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BAHA
BAY AREA HEADQUARTERS AUTHORITY

Memorandum

TO: Bay Area Headquarters Authority

DATE: March 21, 2012

FR: Executive Director

RE: 390 Main Street Status Report – March 2012

1. Overall Renovation and Seismic Retrofit Project Schedule

Workplace Programming	February – June 2012
Technology Programming	
Design (Conceptual/Schematic/Construction)	April 2012 – December 2013
Construction	2012 – 2013
Relocation	Fall 2013

2. Architectural and Engineering Services Update

Programming: Perkins + Will (PW), along with Tom Eliot Fisch, workplace design subconsultants, hosted two additional vision sessions with the executive management teams from MTC, BATA, BAAQMD, and BCDC to collaborate on design concepts and shared space opportunities. ABAG executive management attended the March 6th meeting and will attend future sessions.

The topics included seismic performance levels, governing board and public meeting spaces, onsite parking options, and security. Agency staff input was received through an on-line survey (70% participation), executive management/section director interviews, staff focus groups and onsite observations. The MTC Staff Advisory Group also issued a survey and is gathering feedback to support workplace design concepts. An analysis of the findings will be compiled for agency review and will be used by PW to develop conceptual design ideas for the new facility.

Building System Inspections: PW, along with subconsultants WPS Flack + Kurtz (FK), MEP engineers, and TEECOM, information technology (IT) engineers, is reviewing and verifying the due diligence information related to the building's existing mechanical, electrical, and plumbing (MEP) systems. In the coming month, PW will have a recommendation that weighs the cost and value of replacing existing various equipment versus rehabilitating and reusing existing equipment.

Seismic Retrofit: Also at the vision session, PW and Rutherford & Chekene (RC), PW's structural engineering subconsultant, presented strategies for seismically retrofitting the building. In the next two months, a retrofit concept will be selected. The concept will be a factor of the selected performance level, the range of which is shown in the matrix in Attachment A, and described further in the memorandum in Attachment B. The decision will be based largely on operational needs and cost-benefit analysis.

3. Construction Update

A Request for Qualifications (RFQ) to select the Construction Management at Risk (CMAR) was issued on January 20, 2012. Five (5) firms were shortlisted and invited to submit Proposals to the Request for Proposals issued on February 17, 2012. Award of the contract is included in agenda item #4.

4. Request for Qualifications (RFQ) for Leasing Agent/Property Management Services

On March 9th, an RFQ was issued to select a firm to provide full service leasing and professional building management services. A proposer's conference was held on March 16th with Statements of Qualifications due on March 26th. Staff expects to recommend contract award at the April 2012 BAHA meeting.

5. Building Operations

The following activities have occurred since the last BAHA meeting:

- The City and County of San Francisco issued a sidewalk repair notice dated January 9, 2012. All repair work is completed.
- The City and County of San Francisco is currently reviewing information to support BAHA's request to have the building formally zoned for office use.

Next Steps

Over the next 90 days, staff expects to complete the following tasks:

- Continue negotiations with Department of General Services on the BCDC lease (on-going)
- Commence IT programming discussions (on-going)
- Continue discussions with City and County of San Francisco on the planning and zoning permit process and requirements (on-going)
- Continue work with BAAQMD and BCDC to identify co-location efficiencies (on-going)
- Work with U.S. General Services Administration and Western Laboratory to mitigate impacts of the building renovations to their operations, including potential relocation of these operations to other premises (on-going)

Steve Heminger

Attachment A

Target of upgrade	**Expected post-event state**	**Early design concept**	**Rough order of magnitude cost estimate**	**Notes**
Life Safety (Yellow Tag)	Significant structural damage possible, but some margin of safety against collapse. Some injuries possible, but low chance of death. Repair and re-occupancy of building may not be economically feasible.	Additional shear walls in two directions in four locations.	$4 million. Level of retrofit assumed in BAHA's budget.	Minimum required by code and DGS (for BCDC), and most common type of retrofit. MetroCenter retrofitted to this level in 2008.
Life Safety—Enhanced (Green Tag)	Structural system survives and is safe for re-occupancy. (MEP) systems may require repair / replacement.	Addition of post tensioned reinforcing to Life Safety concept.	$6-$8 million	By bringing in back-up (MEP) systems, building could support a subset of tenants prior to completion of repairs.
Immediate Occupancy	Structural system survives intact. MEP systems or back-up systems survive. Continued occupancy targeted.	Base isolation	$14 million	Typical of first-response facilities, such as hospitals and fire stations.

Attachment B

RUTHERFORD & CHEKENE

Memorandum

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To: Gerry Tierney
Perkins+Will

From: Patrick Ryan

Date: March 15, 2012

Project: Renovation of 390 Main Street **2012-014S**

Subject: Seismic Performance Levels

The spectrum of commonly used seismic performance levels includes Collapse Prevention, Life Safety, Immediate Occupancy, and Operational, as shown on the graph below, with better performance towards the right.

Building Performance Levels

After a significant seismic event in San Francisco the building department will initiate a program of building inspections and determine whether buildings are safe to occupy. Buildings will be tagged red, yellow, or green indicating respectively that they are potentially unsafe, in need of further evaluation, or safe to occupy. The approximate relationship between these tags and the various seismic performance levels is shown above. A building cannot be legally occupied, if it is red or yellow tagged, until necessary repairs are made.

The Life Safety Performance Level for the Design Basis Earthquake is the minimum required by code and therefore consideration of Performance Levels for this project should focus on the portion of the spectrum from Life Safety to Operational. There are distinctions between Immediate Occupancy and Operational, but both of them are essentially aimed at resuming occupancy of the building within a relatively short time frame. Life Safety is aimed at allowing the occupants to exit the building alive, but it does not protect the property itself from damage. A building that performs at the Life Safety Level may be damaged beyond the point of economical repair.

As the retrofit design progresses we may identify low cost and high impact enhancements to a Life Safety retrofit scheme that would increase the chances that the building would be green tagged if subjected to the Design Basis Earthquake, but would not attempt to achieve Immediate Occupancy performance. The addition of vertical post tensioning cables within an otherwise

conventionally reinforced concrete shear wall, for example, would increase the stiffness of the shear wall, resulting in better seismic performance, without making the wall bigger and without adding significant cost.

Retrofit schemes addressing each of these performance levels could be characterized, for discussion purposes, as follows: A Life Safety scheme might consist of added concrete shear walls with a construction cost of approximately $4 million. A similar concrete shear wall scheme with some enhancements that might add another $2-$4 million to the cost (total of $6-$8 million) would increase the chances that the building would be green tagged and the chances that post-earthquake repair costs would be manageable. An Immediate Occupancy scheme might consist of a base isolation system in conjunction with a reduced extent of shear walls or braced frames and a construction cost of approximately $14 million. These are rough order of magnitude costs based upon limited analysis.

If the building were to be structurally split in half to achieve various architectural goals, such as increasing the daylight available at the building interior, it is possible that the two halves could be retrofit to two different performance levels. It is likely that the gap between the two halves would be filled with glass facade and skylight features of some kind, which would require seismic joints. In view of the cost of such seismic joints it is likely that schemes that achieve most of those architectural goals without complete structural separation of the two halves will be pursued in the interest of economy. It is unclear at this point whether enough cost savings could be achieved by downgrading the performance level of half of the building to make up for the increased costs associated with complete structural separation of the two halves.

Consideration of seismic performance levels better than Life Safety must consider the performance of nonstructural systems as well as structural systems. Buildings that have performed quite well structurally in seismic events have stood empty for long periods of time while water damage due to broken pipes as well as damage to other systems has been repaired. The chances of this type of damage can be greatly reduced by utilizing a nonstructural coordinator during design and construction to ensure that proper anchorage is specified, designed, and installed.

Given the limited training and enormous demands on building inspectors following an earthquake there is a chance that the building will be yellow tagged even if it has performed well enough to deserve a green tag. Enrollment in San Francisco's BORP (Building Occupancy Resumption Program) increases the likelihood of appropriate tagging. Under such a program the owner hires the structural engineer of their choice to become familiar with the structure and plan out the post earthquake inspection beforehand. The inspection plan is approved by the Building Department and the engineer is empowered to go straight to the building after the earthquake and inspect and post it with a red, yellow, or green tag. Familiarity with the structure and thoughtful pre-planning by the individual who will inspect the building ensures a quick and appropriate assessment and tagging.