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MEMORANDUM

TO: **Boston Redevelopment Authority**
Waterfront Planning Division

FROM: Craig Seymour

DATE: April 14, 2016

SUBJECT: Chapter 91 Offset Analysis

RKG Associates, Inc. was engaged by Boston Redevelopment Authority (BRA) to evaluate several previous and current Chapter 91 (Ch. 91) licenses and offset requirements in order to assess whether there are commonalities, standards or 'rules of thumb' that could be applied to future development negotiations, in order to provide a more predictable and fair Ch. 91 mitigation strategy. The analysis was conducted over the course of several weeks and included review of Ch. 91 licenses, municipal harbor plans, interviews with property developers and owners, as well as other published information. This memorandum summarizes RKG's findings and conclusions.

Approach – the specific tasks requested by BRA included review of municipal harbor plans and related decisions regarding offset requirements; review of Ch. 91 licenses for Fan Pier, Pier 4, Russia Wharf and Lovejoy Wharf; interviews with developers and current owners/property managers of these projects to discuss their perspectives on the Ch. 91 process; determine if there were any consistencies or similarities in the public benefits provided for each of these projects; review financial data for Marriott Long Wharf, Harbor Garage and Hook Lobster sites regarding initial offset assumptions; and quantify to the extent possible the dollar value of offset requirements relative to the overall project economics.

Key Findings – the following points provide a summary of RKG's findings and conclusions for the assignment:

- *Each waterfront project is unique.* Wide variations in size and scale, mix of uses and relationship to the waterfront make it very difficult to compare features and elements impacted by Ch. 91 and the MHP process. In addition, each project was developed at a different point in the real estate cycle resulting in different funding and development approaches.
- Ch. 91/MHP offsets are just one of many cost elements that go into a developer's prospective financial analysis. Other project costs include those required (or negotiated) as part of Article 80 approvals (e.g. affordable housing) as well as various other state and federal entitlement requirements. A key variable is the

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amount of income-generating space in a project over which the cost of the offsets can be spread.

- The magnitude of the Ch. 91 elements may vary widely relative to other project costs, and may vary widely based on the underlying physical conditions of a specific site. Some of the offset requirements are very costly (e.g. development of waterfront or over-water facilities), and the final costs may not be known during the approval and licensing process.
- Many, if not most, of the Ch. 91 offset requirements also add value to a development project. Enhanced public access, better visibility and enlivenment of the public realm, especially at street level, helps “unlock” additional real estate value. However, it is very difficult to quantify these impacts for any given project.
- One of the biggest issues (from the developer’s perspective) with the Ch. 91/MHP process is the time required to submit and revise plans, and for regulators to complete reviews and grant approvals. This uncertain timeframe adds significant risk, which may impact the underwriting and financing for a project, and stresses the importance of an early consensus amongst regulators.
- The level of detail required for many Ch. 91 mitigation factors, combined with the fact that these elements are negotiated relatively early in the development process, leads to frequent need for later revisions as project evolve to meet changing market conditions and/or additional entitlement requirements. The specificity regarding offsets, such as specific uses, locations, size and users (FPAs) may not take into account market conditions, resulting in underutilized facilities.
- The requirements for on-going facilities management does not appear to be a significant issue, however it is related to the relative size and type of the project.

Chapter 91 Requirements – the regulations governing new development and expansion of existing facilities on Commonwealth Tidelands[1] are found at 310 CMR 9.51 through 9.53. The basic tenet of the law is to preserve public access and use of the waterfront for “water dependent” purposes and activities. The regulations stipulate a number of requirements, or standards, regarding use of the waterfront that must be adhered to unless other standards are substituted through an approved Municipal Harbor Plan (MHP). These standards include allowed uses (e.g. water dependent uses only within 100 feet of the shoreline) as well as dimensional or numerical requirements for structures, open space and non-water dependent uses. MHP’s may propose substitute standards but must prove that the intent of Ch. 91 is enhanced (with “comparable or greater effectiveness”) and include offsetting mitigations. The Ch. 91 requirements focus on encouraging (mandating) only public uses on the waterfront and non-encroachment of the waterfront through height and setback limits. MHP’s can increase these requirements or offer alternatives, such as greater building heights, by ensuring that the intent of Ch. 91 is maintained and enhanced. Some of the major requirements of all Ch. 91 projects include:

- Open Space equivalent to 50% of the lot area that is open to the public,
- Facilities of Public Accommodation (FPAs) on the ground level,

[1] Commonwealth Tidelands include all present and former submerged lands and tidal flats and areas up to 250 feet inland (see 310 CMR 9.02), and are considered held in public trust by the Commonwealth.

- Additions to or enhancements of the Harborwalk allowing public passage and access to the water,
- Mitigation for shadow impacts on the waterfront, and
- Contributions (in monetary terms and/or physical improvements) to public water transportation programs.

Case Studies – RKG reviewed the MHPs and Ch. 91 licenses for four existing projects that were permitted during the past 10+/- years. The key elements of the license requirements and offsets are summarized below.

Russia Wharf – this project involved the preservation/adaptive reuse and redevelopment of three existing buildings (Russia, Graphic Arts and Tufts buildings) and new construction of 23 additional stories above (395 feet) and six levels of below grade parking for a mix of retail, office and residential uses. The buildings result in a 62,600 square foot (SF) footprint on a 2.2 acre (approximately 95,000 SF) combined lot, on private and Commonwealth tidelands and flowed tidelands. Total building area is approximately 861,000 SF.[2]

The Ch. 91 license for the project included a variety of detailed special conditions, including 22,500 SF of public open space, 31,000 SF of Facilities of Public Accommodation (FPA), of which a maximum of 25% could be on upper floors, and 10,800 SF of which were to be designated as a Special Public Destination Facility (SPDF), with very specific descriptions of uses, management and programming. Mitigation included $1.9 million in payments for various waterfront activation programs, including $400,000 for bridge lighting, $500,000 for the Children's Wharf Park, and $500,000 towards a Watersheet Activitation Plan, and support of waterfront transportation ($500,000). The fee for use of the Commonwealth lands was $28,350. Shadow impacts (net new shadow, or NNS) were minimal.

The costs for the required improvements to the waterfront facilities (wharves, docks, piers, Harborwalk, etc.) and other public areas was not indicated in material reviewed. Similarly, the on-going costs for managing the FPA and SPDF space, nor the revenues received were made available. The relative cost of the identified mitigation elements (offsets) identified above works out to be approximately $2.50 per SF of developed space. Additional estimated offsets of $325,000 were identified in the Fort Point Downtown Waterfront MHP Phase 2 Final report.

Discussions with representatives of the developer and current property owner/manager[3] indicated that a key issue with the Ch. 91 and MHP negotiation process was the specificity of the required uses, location, size and programming for the public realm spaces, prior to the project being built and brought to market. As a result, there have been minor modifications of the original plans to better accommodate changing market needs and to better utilize the spaces. The success of the SPDF is credited to the partnership with the Boston Society of Architects as tenant and space manager for the Fort Point Room function facility.

[2] Chapter 91 License #11419
[3] Mike Cantalupa of Boston Properties and Daniel St. Clair of Spaulding & Slye.

Fan Pier – this major mixed-use project, begun in 2000, envisions just over 3 million square feet of development on approximately 20 acres of filled and flowed Commonwealth tidelands on the South Boston waterfront (now the Seaport District). The property is subject to a variety of Ch. 91 (or predecessor regulations) licenses going back to the late 1800s. The Fan Pier master plan, which was licensed in 2002 and subsequently extended to 2007, describes the general overall requirements and stipulates that individual parcels would be subject to additional Ch. 91 licenses as they were developed.

The project as licensed includes development on 9 parcels, one of which is the Institute of Contemporary Art (considered to be a SPDF), along with two public parks, continuation of the Harborwalk, a marina, streetscape and public realm improvements as well as extensive FPA space on the ground floor of several of the proposed buildings. In addition to the tidewater displacement fee of $116,095 (payable over 20 years), required mitigation included approximately $5.5 million for water transportation contribution, of which $4 million could be met with in-kind costs associated with the construction of the marina and $1.5 million as a cash subsidy into the water transportation fund, payable annually over 10 years.

No costs associated with the construction of the public parks, marina or other public realm and waterfront improvements were provided. These improvements are complementary to the variety of uses (residential, office, hotel, restaurant, retail and public) being developed at Fan Pier, and add value to the fee or leased fee interests in the other buildings. Any additional costs associated with the public spaces required under Ch. 91 and the MHP that would not have been incurred but for the regulations, have not been identified. Similarly, the revenues from the marina, which would offset the cost of construction to a degree, were not provided. The identified costs for mitigation ($5.5 million) plus displacement fee works out to be $1.87 per SF of built space.

Pier 4 – this project, developed in 2006, called for 1,001,700 SF of development in three buildings on 9.5 acres of filled and flowed Commonwealth tidelands. The Ch. 91 license required that 80% of the ground floor space (85,000 SF) be used for FPAs and 20,000 SF for civic/cultural activity. Approximately 3 acres of public open space includes a 200 foot wide Waterfront Park (40,000 SF) at the end of the pier, a 23,000 SF Waterfront Plaza, continuation of the Harborwalk along the perimeter of the pier, and a 4,000 SF docking facility. A marina was also included in the plans but would not be built in the foreseeable future.

Mitigation in the amount of a $1,165,000 contribution to the water transportation fund, payable in phases based on building completion, or approximately $1.16 per SF. No element-specific costs for the required public space, FPA and improvements were provided, nor were revenues from leased FPA space.

Lovejoy Wharf – this mixed-use project, developed between 2002 and the present, consists of the rehabilitation of a 7 story building with the addition of 4 new stories above, and construction of a new building with 10 and 14 stories, with a total area of 390,000 SF on a total of approximately 2.1 acres, located between the Washington

Street bridge and the I-93/Zakim Bridge, on filled private tidelands and filled and flowed Commonwealth tidelands.

Ch. 91 license requirements call for replacement of the existing 30,000 wharf, replacement of bulkheads and piles, extending the Harborwalk by 420 feet along the wharf, providing over 47,000 SF of public open space, creating 37,000 of FPA and building a dockage facilities to accommodate public and private boating. In addition, as part of the FPA space, the developer has built a Pavillion that extends from street level on Washington Street down to the wharf level, that can be used for public uses and programing (Visitor Center) as well as observation decks. Specific design criteria and programming for the FPA space and the Visitor Center were included in written determination for the license.

Mitigation included a $1,456,000 contribution to subsidize water transportation, which included a $30,000 feasibility study and annual payments of $150,000 for 5 years as direct operating subsidy for water shuttle service. In addition, a $50,000 study of the Gridley Locks was required, as well as detailed management plans for the public areas. These direct offset costs amount to approximately $5 per SF of built space. The costs for rebuilding the wharf, docks and the public spaces (Pavillion) were not available, but are believed to be substantial. Discussions with the original developer indicated that the total cost of the required offsets was on the order of $7.5 million, or approximately $19 per SF.

Current Waterfront Development Projects – As part of assignment, RKG looked at three projects currently seeking Ch. 91 licensing including Marriott Long Wharf, Harbor Garage and Hook Lobster. In person or telephone interviews were held with representatives of these projects to obtain specific information and the impacts of Ch. 91 offsets, and information from the Downtown Harborfront MHPAC meetings was reviewed. Detailed financial information was not available for all of these projects, although some specific estimates were provided in one case.

Long Wharf Marriott – the owners of this waterfront hotel, built prior to Ch. 91 regulations, is seeking to add 20,000 SF of one-story additions to the waterside of the existing facility for use as restaurant and retail space. This space would open onto the waterfront, and provide additional activation of the existing Harborwalk and would serve both the general public and guests/visitors to the hotel. The proposed additions would increase site coverage on the parcel, which is already in excess of what is allowed under Ch. 91.

A key issue in this case is whether or not it will be physically and financially feasible to complete the proposed additions – extensive geotechnical analysis is required to determine if the underlying soils and pier structure can accommodate the additions and the waterfront improvements that are being suggested by the state and city agencies. The hotel owner is also investigating potential lease rates for the spaces to see if they can generate sufficient revenue to cover direct costs plus the costs of any offsets that may be required. Due to the very small footprint being proposed, any large costs for required improvements will likely make the project financially infeasible.

The other issue expressed by the representatives of the project is the time it is taking for the city and state agencies to evaluate and decide, due to this project's proximity to the much larger and controversial Harbor Garage project.

Harbor Garage – this project is the proposed redevelopment of the exiting garage building with up to 1.3 million SF of mixed-use space. An extensive public input process has attempted to scale back the development to approximately 900,000 SF and provide for more visual and physical public access to the waterfront. The parcel is directly landward of the New England Aquarium, which is considered the City's premier SPDF. A major issue in the process is the shadow impacts on the waterfront, including Long Wharf and the Aquarium. Discussions with the developer indicated that the anticipated costs of any required offsets, including creation of public space and waterfront and Harborwalk improvements, might range in the $6-$7 per SF range based on their evaluation of other projects, and that allocating those costs to a smaller total development would have economic impacts on the feasibility of the project.

Hook Lobster – this project is much further along in the planning process than the previous two, with completed plans for a new 265,000 residential over retail development on a 20,065 SF site, of which nearly 50% is built on piers over flowed tidelands. The developer is proposing to preserve the historic James Hook Lobster Company on the ground floor as a SPDF and has angled the building above to maximize views of Fort Point Channel from Atlantic Avenue.

The proposed development also provides for a 25 foot public open space and Harborwalk along the channel, a 12 foot extension along one side, docks and water transportation facilties, and extension of the Harborwalk under the adjacent Moakley Bridge so that it can continue up into the Fort Point area. The developer's estimated costs for these offset elements are approximately $2.8 million, or approximately $10.50 per SF of developed space. Additional costs, such as a shadow fee (primarily on the Greenway) and contributions/subsidies for water transportation, will increase this cost.

Developer Interviews - in-person or telephone interviews were conducted with representatives of the four existing/completed projects and the three current projects. Individuals contacted included:

- Robert Easton, Ajax Partners – Lovejoy Wharf
- Michael Cantalupa, Boston Properties – Russia Wharf
- Daniel St. Clair, Spaulding & Slye – Russia Wharf, Fan Pier
- John Twohig, Goulston & Storrs – Pier 4
- Scott Pollack, Arrowstreet – Pier 4
- Christian Regnier, Goulston & Storrs – Long Wharf Marriott
- Jenny Kessler, Sunstone Hotel Investors – Long Wharf Marriott
- Don Chiofaro – Harbor Garage
- Will Adams, JW Capital – Hook Wharf
- Bill Zielinski, SKW Partners – Hook Wharf
- Nick Iselin, LendLease – Clippership Wharf

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While the specifics of the conversations were confidential, certain common themes emerged, dealing primarily with the Ch. 91 process. These included:

- The time required to get through negotiations and receive entitlements is lengthy, which adds costs and risks to the development.
- The complexity of the Ch.91 and MHP process, dealing with both the state (DEP, CZM, and other agencies) and BRA also adds risk and costs.
- The specificity of the requirements set forth in the Ch. 91 licenses, as described in the special conditions for a specific project, may conflict with the final development plans due to changes in market or with project changes required by other entitlement agencies. Since the Ch. 91 license is done near the beginning of the overall development process, which may take a period of years, there is a need for more flexibility to revise or update the requirements to meet more current needs. This was reiterated by several respondents who pointed out that a large amount of the required FPA space around the City is not being utilized effectively, or is sitting vacant.
- The overall dollar costs of the direct offset requirements – e.g. water transportation fund contributions or on-going public space management – are not overly onerous from a financial perspective. However, the costs for creating the public space, including waterfront improvements for piers, walkways, marinas, etc. are large, and their financial impact depends on the overall size of the project (the amount of income-generating space the costs can be spread over).
- All of the respondents acknowledged that the public space elements negotiated through the Ch. 91 and MHP process provide benefits to (add value) the private development on their respective parcels, but could not articulate a dollar value for it. Nor did they indicate how much of the public space offset costs were over and above what they would have had to spend 'but for' the Ch. 91 requirements.
- The Ch. 91/MHP costs are just a part of the numerous financial decisions that go into the overall development's financial feasibility equation, or proforma statements. As one respondent explained, "urban development is a 'multi-dimensional calculation' and (Ch. 91) offsets are just one piece of the puzzle." In only one instance were the potential costs of offsets considered a "make or break" issue. Although taken cumulatively with all of the other incremental costs of development, they may play a role in the viability of some projects.

Summary Findings – There is a great deal of complexity and wide variation among waterfront projects, making it difficult to assess common elements in the Ch. 91 licensing process. In addition, from the information RKG reviewed, how specific offset costs were determined was not readily apparent, and appear to be the product of numerous negotiations between developers (who sometimes may change in the course of a project) and the BRA and other regulators. The BRA waterfront staff, who appear to serve as the 'quarterback' for most Ch. 91 and MHP negotiations and approvals, most likely have the institutional knowledge gained from multiple project experiences to shepherd future projects through the process.

From an economic perspective, there does not appear to be a consistent set of standards indicated in the reviewed data for determining offsets. The largest direct offset element has been the required cash or in-kind contributions to water transportation, either through physical improvements (dockage, ticket kiosks) or operational subsidies. These ranged from approximately $0.5 million to $5.5 million among the four projects analyzed, or from approximately $1.16 per SF (Pier 4) to nearly $5 per SF (Lovejoy Wharf), with the larger projects (Fan Pier and Pier 4) paying more in total but less on per SF basis. Unlike the other projects, Russia Wharf offsets included large 'waterfront activation' payments for specific purposes (bridge lighting, Children's Museum park).

Without specific construction costs for the physical improvements or enhancements to the waterfront facilities, it is difficult to determine a relationship between the required offsets and the scale of the project. This would be useful information to collect for future analysis. Likewise, analyzing the direct mitigation costs as a percentage of overall development costs might also prove useful.

The Ch. 91 offsets appear to be focused on a site by site basis, so that improvements that are required address waterfront issues specific to the individual project. The exception to this are payments to the water transportation fund, which presumably can or will be used for system-wide purposes, or, as in the case of Russia Wharf, to nearby projects (Fort Point Channel). Thus, a relatively small project with large offset cost requirements that are based on impacts (lot coverage, shadow, etc.), for example Long Wharf Marriott, may end up with a disproportionally larger offset cost than a larger project where improvements are less. Having a standardized offset (e.g. $ per SF) may allow for spreading funding among multiple waterfront needs.