As a follow-up to our phone conference on August 1, we would like to provide an update on the tasks assigned to the DDC during the meeting. We would like to schedule a call to review the following and discuss next steps in regards to discussing the project budget with OMB, issuing a Capital Program to DDC, and initiating a CP.

Regards

Revised Project Objectives
As requested by BPL, the project objectives were revised to include the design of a new HVAC system with sufficient capacity to provide cooling for the entire library as well as electrical service upgrade, HVAC distribution and equipment upgrades, supplemental air handling units and equipment, and related architectural changes and general construction. The two new design options include the following:

- **OPTION 1**: three additional chillers and air cooled condenser
- **OPTION 2**: three additional chillers and a new cooling tower

As per BPL’s request, temporary cooling options during the upcoming cooling seasons were not included in the revised project objectives. The revised project objectives were sent to BPL on August 8 and comments are still pending (see attached email).

Revised Preliminary Budget Estimates
The two design options listed above were estimated by DCC with a hard construction cost of approximately $2.4m (see attached estimates). These estimates include labor/materials, general conditions, overhead/profit, escalation and construction contingency. These estimates do not include costs for design, IFA, and soft costs. Based on our preliminary estimates for additional soft costs we believe the total project budget will be in the range of $3.3 to 3.6m.

Please note as per BPL’s request, temporary cooling options during the upcoming cooling seasons were not included in the revised estimates. In addition the above estimate may change based on BPL’s pending comments on the project objectives.
NYC Department of Design & Construction
30-30 Thomson Avenue
L I C NY 11101

From: [Redacted]
Sent: Monday, July 23, 2012 11:16 AM
To: [Redacted]
Cc: [Redacted]

Subject: RE: Brooklyn Heights Cooling Tower and Chillers

I would like to take this opportunity to update you on our progress with the Brooklyn Heights project. A request will be made shortly to schedule a meeting with BPL, DDC, and OMB to review our findings and plan next steps. Please feel free to contact me prior to this meeting.

Regards

Assessment & Survey Update
Attached please find the DDC’s initial survey and assessment of the Brooklyn Heights AC System. This report was composed after our two initial visits to the library on the week of July 9th and includes the findings described in my email on July 13th.

Please note the report does not cover the following two issues which will be addressed once we have a consultant on board:

Electrical Service – We believe the current electrical service to the building may be deficient and increase in service may be required. A more detailed load analysis is required to determine the amount of increase.

Temporary Cooling – As temporary system should be considered in order to meet BPL’s request to have cooling at the beginning of the 2013 season.

Preliminary Estimates
Based on the options outlined in the attached report we believe the budget range for this project will be $1.8m to $2.4m. This amount excludes the electrical service upgrade and the cost of temporary cooling.

Consultant Selection
Based on strategy board finding’s, Flack & Kurtz has been selected as the Consultant for this project. We have already contacted the Consultant and scheduled a walkthrough for this week. Project Objectives are currently being developed. We intend to start negotiations by the end of the week.

Expeditied Schedule
Based on our initial assessment of the scope, construction estimate, and methods of expedited project delivery, we believe a construction completion targeted for early to mid-2014 is feasible. As the project develops over the next couple of months we will be able to assess this schedule and target complete date.

This date is based on the following breakdown of activities:

- **Project Initiation**: 1-2 months
- **Design, Constructability, Permits**: 6-9 months
- **Bidding**: 3-4 months
- **Construction**: 9-10 months

Please note the schedule is based on the following assumptions:

- All required funding for this project including Design and Construction will be available from BPL
- The project objectives are reviewed and accepted.
- OMB will expedite this project and approve CP requests.
- The consultant will be directed to proceed with design prior to funding registration based on a letter from the Commissioner
- The bid period will be reduced by using a list of prequalified bidders.

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We would like to take this opportunity to summarize our investigations thus far on the condition of the Brooklyn Heights Cooling Tower and Chillers. Below is a short summary extracted from our report. The report is still a draft as we are waiting for preliminary estimates and a testing report from the existing chiller manufacturer. We will send the report once we have this information.

**Analysis**

The existing modular chillers are rated at 30 tons per chiller. Based on DDC’s preliminary building load calculation, it appears that the existing 150 tons is not sufficient to satisfy the cooling load of the entire building. DDC has estimated that the entire library building would require a total cooling capacity of minimum 250 tons of air conditioning, based on a 61,200 library usable floor space. The existing 150 tons appears to be deficient.

- **Cooling Tower**: The tower basin appears coated with algae and appears to have lots of rust. Tower louvers are rusted. Drift eliminators are cracks.

- **Modular Water Cooled chillers**: Based on the test performed by certified chiller contractor the existing compressors on all five modules are required to be replaced. The condenser/heat exchanger were not tested.
However, due to poor condition of the existing cooling tower and dirty condenser water, contractor recommend that the condenser/heat exchanger to be replaced.

- Condenser Water Pumps - These pumps are reported to be in working condition, however, due to pump age and condenser water condition we recommend pump to be tested and refurbished as required.

- Water Treatment System - With the significant corrosion and algae build-up in the tower it appears that the water maintenance system is not adequate. We recommend provide a new water treatment system shall be provided.

Options

All Options require consultant assessment and design services.

.OPTION - 1: Refurbish the existing cooling tower and rebuild existing (5) five modular water-cooled chillers

OPTION – 2: Refurbish the existing cooling tower and replace in kind existing (5) modular chillers

OPTION – 3: Comprehensive new design of HVAC system

Recommendation

DDC recommends a complete redesign of the HVAC system (Option 3). An outside consultant shall be utilized to survey the entire facility, provide building system cooling load analysis and outline increased capacity & infrastructure needs. The consultant shall provide evaluation of alternative schemes, cost estimates and recommendations for client’s review/approval.

DESIGN PHASE: DDC proposes to utilize one of the Consultants from our existing MEP Requirements Contract. We anticipate an expedited CP process and therefore we will be able release the design prior to contract registration.

CONSTRUCTION PHASE: DDC proposes to utilize of pre-qualified list of contractors to shorten the bid process. In addition, in order to target the 2013 cooling season deadlines, the construction may need to be phased:

Phase 1: Demolish and Install major equipment and infrastructure

Phase 2: Installation of supplemental cooling distribution

Next Steps

- DDC issues report and order of magnitude costs.

- BPL to assign funds and provide a CPI to initiate CP process
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<tr>
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<th>Description</th>
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