27 mph  
 Dangerous Conditions: > 27 mph

Effective Gust Criteria  
 Acceptable: ≤ 31 mph  
 Unacceptable: > 31 mph

**Table 3: Pedestrian Wind Comfort and Safety Categories - Multiple Seasons**

BRA Criteria			Mean Wind Speed			Effective Gust Wind Speed			
Loc.	Config.	Season	Speed(mph)	%Change	RATING	Speed(mph)	%Change	RATING	
9	A	Spring	15		Standing	22		Acceptable	
		Summer	11		Sitting	16		Acceptable	
		Fall	14		Standing	20		Acceptable	
		Winter	16		Walking	22		Acceptable	
		Annual	14		Standing	21		Acceptable	
	B	Spring	14		Standing	21		Acceptable	
		Summer	11		Sitting	16		Acceptable	
		Fall	13		Standing	19		Acceptable	
		Winter	14	-12%	Standing	21		Acceptable	
		Annual	13		Standing	20		Acceptable	
	10	A	Spring	14		Standing	21		Acceptable
			Summer	10		Sitting	16		Acceptable
Fall			13		Standing	20		Acceptable	
Winter			14		Standing	22		Acceptable	
Annual			13		Standing	20		Acceptable	
B		Spring	18	+29%	Walking	26	+24%	Acceptable	
		Summer	13	+30%	Standing	20	+25%	Acceptable	
		Fall	16	+23%	Walking	24	+20%	Acceptable	
		Winter	18	+29%	Walking	27	+23%	Acceptable	
		Annual	16	+23%	Walking	25	+25%	Acceptable	
11		A	Spring	15		Standing	22		Acceptable
			Summer	12		Sitting	17		Acceptable
	Fall		14		Standing	20		Acceptable	
	Winter		15		Standing	22		Acceptable	
	Annual		14		Standing	21		Acceptable	
	B	Spring	15		Standing	22		Acceptable	
		Summer	11		Sitting	17		Acceptable	
		Fall	14		Standing	21		Acceptable	
		Winter	15		Standing	23		Acceptable	
		Annual	14		Standing	21		Acceptable	
	12	A	Spring	20		Uncomfortable	26		Acceptable
			Summer	15		Standing	20		Acceptable
Fall			18		Walking	24		Acceptable	
Winter			20		Uncomfortable	27		Acceptable	
Annual			18		Walking	25		Acceptable	
B		Spring	18		Walking	25		Acceptable	
		Summer	14		Standing	20		Acceptable	
		Fall	16	-10%	Walking	23		Acceptable	
		Winter	18		Walking	25		Acceptable	
		Annual	16	-10%	Walking	23		Acceptable	

Notes: 1) Wind speeds are for a 1% probability of exceedance, and  
 2) %Change is based on comparison with Configuration A and only those that are greater than 10% are listed.

Configurations  
 A - Chapter 91  
 B - Build

Mean Wind Speed Criteria  
 Comfortable for Sitting: ≤ 12 mph  
 Comfortable for Standing: > 12 and ≤ 15 mph  
 Comfortable for Walking: > 15 and ≤ 19 mph  
 Uncomfortable for Walking: > 19 and ≤ 27 mph  
 Dangerous Conditions: > 27 mph

Effective Gust Criteria  
 Acceptable: ≤ 31 mph  
 Unacceptable: > 31 mph

**Table 3: Pedestrian Wind Comfort and Safety Categories - Multiple Seasons**

BRA Criteria			Mean Wind Speed			Effective Gust Wind Speed		
Loc.	Config.	Season	Speed(mph)	%Change	RATING	Speed(mph)	%Change	RATING
13	A	Spring	DATA NOT AVAILABLE					
		Summer	DATA NOT AVAILABLE					
		Fall	DATA NOT AVAILABLE					
		Winter	DATA NOT AVAILABLE					
		Annual	DATA NOT AVAILABLE					
	B	Spring	18		Walking	23		Acceptable
		Summer	14		Standing	18		Acceptable
		Fall	16		Walking	22		Acceptable
		Winter	18		Walking	24		Acceptable
		Annual	17		Walking	22		Acceptable
14	A	Spring	DATA NOT AVAILABLE					
		Summer	DATA NOT AVAILABLE					
		Fall	DATA NOT AVAILABLE					
		Winter	DATA NOT AVAILABLE					
		Annual	DATA NOT AVAILABLE					
	B	Spring	10		Sitting	15		Acceptable
		Summer	8		Sitting	12		Acceptable
		Fall	9		Sitting	14		Acceptable
		Winter	11		Sitting	17		Acceptable
		Annual	10		Sitting	15		Acceptable
15	A	Spring	21		Uncomfortable	28		Acceptable
		Summer	17		Walking	22		Acceptable
		Fall	19		Walking	25		Acceptable
		Winter	21		Uncomfortable	28		Acceptable
		Annual	19		Walking	26		Acceptable
	B	Spring	20		Uncomfortable	26		Acceptable
		Summer	17		Walking	21		Acceptable
		Fall	18		Walking	24		Acceptable
		Winter	21		Uncomfortable	27		Acceptable
		Annual	19		Walking	25		Acceptable
16	A	Spring	24		Uncomfortable	29		Acceptable
		Summer	19		Walking	23		Acceptable
		Fall	21		Uncomfortable	26		Acceptable
		Winter	24		Uncomfortable	29		Acceptable
		Annual	22		Uncomfortable	27		Acceptable
	B	Spring	22		Uncomfortable	28		Acceptable
		Summer	18		Walking	22		Acceptable
		Fall	20		Uncomfortable	26		Acceptable
		Winter	23		Uncomfortable	29		Acceptable
		Annual	21		Uncomfortable	26		Acceptable

Notes: 1) Wind speeds are for a 1% probability of exceedance, and  
 2) %Change is based on comparison with Configuration A and only those that are greater than 10% are listed.

Configurations  
 A - Chapter 91  
 B - Build

Mean Wind Speed Criteria  
 Comfortable for Sitting: ≤ 12 mph  
 Comfortable for Standing: > 12 and ≤ 15 mph  
 Comfortable for Walking: > 15 and ≤ 19 mph  
 Uncomfortable for Walking: > 19 and ≤ 27 mph  
 Dangerous Conditions: > 27 mph

Effective Gust Criteria  
 Acceptable: ≤ 31 mph  
 Unacceptable: > 31 mph

**Table 3: Pedestrian Wind Comfort and Safety Categories - Multiple Seasons**

BRA Criteria			Mean Wind Speed			Effective Gust Wind Speed			
Loc.	Config.	Season	Speed(mph)	%Change	RATING	Speed(mph)	%Change	RATING	
17	A	Spring	23		Uncomfortable	29		Acceptable	
		Summer	18		Walking	23		Acceptable	
		Fall	20		Uncomfortable	26		Acceptable	
		Winter	23		Uncomfortable	29		Acceptable	
		Annual	21		Uncomfortable	26		Acceptable	
	B	Spring	19	-16%	Walking	26	-12%	Acceptable	
		Summer	15	-16%	Standing	20		Acceptable	
		Fall	18		Walking	24		Acceptable	
		Winter	20	-12%	Uncomfortable	27		Acceptable	
		Annual	18	-13%	Walking	24		Acceptable	
	18	A	Spring	18		Walking	25		Acceptable
			Summer	15		Standing	20		Acceptable
			Fall	16		Walking	23		Acceptable
			Winter	18		Walking	25		Acceptable
Annual			17		Walking	23		Acceptable	
B		Spring	15	-16%	Standing	22	-11%	Acceptable	
		Summer	12	-19%	Sitting	17	-14%	Acceptable	
		Fall	14	-12%	Standing	21		Acceptable	
		Winter	16	-10%	Walking	23		Acceptable	
		Annual	14	-17%	Standing	21		Acceptable	
19	A	Spring	18		Walking	24		Acceptable	
		Summer	14		Standing	19		Acceptable	
		Fall	17		Walking	23		Acceptable	
		Winter	19		Walking	25		Acceptable	
		Annual	17		Walking	23		Acceptable	
	B	Spring	13	-27%	Standing	19	-20%	Acceptable	
		Summer	10	-28%	Sitting	16	-15%	Acceptable	
		Fall	12	-28%	Sitting	18	-21%	Acceptable	
		Winter	13	-31%	Standing	20	-19%	Acceptable	
		Annual	12	-28%	Sitting	18	-21%	Acceptable	
20	A	Spring	14		Standing	21		Acceptable	
		Summer	10		Sitting	15		Acceptable	
		Fall	13		Standing	19		Acceptable	
		Winter	14		Standing	22		Acceptable	
		Annual	13		Standing	20		Acceptable	
	B	Spring	14		Standing	21		Acceptable	
		Summer	11	+10%	Sitting	16		Acceptable	
		Fall	13		Standing	20		Acceptable	
		Winter	15		Standing	22		Acceptable	
		Annual	14		Standing	20		Acceptable	

Notes: 1) Wind speeds are for a 1% probability of exceedance, and  
 2) %Change is based on comparison with Configuration A and only those that are greater than 10% are listed.

Configurations  
 A - Chapter 91  
 B - Build

Mean Wind Speed Criteria  
 Comfortable for Sitting: ≤ 12 mph  
 Comfortable for Standing: > 12 and ≤ 15 mph  
 Comfortable for Walking: > 15 and ≤ 19 mph  
 Uncomfortable for Walking: > 19 and ≤ 27 mph  
 Dangerous Conditions: > 27 mph

Effective Gust Criteria  
 Acceptable: ≤ 31 mph  
 Unacceptable: > 31 mph

**Table 3: Pedestrian Wind Comfort and Safety Categories - Multiple Seasons**

BRA Criteria			Mean Wind Speed			Effective Gust Wind Speed			
Loc.	Config.	Season	Speed(mph)	%Change	RATING	Speed(mph)	%Change	RATING	
21	A	Spring	6		Sitting	9		Acceptable	
		Summer	4		Sitting	7		Acceptable	
		Fall	6		Sitting	9		Acceptable	
		Winter	6		Sitting	10		Acceptable	
		Annual	6		Sitting	9		Acceptable	
	B	Spring	6		Sitting	10	+11%	Acceptable	
		Summer	4		Sitting	7		Acceptable	
		Fall	6		Sitting	9		Acceptable	
		Winter	7	+17%	Sitting	10		Acceptable	
		Annual	6		Sitting	10	+11%	Acceptable	
	22	A	Spring	9		Sitting	15		Acceptable
			Summer	7		Sitting	11		Acceptable
			Fall	8		Sitting	13		Acceptable
			Winter	9		Sitting	15		Acceptable
Annual			9		Sitting	14		Acceptable	
B		Spring	8	-10%	Sitting	13	-12%	Acceptable	
		Summer	6	-13%	Sitting	9	-17%	Acceptable	
		Fall	8		Sitting	12		Acceptable	
		Winter	8	-10%	Sitting	13	-12%	Acceptable	
		Annual	8	-10%	Sitting	12	-13%	Acceptable	
23		A	Spring	21		Uncomfortable	28		Acceptable
			Summer	16		Walking	21		Acceptable
			Fall	19		Walking	26		Acceptable
			Winter	21		Uncomfortable	29		Acceptable
	Annual		19		Walking	26		Acceptable	
	B	Spring	21		Uncomfortable	28		Acceptable	
		Summer	16		Walking	22		Acceptable	
		Fall	19		Walking	26		Acceptable	
		Winter	22		Uncomfortable	29		Acceptable	
		Annual	20		Uncomfortable	27		Acceptable	
	24	A	Spring	17		Walking	23		Acceptable
			Summer	14		Standing	18		Acceptable
			Fall	15		Standing	21		Acceptable
			Winter	17		Walking	23		Acceptable
Annual			15		Standing	21		Acceptable	
B		Spring	18		Walking	23		Acceptable	
		Summer	15		Standing	19		Acceptable	
		Fall	16		Walking	21		Acceptable	
		Winter	17		Walking	23		Acceptable	
		Annual	16		Walking	21		Acceptable	

Notes: 1) Wind speeds are for a 1% probability of exceedance, and  
 2) %Change is based on comparison with Configuration A and only those that are greater than 10% are listed.

Configurations

A - Chapter 91  
 B - Build

Mean Wind Speed Criteria

Comfortable for Sitting: ≤ 12 mph  
 Comfortable for Standing: > 12 and ≤ 15 mph  
 Comfortable for Walking: > 15 and ≤ 19 mph  
 Uncomfortable for Walking: > 19 and ≤ 27 mph  
 Dangerous Conditions: > 27 mph

Effective Gust Criteria

Acceptable: ≤ 31 mph  
 Unacceptable: > 31 mph

**Table 3: Pedestrian Wind Comfort and Safety Categories - Multiple Seasons**

BRA Criteria			Mean Wind Speed			Effective Gust Wind Speed			
Loc.	Config.	Season	Speed(mph)	%Change	RATING	Speed(mph)	%Change	RATING	
25	A	Spring	15		Standing	23		Acceptable	
		Summer	11		Sitting	17		Acceptable	
		Fall	13		Standing	21		Acceptable	
		Winter	15		Standing	23		Acceptable	
		Annual	13		Standing	21		Acceptable	
	B	Spring	16		Walking	24		Acceptable	
		Summer	13	+18%	Standing	18		Acceptable	
		Fall	15	+15%	Standing	22		Acceptable	
		Winter	17	+13%	Walking	24		Acceptable	
		Annual	15	+15%	Standing	22		Acceptable	
	26	A	Spring	16		Walking	25		Acceptable
			Summer	12		Sitting	19		Acceptable
			Fall	15		Standing	23		Acceptable
			Winter	16		Walking	25		Acceptable
Annual			15		Standing	23		Acceptable	
B		Spring	15		Standing	23		Acceptable	
		Summer	11		Sitting	17	-10%	Acceptable	
		Fall	13	-12%	Standing	21		Acceptable	
		Winter	15		Standing	23		Acceptable	
		Annual	13	-12%	Standing	21		Acceptable	
27		A	Spring	10		Sitting	17		Acceptable
			Summer	7		Sitting	13		Acceptable
			Fall	9		Sitting	16		Acceptable
			Winter	10		Sitting	17		Acceptable
	Annual		9		Sitting	16		Acceptable	
	B	Spring	9		Sitting	16		Acceptable	
		Summer	7		Sitting	12		Acceptable	
		Fall	8	-10%	Sitting	15		Acceptable	
		Winter	9		Sitting	16		Acceptable	
		Annual	8	-10%	Sitting	15		Acceptable	
	28	A	Spring	8		Sitting	14		Acceptable
			Summer	6		Sitting	11		Acceptable
			Fall	8		Sitting	13		Acceptable
			Winter	9		Sitting	15		Acceptable
Annual			8		Sitting	13		Acceptable	
B		Spring	9	+13%	Sitting	14		Acceptable	
		Summer	7	+17%	Sitting	11		Acceptable	
		Fall	8		Sitting	13		Acceptable	
		Winter	9		Sitting	15		Acceptable	
		Annual	8		Sitting	14		Acceptable	

Notes: 1) Wind speeds are for a 1% probability of exceedance, and  
 2) %Change is based on comparison with Configuration A and only those that are greater than 10% are listed.

Configurations  
 A - Chapter 91  
 B - Build

Mean Wind Speed Criteria  
 Comfortable for Sitting: ≤ 12 mph  
 Comfortable for Standing: > 12 and ≤ 15 mph  
 Comfortable for Walking: > 15 and ≤ 19 mph  
 Uncomfortable for Walking: > 19 and ≤ 27 mph  
 Dangerous Conditions: > 27 mph

Effective Gust Criteria  
 Acceptable: ≤ 31 mph  
 Unacceptable: > 31 mph

**Table 3: Pedestrian Wind Comfort and Safety Categories - Multiple Seasons**

BRA Criteria			Mean Wind Speed			Effective Gust Wind Speed		
Loc.	Config.	Season	Speed(mph)	%Change	RATING	Speed(mph)	%Change	RATING
29	A	Spring	14		Standing	22		Acceptable
		Summer	10		Sitting	16		Acceptable
		Fall	12		Sitting	20		Acceptable
		Winter	14		Standing	22		Acceptable
		Annual	13		Standing	20		Acceptable
	B	Spring	13		Standing	21		Acceptable
		Summer	10		Sitting	16		Acceptable
		Fall	12		Sitting	19		Acceptable
		Winter	13		Standing	21		Acceptable
		Annual	12		Sitting	20		Acceptable
30	A	Spring	12		Sitting	18		Acceptable
		Summer	9		Sitting	14		Acceptable
		Fall	11		Sitting	17		Acceptable
		Winter	12		Sitting	19		Acceptable
		Annual	11		Sitting	17		Acceptable
	B	Spring	10	-16%	Sitting	16	-10%	Acceptable
		Summer	8	-10%	Sitting	12	-13%	Acceptable
		Fall	9	-17%	Sitting	15	-11%	Acceptable
		Winter	10	-16%	Sitting	17	-10%	Acceptable
		Annual	9	-17%	Sitting	15	-11%	Acceptable
31	A	Spring	15		Standing	23		Acceptable
		Summer	11		Sitting	18		Acceptable
		Fall	13		Standing	22		Acceptable
		Winter	15		Standing	24		Acceptable
		Annual	14		Standing	22		Acceptable
	B	Spring	14		Standing	22	-10%	Acceptable
		Summer	10		Sitting	16		Acceptable
		Fall	13		Standing	20		Acceptable
		Winter	14		Standing	22		Acceptable
		Annual	13		Standing	21		Acceptable
32	A	Spring	15		Standing	23		Acceptable
		Summer	12		Sitting	18		Acceptable
		Fall	14		Standing	21		Acceptable
		Winter	15		Standing	24		Acceptable
		Annual	14		Standing	21		Acceptable
	B	Spring	16		Walking	24		Acceptable
		Summer	11		Sitting	17		Acceptable
		Fall	14		Standing	22		Acceptable
		Winter	16		Walking	24		Acceptable
		Annual	14		Standing	22		Acceptable

Notes: 1) Wind speeds are for a 1% probability of exceedance, and  
 2) %Change is based on comparison with Configuration A and only those that are greater than 10% are listed.

Configurations  
 A - Chapter 91  
 B - Build

Mean Wind Speed Criteria  
 Comfortable for Sitting: ≤ 12 mph  
 Comfortable for Standing: > 12 and ≤ 15 mph  
 Comfortable for Walking: > 15 and ≤ 19 mph  
 Uncomfortable for Walking: > 19 and ≤ 27 mph  
 Dangerous Conditions: > 27 mph

Effective Gust Criteria  
 Acceptable: ≤ 31 mph  
 Unacceptable: > 31 mph



**Table 3: Pedestrian Wind Comfort and Safety Categories - Multiple Seasons**

BRA Criteria			Mean Wind Speed			Effective Gust Wind Speed		
Loc.	Config.	Season	Speed(mph)	%Change	RATING	Speed(mph)	%Change	RATING
33	A	Spring	14		Standing	21		Acceptable
		Summer	11		Sitting	17		Acceptable
		Fall	13		Standing	20		Acceptable
		Winter	14		Standing	22		Acceptable
		Annual	13		Standing	20		Acceptable
	B	Spring	14		Standing	21		Acceptable
		Summer	10		Sitting	15	-11%	Acceptable
		Fall	12		Sitting	20		Acceptable
		Winter	14		Standing	22		Acceptable
		Annual	13		Standing	20		Acceptable
34	A	Spring	15		Standing	24		Acceptable
		Summer	13		Standing	20		Acceptable
		Fall	15		Standing	23		Acceptable
		Winter	16		Walking	25		Acceptable
		Annual	15		Standing	23		Acceptable
	B	Spring	18	+20%	Walking	26		Acceptable
		Summer	14		Standing	19		Acceptable
		Fall	17	+13%	Walking	24		Acceptable
		Winter	19	+19%	Walking	27		Acceptable
		Annual	17	+13%	Walking	25		Acceptable
35	A	Spring	13		Standing	20		Acceptable
		Summer	10		Sitting	16		Acceptable
		Fall	12		Sitting	19		Acceptable
		Winter	13		Standing	21		Acceptable
		Annual	12		Sitting	19		Acceptable
	B	Spring	15	+15%	Standing	22	+10%	Acceptable
		Summer	11	+10%	Sitting	16		Acceptable
		Fall	14	+17%	Standing	21	+11%	Acceptable
		Winter	15	+15%	Standing	23	+10%	Acceptable
		Annual	14	+17%	Standing	21	+11%	Acceptable
36	A	Spring	15		Standing	23		Acceptable
		Summer	12		Sitting	18		Acceptable
		Fall	14		Standing	22		Acceptable
		Winter	15		Standing	24		Acceptable
		Annual	14		Standing	22		Acceptable
	B	Spring	18	+20%	Walking	26	+13%	Acceptable
		Summer	13		Standing	18		Acceptable
		Fall	16	+14%	Walking	23		Acceptable
		Winter	18	+20%	Walking	26		Acceptable
		Annual	17	+21%	Walking	24		Acceptable

Notes: 1) Wind speeds are for a 1% probability of exceedance, and  
 2) %Change is based on comparison with Configuration A and only those that are greater than 10% are listed.

Configurations  
 A - Chapter 91  
 B - Build

Mean Wind Speed Criteria  
 Comfortable for Sitting: ≤ 12 mph  
 Comfortable for Standing: > 12 and ≤ 15 mph  
 Comfortable for Walking: > 15 and ≤ 19 mph  
 Uncomfortable for Walking: > 19 and ≤ 27 mph  
 Dangerous Conditions: > 27 mph

Effective Gust Criteria  
 Acceptable: ≤ 31 mph  
 Unacceptable: > 31 mph

**Table 3: Pedestrian Wind Comfort and Safety Categories - Multiple Seasons**

BRA Criteria			Mean Wind Speed			Effective Gust Wind Speed		
Loc.	Config.	Season	Speed(mph)	%Change	RATING	Speed(mph)	%Change	RATING
37	A	Spring	14		Standing	21		Acceptable
		Summer	11		Sitting	16		Acceptable
		Fall	13		Standing	19		Acceptable
		Winter	14		Standing	21		Acceptable
		Annual	13		Standing	20		Acceptable
	B	Spring	14		Standing	20		Acceptable
		Summer	10		Sitting	15		Acceptable
		Fall	12		Sitting	18		Acceptable
		Winter	14		Standing	20		Acceptable
		Annual	13		Standing	19		Acceptable
38	A	Spring	12		Sitting	19		Acceptable
		Summer	9		Sitting	15		Acceptable
		Fall	11		Sitting	18		Acceptable
		Winter	12		Sitting	20		Acceptable
		Annual	11		Sitting	18		Acceptable
	B	Spring	13		Standing	20		Acceptable
		Summer	9		Sitting	14		Acceptable
		Fall	12		Sitting	18		Acceptable
		Winter	13		Standing	20		Acceptable
		Annual	12		Sitting	18		Acceptable
39	A	Spring	13		Standing	20		Acceptable
		Summer	9		Sitting	15		Acceptable
		Fall	12		Sitting	19		Acceptable
		Winter	13		Standing	21		Acceptable
		Annual	12		Sitting	19		Acceptable
	B	Spring	15	+15%	Standing	22	+10%	Acceptable
		Summer	10	+11%	Sitting	16		Acceptable
		Fall	13		Standing	20		Acceptable
		Winter	15	+15%	Standing	22		Acceptable
		Annual	14	+17%	Standing	20		Acceptable
40	A	Spring	13		Standing	20		Acceptable
		Summer	10		Sitting	15		Acceptable
		Fall	12		Sitting	19		Acceptable
		Winter	13		Standing	21		Acceptable
		Annual	12		Sitting	19		Acceptable
	B	Spring	14		Standing	21		Acceptable
		Summer	11	+10%	Sitting	15		Acceptable
		Fall	13		Standing	19		Acceptable
		Winter	14		Standing	21		Acceptable
		Annual	13		Standing	19		Acceptable

Notes: 1) Wind speeds are for a 1% probability of exceedance, and  
 2) %Change is based on comparison with Configuration A and only those that are greater than 10% are listed.

Configurations  
 A - Chapter 91  
 B - Build

Mean Wind Speed Criteria  
 Comfortable for Sitting: ≤ 12 mph  
 Comfortable for Standing: > 12 and ≤ 15 mph  
 Comfortable for Walking: > 15 and ≤ 19 mph  
 Uncomfortable for Walking: > 19 and ≤ 27 mph  
 Dangerous Conditions: > 27 mph

Effective Gust Criteria  
 Acceptable: ≤ 31 mph  
 Unacceptable: > 31 mph

**Table 3: Pedestrian Wind Comfort and Safety Categories - Multiple Seasons**

BRA Criteria			Mean Wind Speed			Effective Gust Wind Speed		
Loc.	Config.	Season	Speed(mph)	%Change	RATING	Speed(mph)	%Change	RATING
41	A	Spring	14		Standing	21		Acceptable
		Summer	11		Sitting	15		Acceptable
		Fall	13		Standing	19		Acceptable
		Winter	14		Standing	21		Acceptable
		Annual	13		Standing	19		Acceptable
	B	Spring	15		Standing	21		Acceptable
		Summer	11		Sitting	16		Acceptable
		Fall	13		Standing	19		Acceptable
		Winter	15		Standing	21		Acceptable
		Annual	13		Standing	19		Acceptable
42	A	Spring	14		Standing	22		Acceptable
		Summer	11		Sitting	17		Acceptable
		Fall	13		Standing	20		Acceptable
		Winter	14		Standing	22		Acceptable
		Annual	13		Standing	20		Acceptable
	B	Spring	15		Standing	22		Acceptable
		Summer	11		Sitting	17		Acceptable
		Fall	14		Standing	20		Acceptable
		Winter	15		Standing	22		Acceptable
		Annual	14		Standing	20		Acceptable
43	A	Spring	14		Standing	22		Acceptable
		Summer	11		Sitting	17		Acceptable
		Fall	13		Standing	19		Acceptable
		Winter	14		Standing	22		Acceptable
		Annual	13		Standing	20		Acceptable
	B	Spring	14		Standing	20		Acceptable
		Summer	11		Sitting	15	-11%	Acceptable
		Fall	13		Standing	18		Acceptable
		Winter	14		Standing	21		Acceptable
		Annual	13		Standing	19		Acceptable
44	A	Spring	17		Walking	24		Acceptable
		Summer	13		Standing	19		Acceptable
		Fall	15		Standing	22		Acceptable
		Winter	16		Walking	24		Acceptable
		Annual	15		Standing	22		Acceptable
	B	Spring	15	-11%	Standing	20	-16%	Acceptable
		Summer	11	-14%	Sitting	15	-20%	Acceptable
		Fall	13	-12%	Standing	18	-17%	Acceptable
		Winter	15		Standing	20	-16%	Acceptable
		Annual	13	-12%	Standing	19	-13%	Acceptable

Notes: 1) Wind speeds are for a 1% probability of exceedance, and  
 2) %Change is based on comparison with Configuration A and only those that are greater than 10% are listed.

Configurations  
 A - Chapter 91  
 B - Build

Mean Wind Speed Criteria  
 Comfortable for Sitting: ≤ 12 mph  
 Comfortable for Standing: > 12 and ≤ 15 mph  
 Comfortable for Walking: > 15 and ≤ 19 mph  
 Uncomfortable for Walking: > 19 and ≤ 27 mph  
 Dangerous Conditions: > 27 mph

Effective Gust Criteria  
 Acceptable: ≤ 31 mph  
 Unacceptable: > 31 mph

**Table 3: Pedestrian Wind Comfort and Safety Categories - Multiple Seasons**

BRA Criteria			Mean Wind Speed			Effective Gust Wind Speed			
Loc.	Config.	Season	Speed(mph)	%Change	RATING	Speed(mph)	%Change	RATING	
45	A	Spring	19		Walking	27		Acceptable	
		Summer	15		Standing	21		Acceptable	
		Fall	17		Walking	24		Acceptable	
		Winter	19		Walking	27		Acceptable	
		Annual	17		Walking	25		Acceptable	
	B	Spring	19		Walking	26		Acceptable	
		Summer	15		Standing	20		Acceptable	
		Fall	17		Walking	23		Acceptable	
		Winter	19		Walking	26		Acceptable	
		Annual	18		Walking	24		Acceptable	
	46	A	Spring	14		Standing	20		Acceptable
			Summer	11		Sitting	15		Acceptable
Fall			12		Sitting	18		Acceptable	
Winter			14		Standing	20		Acceptable	
Annual			12		Sitting	19		Acceptable	
B		Spring	17	+21%	Walking	24	+20%	Acceptable	
		Summer	13	+18%	Standing	18	+20%	Acceptable	
		Fall	15	+25%	Standing	21	+17%	Acceptable	
		Winter	17	+21%	Walking	24	+20%	Acceptable	
		Annual	16	+33%	Walking	22	+16%	Acceptable	
47		A	Spring	14		Standing	22		Acceptable
			Summer	11		Sitting	17		Acceptable
	Fall		13		Standing	21		Acceptable	
	Winter		15		Standing	23		Acceptable	
	Annual		13		Standing	21		Acceptable	
	B	Spring	15		Standing	23		Acceptable	
		Summer	12		Sitting	18		Acceptable	
		Fall	14		Standing	21		Acceptable	
		Winter	16		Walking	24		Acceptable	
		Annual	14		Standing	22		Acceptable	
	48	A	Spring	14		Standing	22		Acceptable
			Summer	10		Sitting	16		Acceptable
Fall			13		Standing	20		Acceptable	
Winter			14		Standing	23		Acceptable	
Annual			13		Standing	21		Acceptable	
B		Spring	15		Standing	23		Acceptable	
		Summer	11	+10%	Sitting	17		Acceptable	
		Fall	14		Standing	21		Acceptable	
		Winter	15		Standing	23		Acceptable	
		Annual	14		Standing	22		Acceptable	

Notes: 1) Wind speeds are for a 1% probability of exceedance, and  
 2) %Change is based on comparison with Configuration A and only those that are greater than 10% are listed.

Configurations  
 A - Chapter 91  
 B - Build

Mean Wind Speed Criteria  
 Comfortable for Sitting: ≤ 12 mph  
 Comfortable for Standing: > 12 and ≤ 15 mph  
 Comfortable for Walking: > 15 and ≤ 19 mph  
 Uncomfortable for Walking: > 19 and ≤ 27 mph  
 Dangerous Conditions: > 27 mph

Effective Gust Criteria  
 Acceptable: ≤ 31 mph  
 Unacceptable: > 31 mph

**Table 3: Pedestrian Wind Comfort and Safety Categories - Multiple Seasons**

BRA Criteria			Mean Wind Speed			Effective Gust Wind Speed			
Loc.	Config.	Season	Speed(mph)	%Change	RATING	Speed(mph)	%Change	RATING	
49	A	Spring	17		Walking	24		Acceptable	
		Summer	13		Standing	19		Acceptable	
		Fall	15		Standing	22		Acceptable	
		Winter	16		Walking	24		Acceptable	
		Annual	16		Walking	22		Acceptable	
	B	Spring	18		Walking	25		Acceptable	
		Summer	14		Standing	20		Acceptable	
		Fall	16		Walking	23		Acceptable	
		Winter	17		Walking	24		Acceptable	
		Annual	16		Walking	23		Acceptable	
	50	A	Spring	DATA NOT AVAILABLE					
			Summer	DATA NOT AVAILABLE					
			Fall	DATA NOT AVAILABLE					
			Winter	DATA NOT AVAILABLE					
Annual			DATA NOT AVAILABLE						
B		Spring	DATA NOT AVAILABLE						
		Summer	DATA NOT AVAILABLE						
		Fall	DATA NOT AVAILABLE						
		Winter	DATA NOT AVAILABLE						
		Annual	DATA NOT AVAILABLE						
51	A	Spring	DATA NOT AVAILABLE						
		Summer	DATA NOT AVAILABLE						
		Fall	DATA NOT AVAILABLE						
		Winter	DATA NOT AVAILABLE						
		Annual	DATA NOT AVAILABLE						
	B	Spring	DATA NOT AVAILABLE						
		Summer	DATA NOT AVAILABLE						
		Fall	DATA NOT AVAILABLE						
		Winter	DATA NOT AVAILABLE						
		Annual	DATA NOT AVAILABLE						
52	A	Spring	17		Walking	25		Acceptable	
		Summer	13		Standing	18		Acceptable	
		Fall	16		Walking	23		Acceptable	
		Winter	17		Walking	25		Acceptable	
		Annual	16		Walking	23		Acceptable	
	B	Spring	16		Walking	24		Acceptable	
		Summer	12		Sitting	17		Acceptable	
		Fall	15		Standing	22		Acceptable	
		Winter	16		Walking	24		Acceptable	
		Annual	15		Standing	22		Acceptable	

Notes: 1) Wind speeds are for a 1% probability of exceedance, and  
 2) %Change is based on comparison with Configuration A and only those that are greater than 10% are listed.

Configurations  
 A - Chapter 91  
 B - Build

Mean Wind Speed Criteria  
 Comfortable for Sitting: ≤ 12 mph  
 Comfortable for Standing: > 12 and ≤ 15 mph  
 Comfortable for Walking: > 15 and ≤ 19 mph  
 Uncomfortable for Walking: > 19 and ≤ 27 mph  
 Dangerous Conditions: > 27 mph

Effective Gust Criteria  
 Acceptable: ≤ 31 mph  
 Unacceptable: > 31 mph

**Table 3: Pedestrian Wind Comfort and Safety Categories - Multiple Seasons**

BRA Criteria			Mean Wind Speed			Effective Gust Wind Speed		
Loc.	Config.	Season	Speed(mph)	%Change	RATING	Speed(mph)	%Change	RATING
53	A	Spring	16		Walking	22		Acceptable
		Summer	11		Sitting	16		Acceptable
		Fall	14		Standing	20		Acceptable
		Winter	15		Standing	22		Acceptable
		Annual	14		Standing	21		Acceptable
	B	Spring	14	-12%	Standing	21		Acceptable
		Summer	10		Sitting	15		Acceptable
		Fall	13		Standing	18		Acceptable
		Winter	14		Standing	20		Acceptable
		Annual	13		Standing	19		Acceptable
54	A	Spring	18		Walking	25		Acceptable
		Summer	13		Standing	18		Acceptable
		Fall	16		Walking	23		Acceptable
		Winter	18		Walking	25		Acceptable
		Annual	17		Walking	23		Acceptable
	B	Spring	17		Walking	24		Acceptable
		Summer	13		Standing	17		Acceptable
		Fall	16		Walking	22		Acceptable
		Winter	17		Walking	24		Acceptable
		Annual	16		Walking	22		Acceptable
55	A	Spring	12		Sitting	20		Acceptable
		Summer	9		Sitting	14		Acceptable
		Fall	11		Sitting	18		Acceptable
		Winter	12		Sitting	20		Acceptable
		Annual	12		Sitting	19		Acceptable
	B	Spring	13		Standing	20		Acceptable
		Summer	9		Sitting	14		Acceptable
		Fall	11		Sitting	18		Acceptable
		Winter	13		Standing	20		Acceptable
		Annual	12		Sitting	19		Acceptable
56	A	Spring	15		Standing	22		Acceptable
		Summer	11		Sitting	16		Acceptable
		Fall	14		Standing	20		Acceptable
		Winter	15		Standing	22		Acceptable
		Annual	14		Standing	20		Acceptable
	B	Spring	16		Walking	23		Acceptable
		Summer	11		Sitting	17		Acceptable
		Fall	14		Standing	21		Acceptable
		Winter	16		Walking	22		Acceptable
		Annual	15		Standing	21		Acceptable

Notes: 1) Wind speeds are for a 1% probability of exceedance, and  
 2) %Change is based on comparison with Configuration A and only those that are greater than 10% are listed.

Configurations  
 A - Chapter 91  
 B - Build

Mean Wind Speed Criteria  
 Comfortable for Sitting: ≤ 12 mph  
 Comfortable for Standing: > 12 and ≤ 15 mph  
 Comfortable for Walking: > 15 and ≤ 19 mph  
 Uncomfortable for Walking: > 19 and ≤ 27 mph  
 Dangerous Conditions: > 27 mph

Effective Gust Criteria  
 Acceptable: ≤ 31 mph  
 Unacceptable: > 31 mph

**Table 3: Pedestrian Wind Comfort and Safety Categories - Multiple Seasons**

BRA Criteria			Mean Wind Speed			Effective Gust Wind Speed		
Loc.	Config.	Season	Speed(mph)	%Change	RATING	Speed(mph)	%Change	RATING
57	A	Spring	18		Walking	25		Acceptable
		Summer	15		Standing	21		Acceptable
		Fall	16		Walking	23		Acceptable
		Winter	17		Walking	24		Acceptable
		Annual	17		Walking	23		Acceptable
	B	Spring	18		Walking	25		Acceptable
		Summer	15		Standing	20		Acceptable
		Fall	16		Walking	23		Acceptable
		Winter	17		Walking	25		Acceptable
		Annual	17		Walking	24		Acceptable
58	A	Spring	13		Standing	21		Acceptable
		Summer	11		Sitting	17		Acceptable
		Fall	13		Standing	20		Acceptable
		Winter	14		Standing	22		Acceptable
		Annual	13		Standing	21		Acceptable
	B	Spring	13		Standing	21		Acceptable
		Summer	10		Sitting	16		Acceptable
		Fall	12		Sitting	20		Acceptable
		Winter	14		Standing	22		Acceptable
		Annual	13		Standing	20		Acceptable
59	A	Spring	12		Sitting	20		Acceptable
		Summer	10		Sitting	16		Acceptable
		Fall	12		Sitting	19		Acceptable
		Winter	13		Standing	20		Acceptable
		Annual	12		Sitting	19		Acceptable
	B	Spring	13		Standing	20		Acceptable
		Summer	10		Sitting	16		Acceptable
		Fall	12		Sitting	19		Acceptable
		Winter	13		Standing	21		Acceptable
		Annual	12		Sitting	19		Acceptable
60	A	Spring	11		Sitting	18		Acceptable
		Summer	8		Sitting	14		Acceptable
		Fall	10		Sitting	17		Acceptable
		Winter	11		Sitting	19		Acceptable
		Annual	10		Sitting	17		Acceptable
	B	Spring	12		Sitting	19		Acceptable
		Summer	9	+13%	Sitting	15		Acceptable
		Fall	11	+10%	Sitting	18		Acceptable
		Winter	12		Sitting	20		Acceptable
		Annual	11	+10%	Sitting	18		Acceptable

Notes: 1) Wind speeds are for a 1% probability of exceedance, and  
 2) %Change is based on comparison with Configuration A and only those that are greater than 10% are listed.

Configurations  
 A - Chapter 91  
 B - Build

Mean Wind Speed Criteria  
 Comfortable for Sitting: ≤ 12 mph  
 Comfortable for Standing: > 12 and ≤ 15 mph  
 Comfortable for Walking: > 15 and ≤ 19 mph  
 Uncomfortable for Walking: > 19 and ≤ 27 mph  
 Dangerous Conditions: > 27 mph

Effective Gust Criteria  
 Acceptable: ≤ 31 mph  
 Unacceptable: > 31 mph

**Table 3: Pedestrian Wind Comfort and Safety Categories - Multiple Seasons**

BRA Criteria			Mean Wind Speed			Effective Gust Wind Speed			
Loc.	Config.	Season	Speed(mph)	%Change	RATING	Speed(mph)	%Change	RATING	
61	A	Spring	16		Walking	24		Acceptable	
		Summer	13		Standing	20		Acceptable	
		Fall	15		Standing	23		Acceptable	
		Winter	17		Walking	25		Acceptable	
		Annual	16		Walking	23		Acceptable	
	B	Spring	15		Standing	22		Acceptable	
		Summer	12		Sitting	17	-14%	Acceptable	
		Fall	14		Standing	21		Acceptable	
		Winter	16		Walking	24		Acceptable	
		Annual	15		Standing	22		Acceptable	
	62	A	Spring	19		Walking	27		Acceptable
			Summer	15		Standing	21		Acceptable
			Fall	18		Walking	25		Acceptable
			Winter	20		Uncomfortable	28		Acceptable
			Annual	18		Walking	26		Acceptable
B		Spring	24	+26%	Uncomfortable	31	+15%	Acceptable	
		Summer	19	+27%	Walking	24	+14%	Acceptable	
		Fall	22	+22%	Uncomfortable	28	+12%	Acceptable	
		Winter	24	+20%	Uncomfortable	32	+14%	Unacceptable	
		Annual	22	+22%	Uncomfortable	29	+12%	Acceptable	
63	A	Spring	21		Uncomfortable	29		Acceptable	
		Summer	17		Walking	23		Acceptable	
		Fall	20		Uncomfortable	28		Acceptable	
		Winter	22		Uncomfortable	30		Acceptable	
		Annual	20		Uncomfortable	28		Acceptable	
	B	Spring	22		Uncomfortable	30		Acceptable	
		Summer	18		Walking	24		Acceptable	
		Fall	20		Uncomfortable	28		Acceptable	
		Winter	22		Uncomfortable	31		Acceptable	
		Annual	21		Uncomfortable	28		Acceptable	
64	A	Spring	19		Walking	28		Acceptable	
		Summer	16		Walking	23		Acceptable	
		Fall	18		Walking	26		Acceptable	
		Winter	20		Uncomfortable	29		Acceptable	
		Annual	18		Walking	27		Acceptable	
	B	Spring	20		Uncomfortable	29		Acceptable	
		Summer	16		Walking	23		Acceptable	
		Fall	18		Walking	27		Acceptable	
		Winter	20		Uncomfortable	30		Acceptable	
		Annual	19		Walking	27		Acceptable	

Notes: 1) Wind speeds are for a 1% probability of exceedance, and  
 2) %Change is based on comparison with Configuration A and only those that are greater than 10% are listed.

Configurations  
 A - Chapter 91  
 B - Build

Mean Wind Speed Criteria  
 Comfortable for Sitting: ≤ 12 mph  
 Comfortable for Standing: > 12 and ≤ 15 mph  
 Comfortable for Walking: > 15 and ≤ 19 mph  
 Uncomfortable for Walking: > 19 and ≤ 27 mph  
 Dangerous Conditions: > 27 mph

Effective Gust Criteria  
 Acceptable: ≤ 31 mph  
 Unacceptable: > 31 mph



**Table 3: Pedestrian Wind Comfort and Safety Categories - Multiple Seasons**

BRA Criteria			Mean Wind Speed			Effective Gust Wind Speed			
Loc.	Config.	Season	Speed(mph)	%Change	RATING	Speed(mph)	%Change	RATING	
65	A	Spring	17		Walking	25		Acceptable	
		Summer	14		Standing	20		Acceptable	
		Fall	16		Walking	24		Acceptable	
		Winter	18		Walking	26		Acceptable	
		Annual	17		Walking	24		Acceptable	
	B	Spring	17		Walking	24		Acceptable	
		Summer	14		Standing	20		Acceptable	
		Fall	16		Walking	23		Acceptable	
		Winter	18		Walking	25		Acceptable	
		Annual	16		Walking	23		Acceptable	
	66	A	Spring	17		Walking	26		Acceptable
			Summer	14		Standing	21		Acceptable
Fall			16		Walking	24		Acceptable	
Winter			17		Walking	27		Acceptable	
Annual			16		Walking	25		Acceptable	
B		Spring	16		Walking	24		Acceptable	
		Summer	13		Standing	19		Acceptable	
		Fall	15		Standing	22		Acceptable	
		Winter	16		Walking	24	-10%	Acceptable	
		Annual	15		Standing	22	-11%	Acceptable	
67		A	Spring	11		Sitting	17		Acceptable
			Summer	8		Sitting	13		Acceptable
	Fall		10		Sitting	16		Acceptable	
	Winter		11		Sitting	18		Acceptable	
	Annual		10		Sitting	16		Acceptable	
	B	Spring	11		Sitting	19	+12%	Acceptable	
		Summer	8		Sitting	14		Acceptable	
		Fall	11	+10%	Sitting	18	+13%	Acceptable	
		Winter	11		Sitting	19		Acceptable	
		Annual	11	+10%	Sitting	18	+13%	Acceptable	
	68	A	Spring	14		Standing	21		Acceptable
			Summer	12		Sitting	17		Acceptable
Fall			13		Standing	19		Acceptable	
Winter			14		Standing	21		Acceptable	
Annual			13		Standing	20		Acceptable	
B		Spring	16	+14%	Walking	24	+14%	Acceptable	
		Summer	13		Standing	19	+12%	Acceptable	
		Fall	15	+15%	Standing	22	+16%	Acceptable	
		Winter	16	+14%	Walking	24	+14%	Acceptable	
		Annual	15	+15%	Standing	22	+10%	Acceptable	

Notes: 1) Wind speeds are for a 1% probability of exceedance, and  
 2) %Change is based on comparison with Configuration A and only those that are greater than 10% are listed.

Configurations  
 A - Chapter 91  
 B - Build

Mean Wind Speed Criteria  
 Comfortable for Sitting: ≤ 12 mph  
 Comfortable for Standing: > 12 and ≤ 15 mph  
 Comfortable for Walking: > 15 and ≤ 19 mph  
 Uncomfortable for Walking: > 19 and ≤ 27 mph  
 Dangerous Conditions: > 27 mph

Effective Gust Criteria  
 Acceptable: ≤ 31 mph  
 Unacceptable: > 31 mph

**Table 3: Pedestrian Wind Comfort and Safety Categories - Multiple Seasons**

BRA Criteria			Mean Wind Speed			Effective Gust Wind Speed			
Loc.	Config.	Season	Speed(mph)	%Change	RATING	Speed(mph)	%Change	RATING	
69	A	Spring	18		Walking	29		Acceptable	
		Summer	15		Standing	23		Acceptable	
		Fall	17		Walking	26		Acceptable	
		Winter	18		Walking	29		Acceptable	
		Annual	17		Walking	26		Acceptable	
	B	Spring	16	-10%	Walking	24	-16%	Acceptable	
		Summer	13	-12%	Standing	19	-16%	Acceptable	
		Fall	14	-17%	Standing	22	-14%	Acceptable	
		Winter	16	-10%	Walking	25	-13%	Acceptable	
		Annual	15	-11%	Standing	22	-14%	Acceptable	
	70	A	Spring	11		Sitting	18		Acceptable
			Summer	9		Sitting	15		Acceptable
			Fall	10		Sitting	17		Acceptable
			Winter	11		Sitting	18		Acceptable
Annual			10		Sitting	17		Acceptable	
B		Spring	11		Sitting	18		Acceptable	
		Summer	9		Sitting	15		Acceptable	
		Fall	10		Sitting	17		Acceptable	
		Winter	11		Sitting	19		Acceptable	
		Annual	11	+10%	Sitting	18		Acceptable	
71	A	Spring	11		Sitting	18		Acceptable	
		Summer	8		Sitting	13		Acceptable	
		Fall	10		Sitting	17		Acceptable	
		Winter	11		Sitting	18		Acceptable	
		Annual	10		Sitting	17		Acceptable	
	B	Spring	17	+55%	Walking	26	+44%	Acceptable	
		Summer	13	+63%	Standing	19	+46%	Acceptable	
		Fall	15	+50%	Standing	23	+35%	Acceptable	
		Winter	16	+45%	Walking	25	+39%	Acceptable	
		Annual	15	+50%	Standing	23	+35%	Acceptable	
72	A	Spring	13		Standing	21		Acceptable	
		Summer	11		Sitting	17		Acceptable	
		Fall	12		Sitting	20		Acceptable	
		Winter	14		Standing	22		Acceptable	
		Annual	13		Standing	20		Acceptable	
	B	Spring	16	+23%	Walking	23	+10%	Acceptable	
		Summer	11		Sitting	17		Acceptable	
		Fall	14	+17%	Standing	21		Acceptable	
		Winter	16	+14%	Walking	23		Acceptable	
		Annual	14		Standing	22	+10%	Acceptable	

Notes: 1) Wind speeds are for a 1% probability of exceedance, and  
 2) %Change is based on comparison with Configuration A and only those that are greater than 10% are listed.

Configurations  
 A - Chapter 91  
 B - Build

Mean Wind Speed Criteria  
 Comfortable for Sitting: ≤ 12 mph  
 Comfortable for Standing: > 12 and ≤ 15 mph  
 Comfortable for Walking: > 15 and ≤ 19 mph  
 Uncomfortable for Walking: > 19 and ≤ 27 mph  
 Dangerous Conditions: > 27 mph

Effective Gust Criteria  
 Acceptable: ≤ 31 mph  
 Unacceptable: > 31 mph

**Table 3: Pedestrian Wind Comfort and Safety Categories - Multiple Seasons**

BRA Criteria			Mean Wind Speed			Effective Gust Wind Speed		
Loc.	Config.	Season	Speed(mph)	%Change	RATING	Speed(mph)	%Change	RATING
73	A	Spring	18		Walking	28		Acceptable
		Summer	14		Standing	21		Acceptable
		Fall	17		Walking	25		Acceptable
		Winter	18		Walking	28		Acceptable
		Annual	17		Walking	26		Acceptable
	B	Spring	18		Walking	27		Acceptable
		Summer	14		Standing	21		Acceptable
		Fall	16		Walking	24		Acceptable
		Winter	18		Walking	27		Acceptable
		Annual	17		Walking	25		Acceptable
74	A	Spring	19		Walking	28		Acceptable
		Summer	14		Standing	20		Acceptable
		Fall	17		Walking	26		Acceptable
		Winter	19		Walking	28		Acceptable
		Annual	18		Walking	26		Acceptable
	B	Spring	18		Walking	27		Acceptable
		Summer	13		Standing	19		Acceptable
		Fall	17		Walking	25		Acceptable
		Winter	20		Uncomfortable	28		Acceptable
		Annual	18		Walking	26		Acceptable

Notes: 1) Wind speeds are for a 1% probability of exceedance, and  
 2) %Change is based on comparison with Configuration A and only those that are greater than 10% are listed.

Configurations  
 A - Chapter 91  
 B - Build

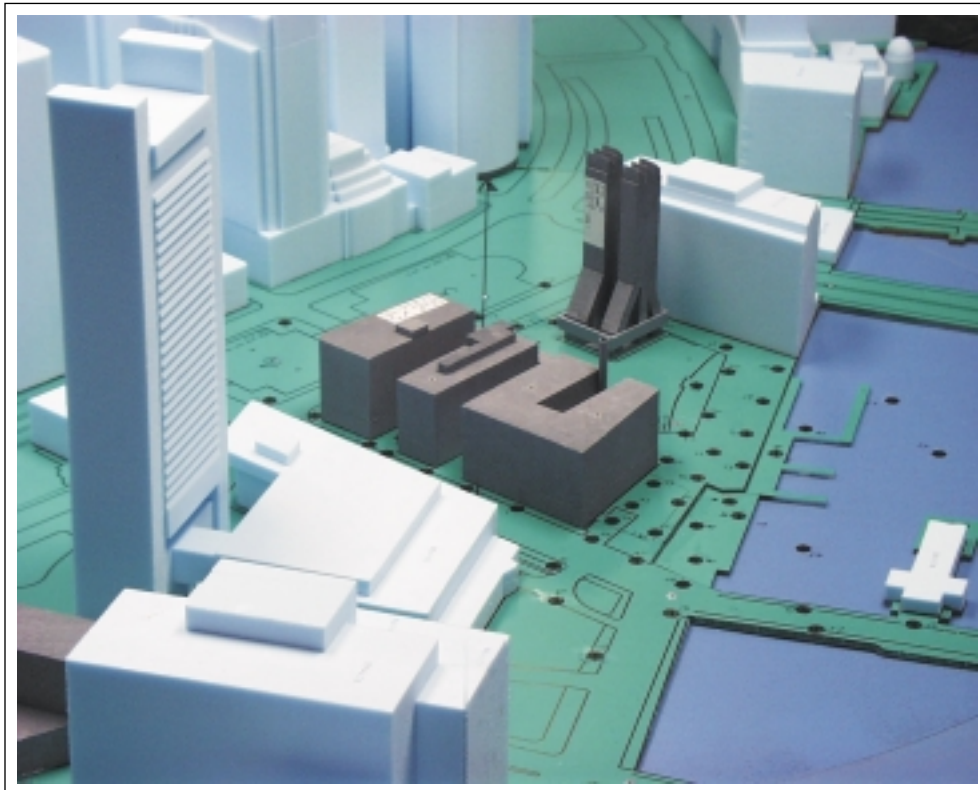
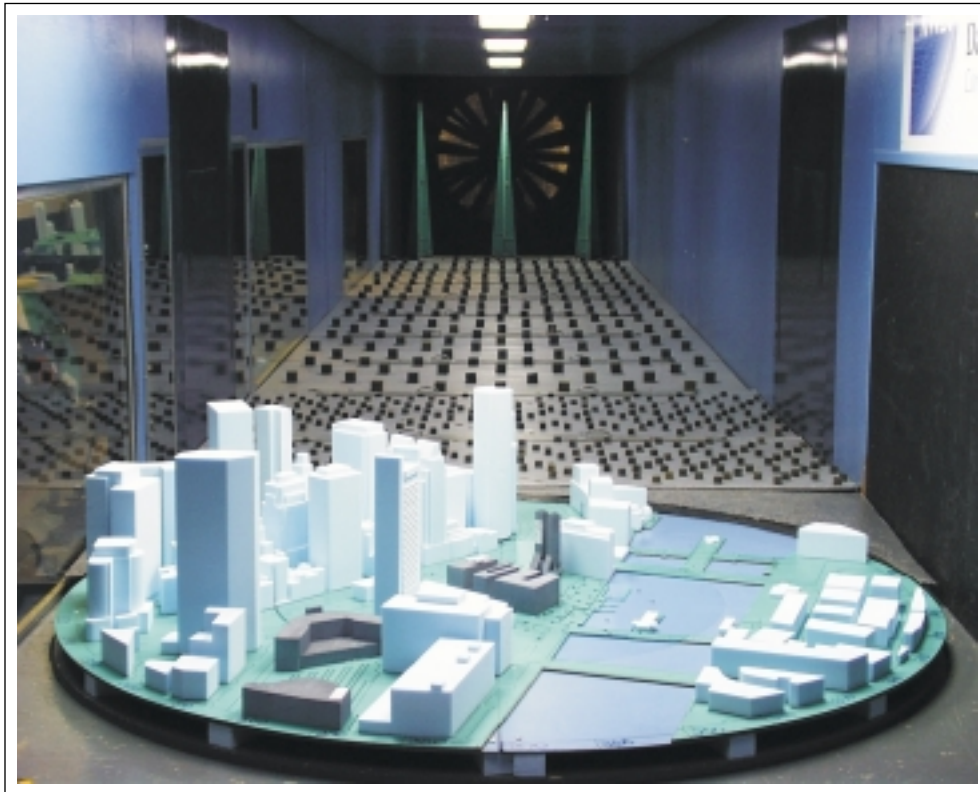
Mean Wind Speed Criteria  
 Comfortable for Sitting: ≤ 12 mph  
 Comfortable for Standing: > 12 and ≤ 15 mph  
 Comfortable for Walking: > 15 and ≤ 19 mph  
 Uncomfortable for Walking: > 19 and ≤ 27 mph  
 Dangerous Conditions: > 27 mph

Effective Gust Criteria  
 Acceptable: ≤ 31 mph  
 Unacceptable: > 31 mph

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## **FIGURES**

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**Wind Tunnel Study Model  
Existing Condition**

Russia Wharf - Boston, Massachusetts

Project #03-1106

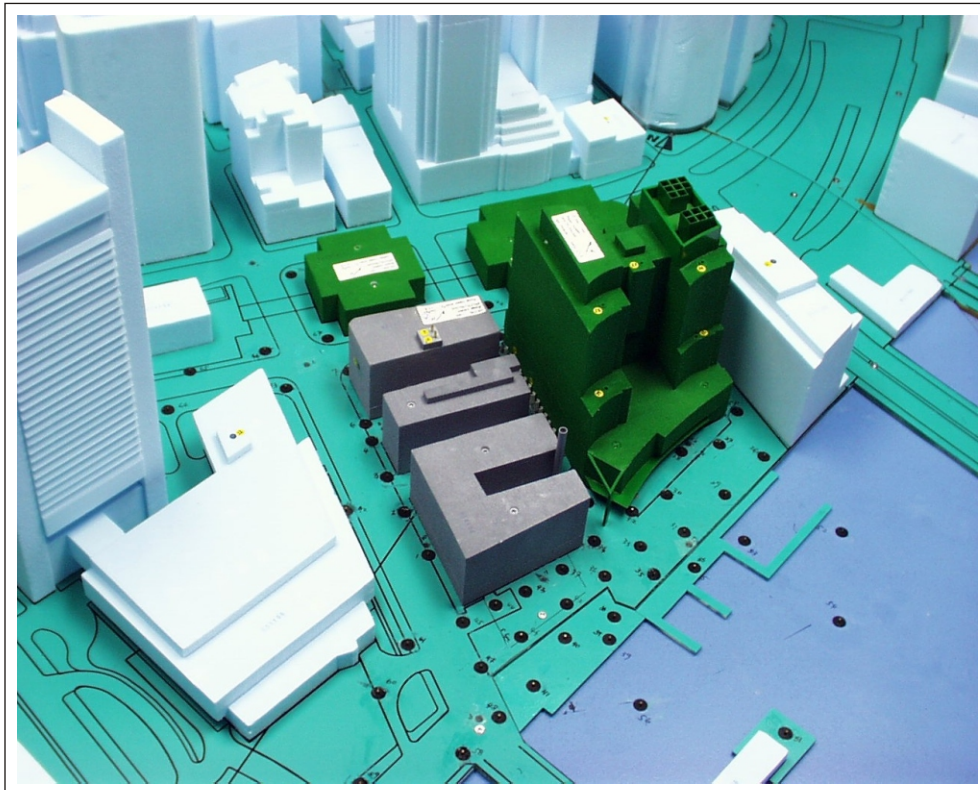
Figure No.

1

Date:

December 4, 2002

**RWDI**



**Wind Tunnel Study Model**  
**No Build Condition**

Russia Wharf - Boston, Massachusetts

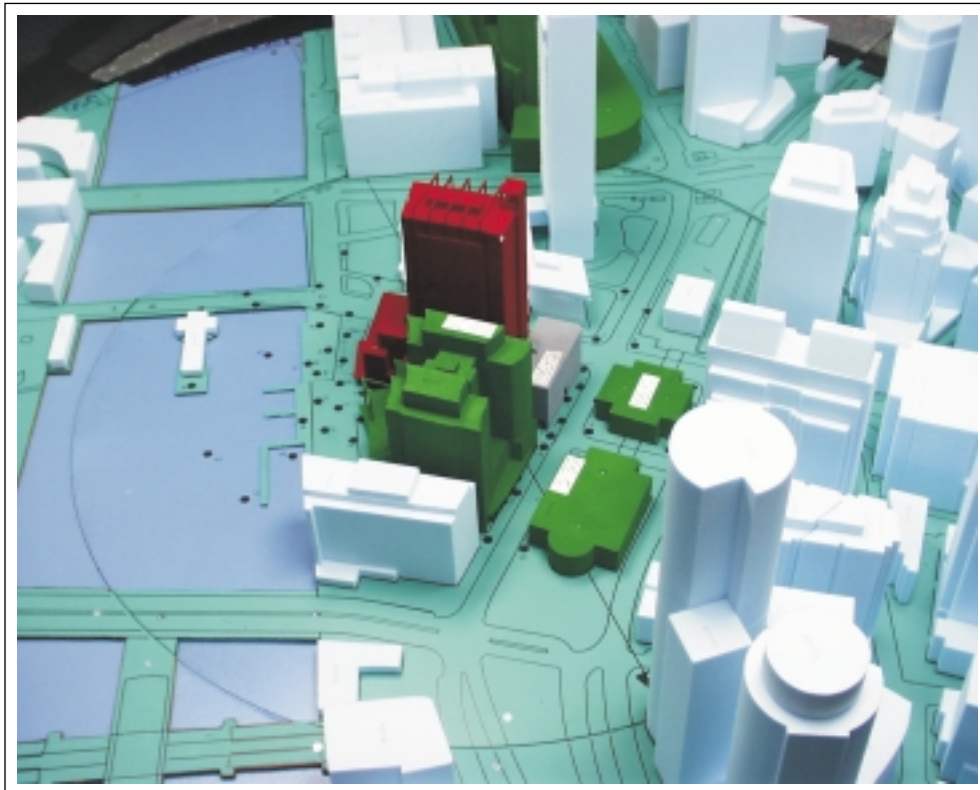
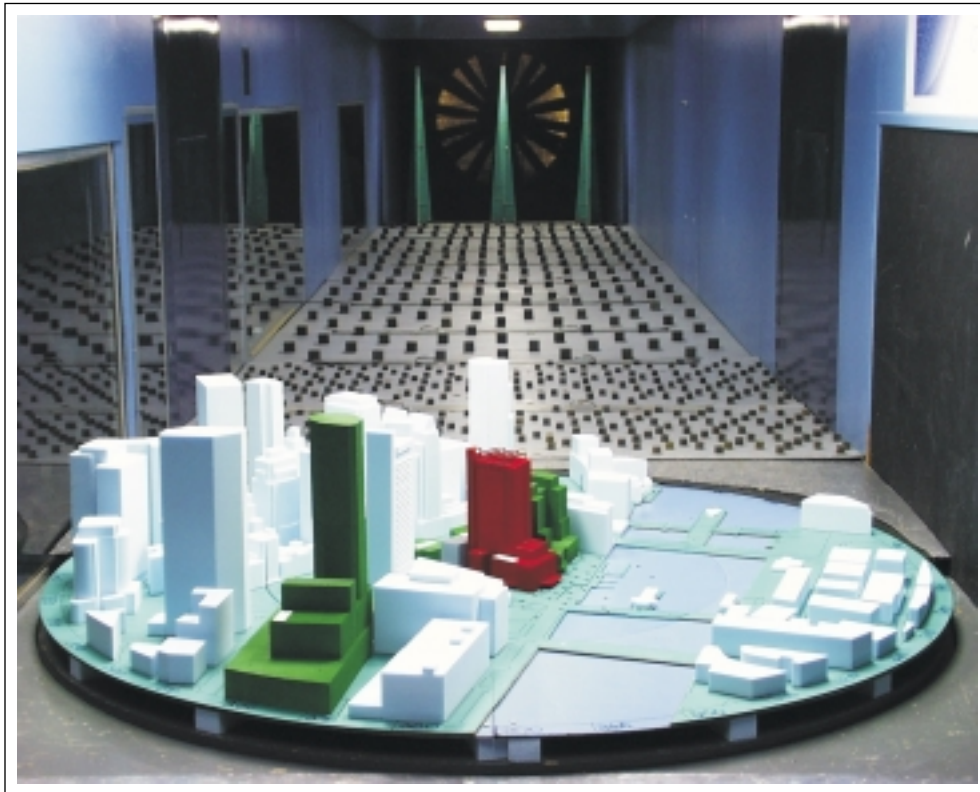
Project #03-1106

Figure No.

2

Date: December 13, 2002

**RWDI**



**Wind Tunnel Study Model**  
**Build Condition**

Russia Wharf - Boston, Massachusetts

Project #03-1106

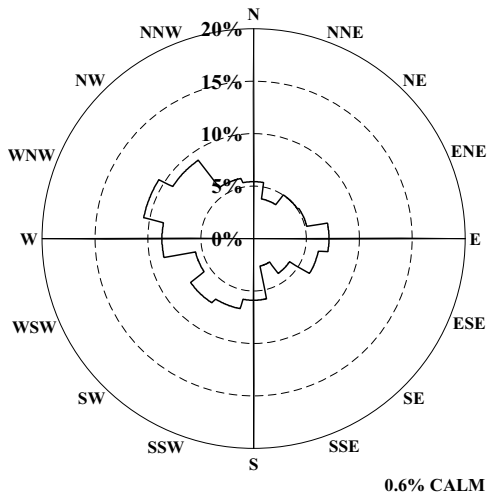
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3

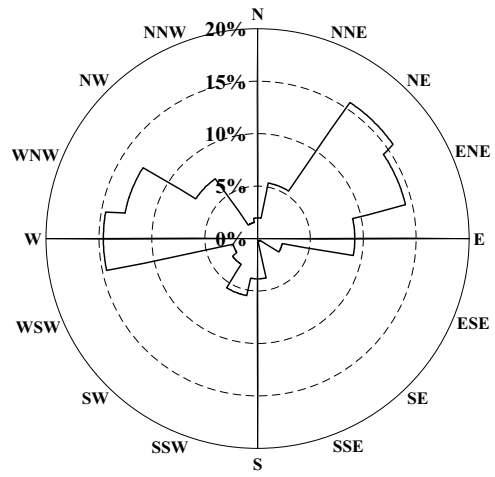
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December 4, 2002

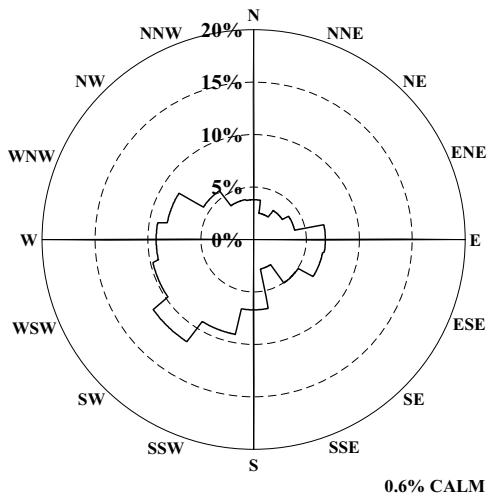
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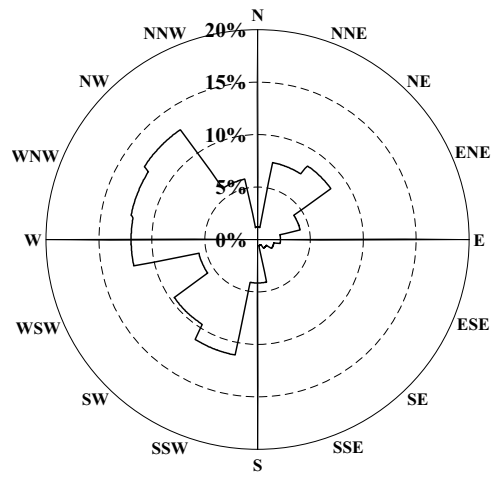
**ALL SPRING WINDS**



**STRONG SPRING WINDS**



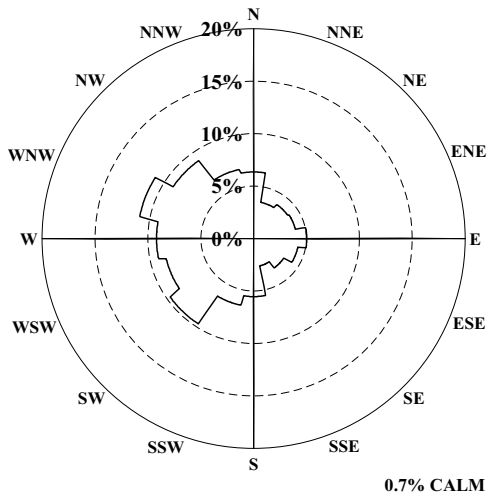
**ALL SUMMER WINDS**



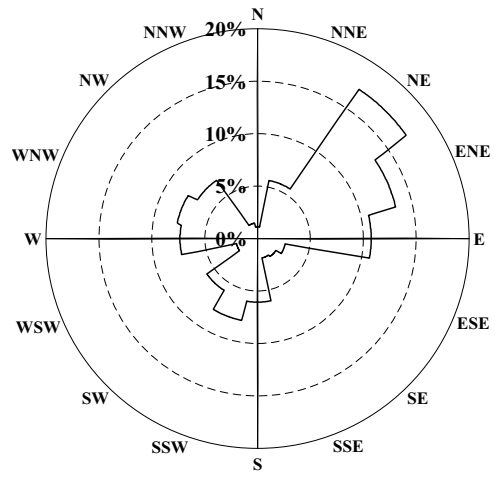
**STRONG SUMMER WINDS**

<b>Directional Distribution (%) of Winds (Blowing From)          Boston-Logan International Airport, Massachusetts (1945 - 1998)</b>	Figure No. <b>4</b>	
	Date: December 6, 2002	
Russia Wharf - Boston, MA	Project #03-1106	

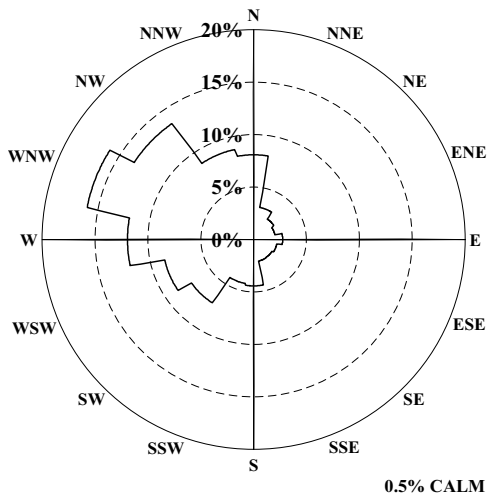




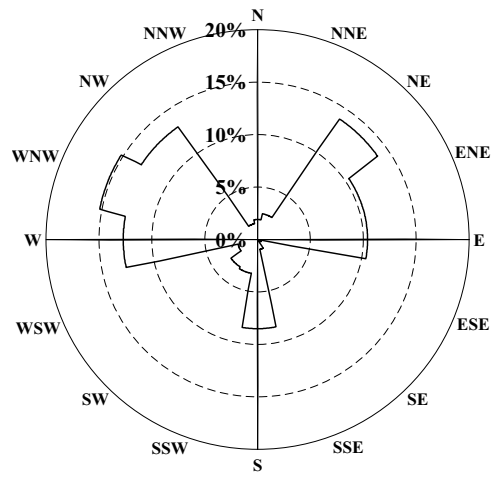
**ALL FALL WINDS**



**STRONG FALL WINDS**

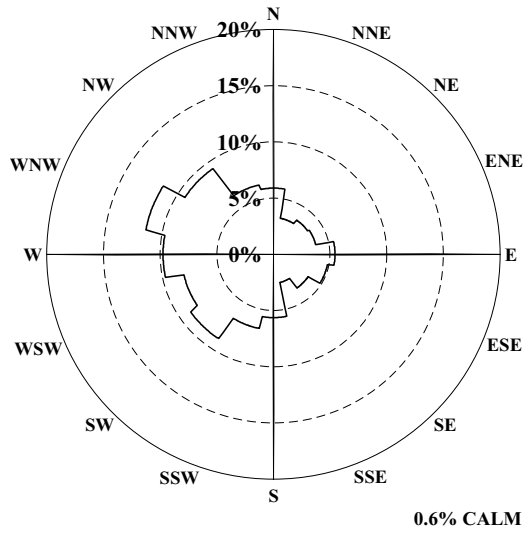


**ALL WINTER WINDS**

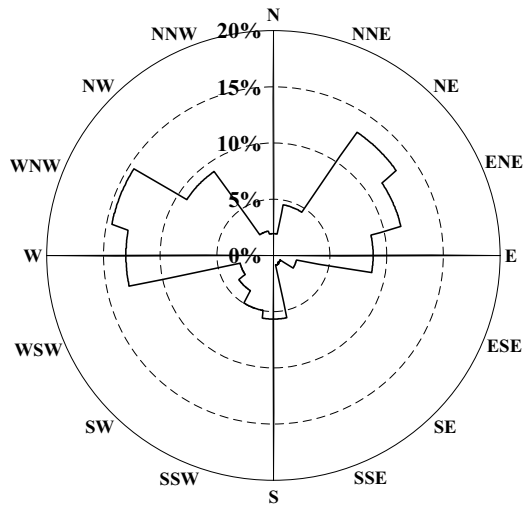


**STRONG WINTER WINDS**

<b>Directional Distribution (%) of Winds (Blowing From)          Boston-Logan International Airport, Massachusetts (1945 - 1998)</b>  Russia Wharf - Boston, MA	Figure No. <b>5</b>	
	Date: December 6, 2002	

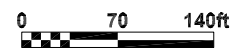
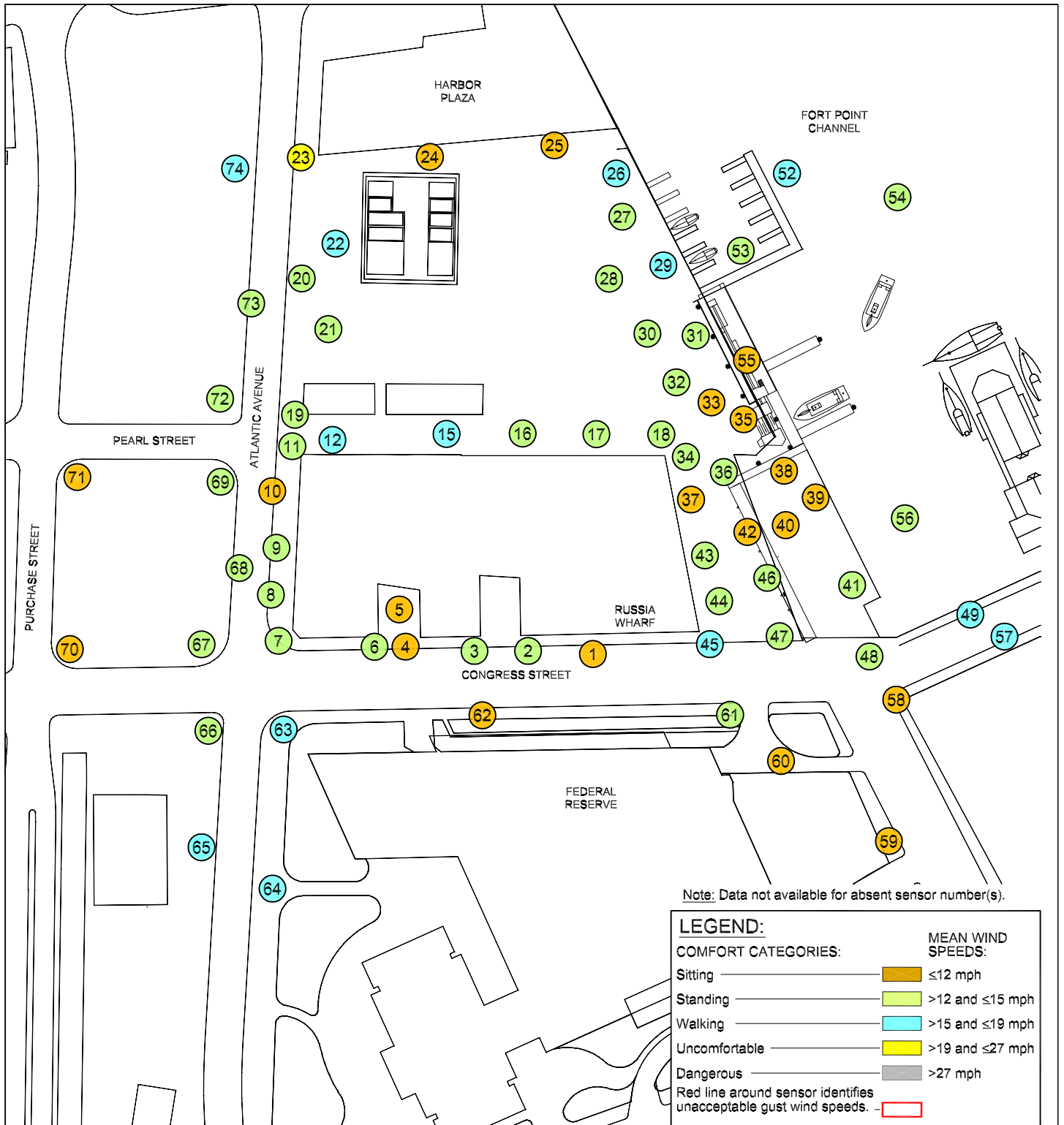


**ALL ANNUAL WINDS**



**STRONG ANNUAL WINDS**

<b>Directional Distribution (%) of Winds (Blowing From)</b> <b>Boston-Logan International Airport, Massachusetts (1945 - 1998)</b>	Figure No. <b>6</b>	
	Date: December 6, 2002	
Russia Wharf - Boston, MA	Project #03-1106	



**Pedestrian Wind Conditions - Annual**  
Existing Condition

Russia Wharf - Boston, Massachusetts



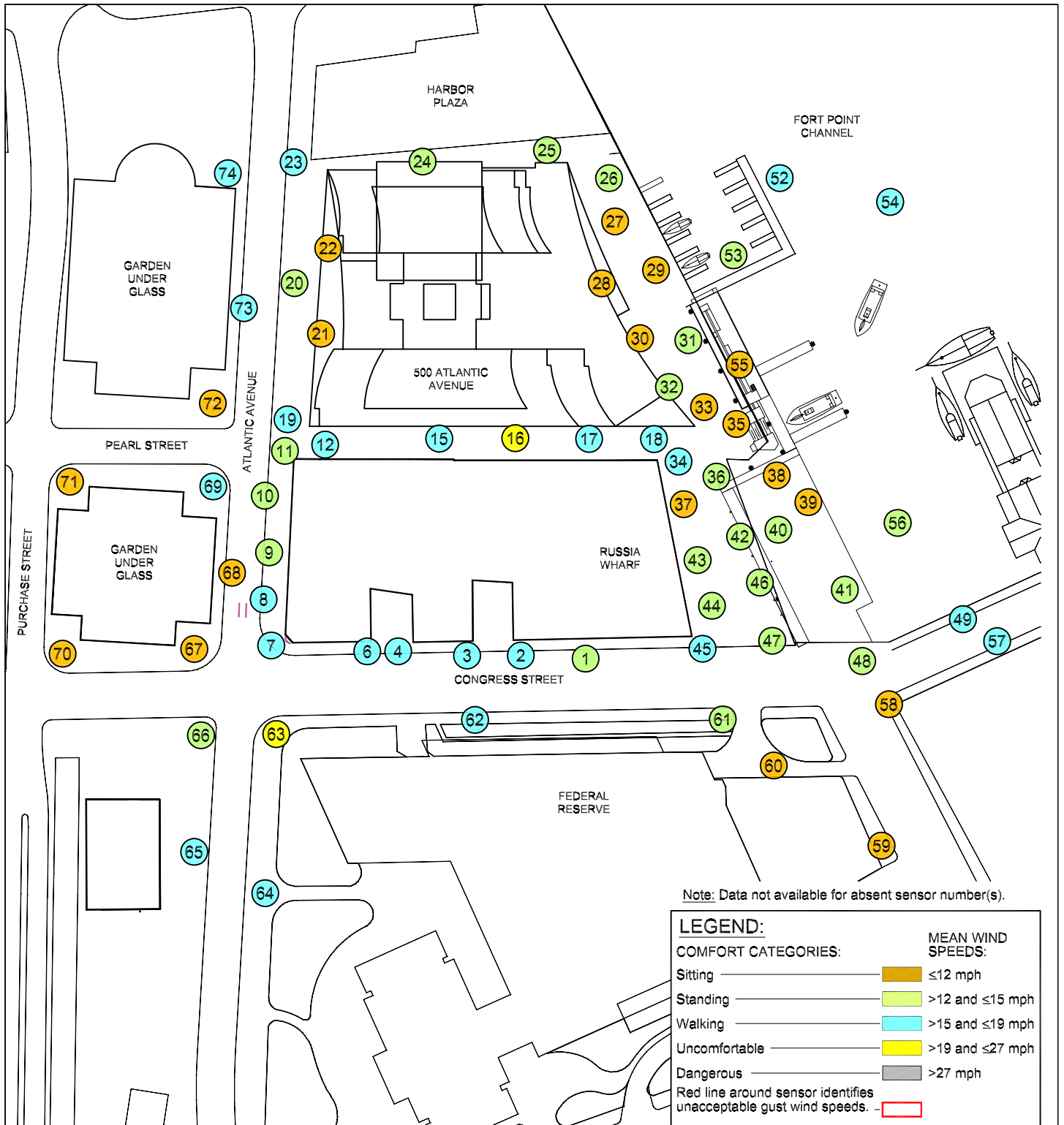
Project #03-1106

Drawn by: CAS Figure: 7

Approx. Scale: 1"=140'

Date Revised: Jan. 15, 2003





**Pedestrian Wind Conditions - Annual**  
No Build Condition

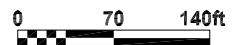
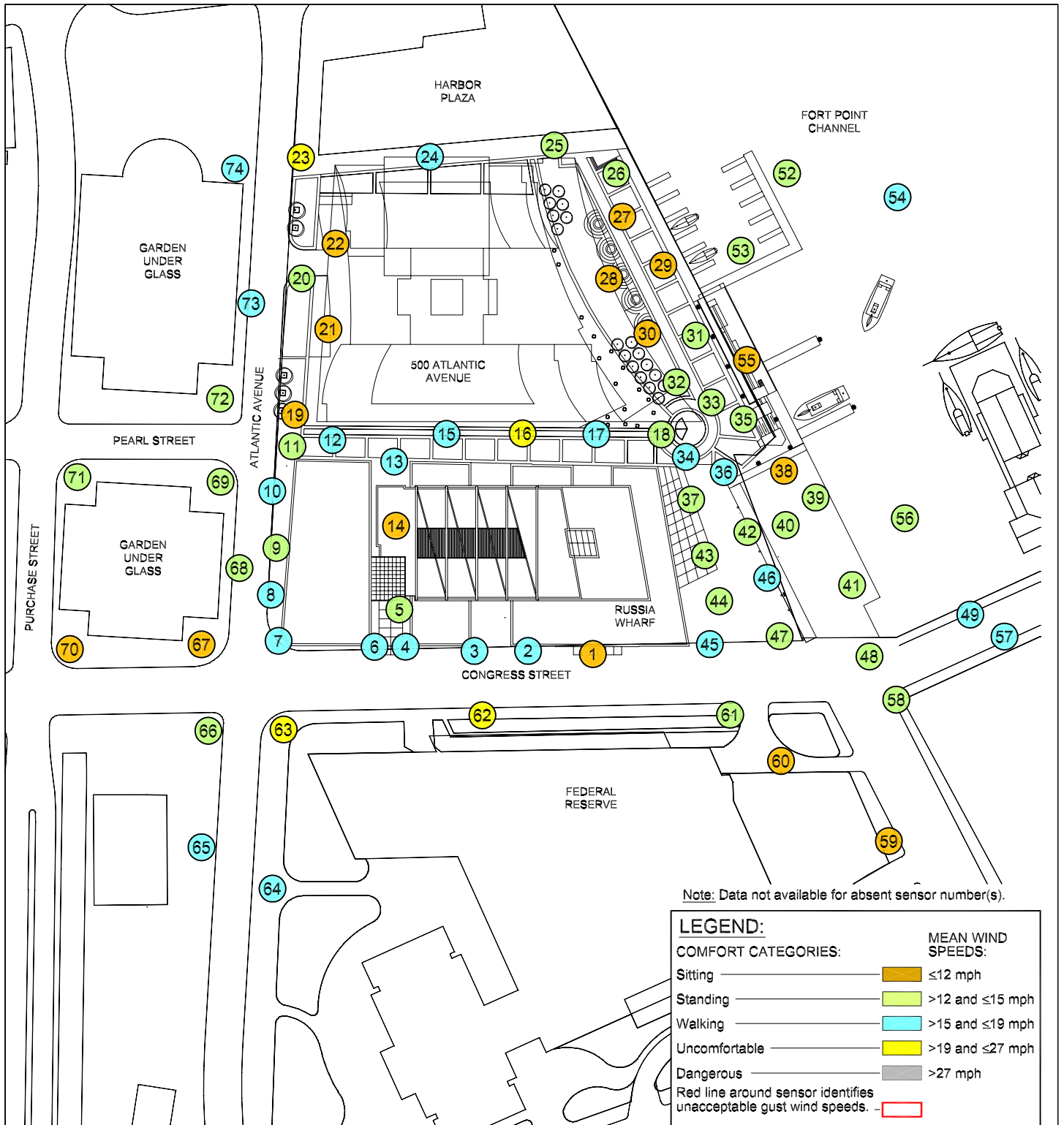


Drawn by: CAS Figure: 8

Approx. Scale: 1"=140'

Date Revised: Jan. 15, 2003





**Pedestrian Wind Conditions - Annual  
Build Condition**

Russia Wharf - Boston, Massachusetts



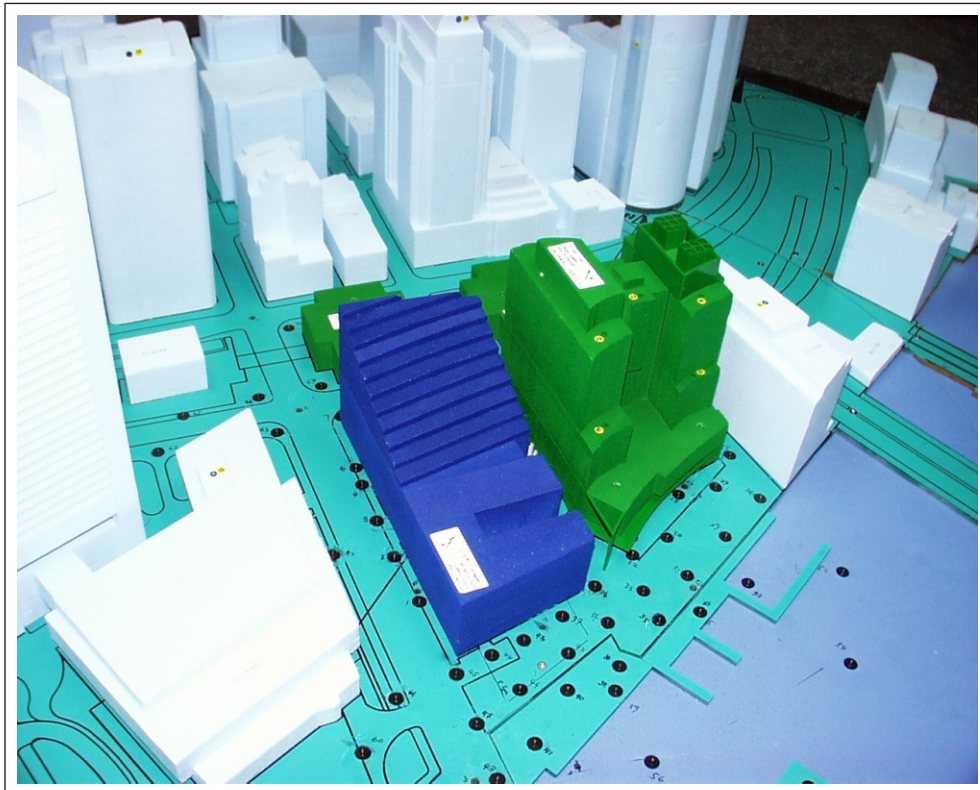
Project #03-1106

Drawn by: CAS Figure: 9

Approx. Scale: 1"=140'

Date Revised: Jan. 15, 2003





**Wind Tunnel Study Model**  
**The Chapter 91 Condition**

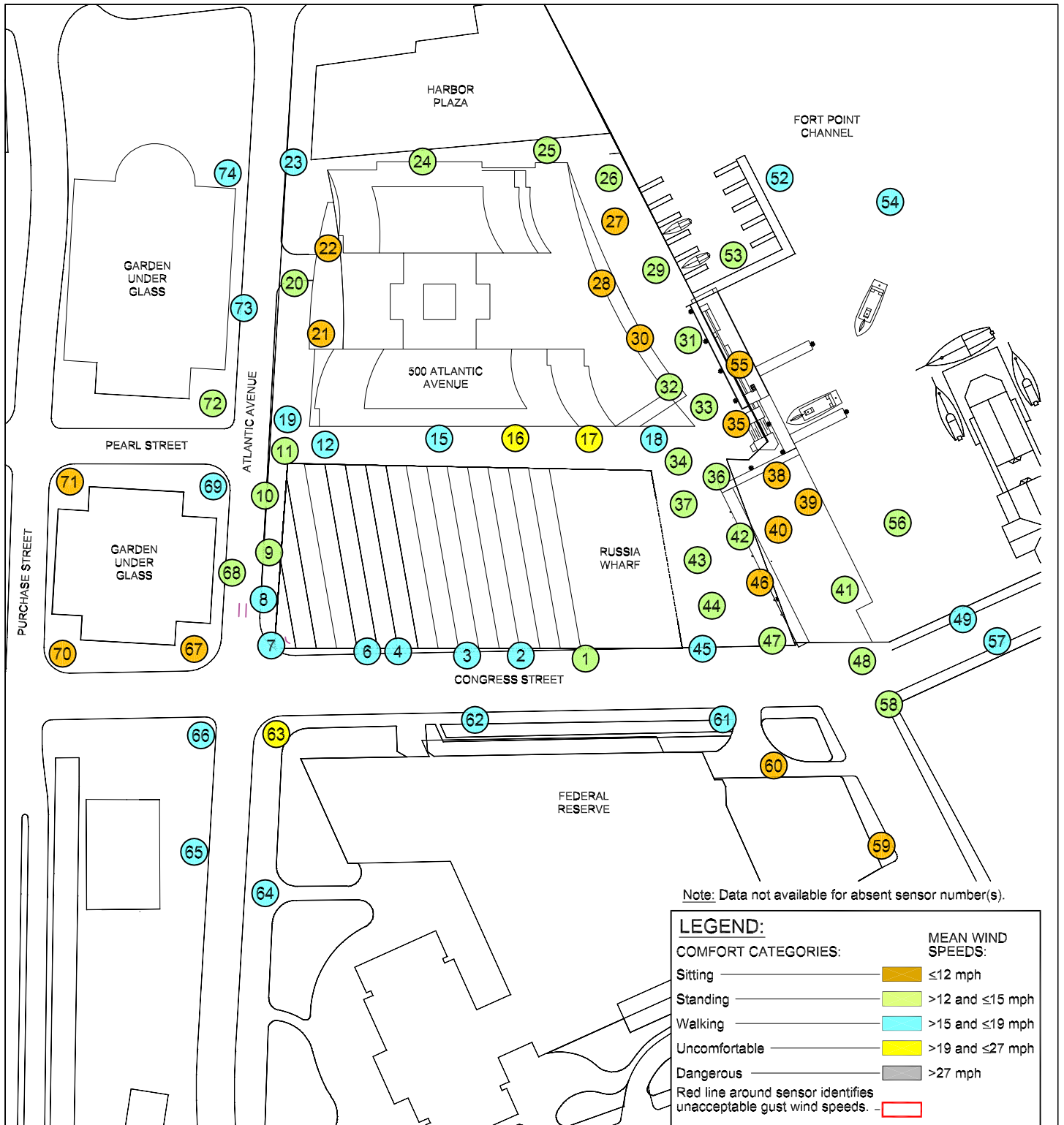
Russia Wharf - Boston, Massachusetts

Project #03-1106

Figure No. 10

Date: December 13, 2002

**RWDI**



**Pedestrian Wind Conditions - Annual**  
Chapter 91 Condition



Drawn by: CAS Figure: 11

Approx. Scale: 1"=140'

Date Revised: Jan. 15, 2003





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**Memorandum**

To: Richard McGuinness  
Boston Redevelopment Authority

Date: April 16, 2003

Project No.: 08240

From: Daniel Padien  
Senior Environmental Scientist

Re: Russia Wharf Redevelopment Project  
Pedestrian Level Wind Conditions

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This memorandum provides additional clarification regarding the differences in predicted pedestrian level wind conditions in the vicinity of the Russia Wharf Redevelopment Project. As requested at the April 2, 2003 meeting of the Fort Point Channel Downtown Municipal Harbor Planning Advisory Committee, the project team has further considered the differences in pedestrian level wind conditions between the 2010 Chapter 91 Height-Compliant Alternative and the 2010 Build Alternative described in the Draft PIR/EIR. Sixteen (16) sensor locations are expected to have a measurable change in annual wind conditions, however, the majority of these changes are small and in only one case results in a condition that is within an uncomfortable category. The remaining tested locations are expected to continue to be comfortable for typical pedestrian activities. Seven of these locations experience a decrease in wind activity, nine (9) are expected to experience a small increase

The attached figure shows the predicted differences in annual wind conditions expected from the 2010 Height-Compliant and 2010 Build Alternatives in the same format used in the Draft PIR/EIR. The figure identifies 67 sensor locations present in both the Chapter 91 Height-compliant Alternative and the 2010 Build Alternative as follows:

- Fifty-one (51) sensor locations are expected to experience a change in annual wind speeds of 1 mph or less. A change of this limited scale is within the margin of error of the wind study; and is too small to be perceived by pedestrians. Therefore, these locations are shown as “No Change.”
- Sixteen (16) sensor locations are expected to experience a change in wind speed of greater than 1 mph and are colored to indicate the predicted comfort category at each location under the 2010 Build Condition. The change in annual wind speed (mph) is provided for each sensor location where appropriate.
- Seven (7) sensor locations experience a decrease in wind speed and are identified by a colored band around the sensor location.

The differences in pedestrian wind conditions between the 2010 Height-Compliant and 2010 Build Alternative are minor in scale and will not adversely affect the use of the waterfront plaza, sidewalks or other pedestrian areas in the vicinity of the Russia Wharf site.

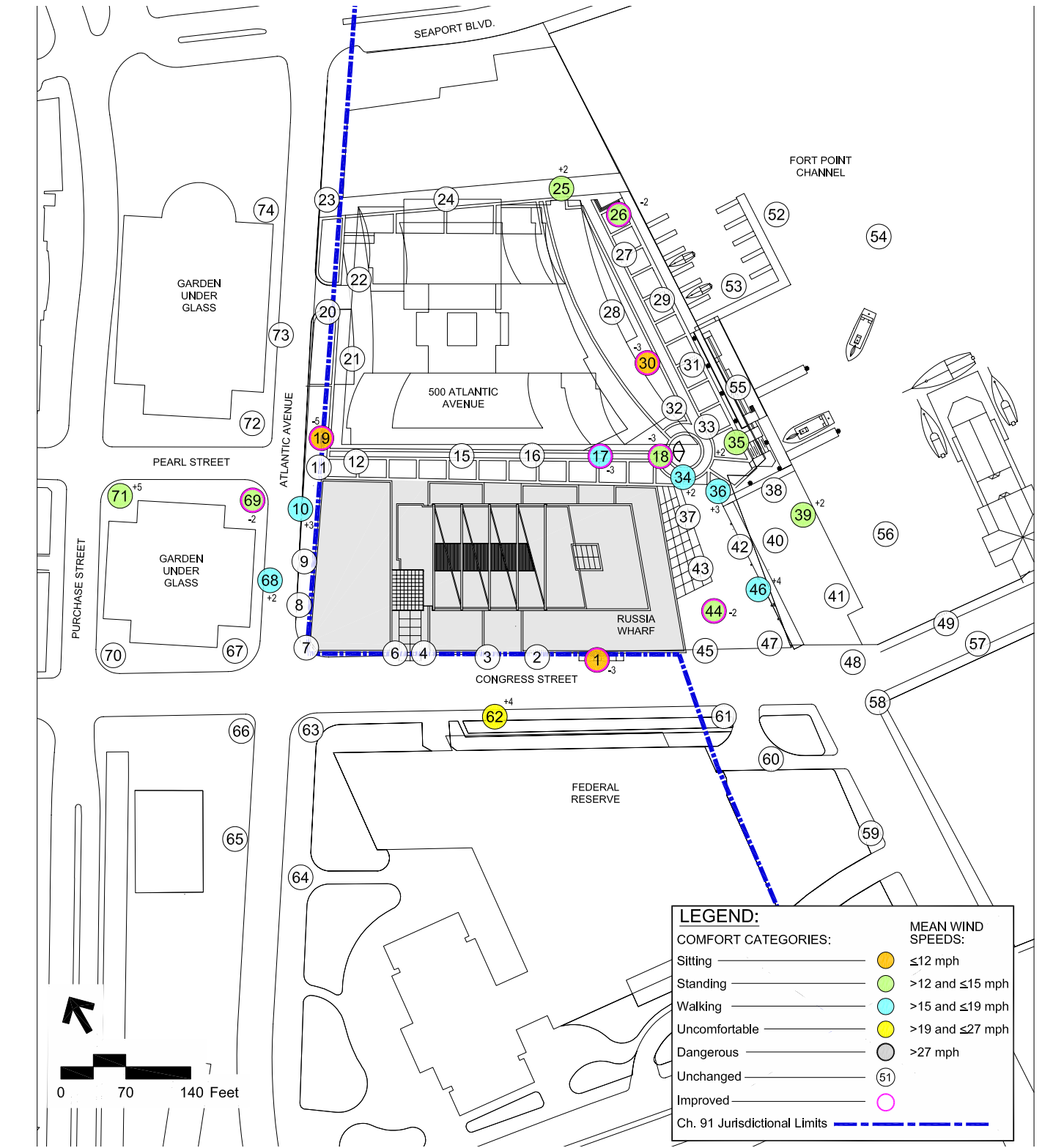


In response to the committee's questions regarding the small expected increase in annual wind conditions at location 62, the project team has considered the wind flows expected to cause the potential uncomfortable conditions at this location. The increase in wind activity at location 62 is primarily due to northeast winds. This wind direction is dominant during several major storms (Nor'easters) each year and contributes to the expected uncomfortable wind conditions at this location approximately 1 percent of the year, at a time when pedestrian activity is expected to be minimal.

The Equity Office has begun additional wind tunnel testing to quantify the lateral extent of the elevated wind conditions at location 62 and along Congress Street. This testing includes the placement of additional sensors around this location and detailed flow visualization to confirm the path by which predicted winds concentrate at this location. These results will be reported to the committee as soon as they become available.

Attachment

Cc: David Hanifin, Boston Redevelopment Authority  
Bob Kaye, Equity Office



**R u s s i a   W h a r f**

Russia Wharf Redevelopment Project  
 Annual Pedestrian Wind Conditions  
 2010 Height Compliant Alternative  
 vs. 2010 Build Alternative