



PUBLIC NOTICE OF DESIGNER SELECTION

Designer Selection Board

One Ashburton Place, Room 1004, 10th Floor | Boston, MA | 02108
Telephone: 617-727-4046 | www.mass.gov/dsb

DSB List#: 20-02
Notice Date: February 26, 2020
Submission Deadline: March 18, 2020 At 2:00 PM
Project Number: 7677
Project Title: Quabbin Maintenance Building
Project Location: Belchertown, Massachusetts
Awarding Agency: Massachusetts Water Resources Authority, on behalf of the
Department of Conservation and Recreation
Available Amount: \$ 4,098,450
Estimated Construction Cost: \$ 3,288,468
Fee for: Study/Schematic Design N/A
Final Design To be Negotiated

Contract Type:

☒ Design and Engineering Services During
Construction and Resident Engineering
Services

Immediate Services Authorized:

☒ Schematic Plans and Outline Specifications

Certifiable Building Study

Other:

Prime Firm Requested:

☒ Engineer

Landscape Architect

Architect

Interior Designer

Programmer

Construction Manager

Other:

It is intended that the following continued services will be required
of the selected Designer following completion of the certified study
and notification of the Board in accordance with M.G.L. c. 7C.

☒ Design Development Plans and Specifications
☒ Construction Plans and Specifications
☒ Administration of Construction Contract

Other:

AGENCY INFORMATION

Massachusetts Water Resources Authority:

The Massachusetts Resources Authority (MWRA) is a public authority established by an act of the Legislature in 1984 to provide wholesale water and sewer services to 3.1 million people and more than 5,500 large industrial users in 61 communities in eastern and central Massachusetts.

MWRA assets are located in an area of more than 800 square miles, spanning from the Chicopee Valley to Boston Harbor. MWRA's water system has more than 200 separate facilities, including the John J. Carroll Water Treatment Plant, with a capacity of 405 million gallons per day (mgd), the William A. Brusch Water Treatment Facility with a capacity of 16 mgd, 11 pump stations, and 14 below- or above-ground storage tanks. The water transmission system has 105 miles of active tunnels and aqueducts (mostly 10 to 14 feet in diameter) and 39 miles of standby aqueducts.

MWRA's wastewater system has 65 facilities, including two treatment plants, the Deer Island Treatment Plant, with a capacity of 1.27 billion gallons per day, and the Clinton Advanced Wastewater Treatment Plant, with a capacity of 12 million gallons per day. There are 13 pumping stations, a screen house and four remote head works, four Combined Sewer Overflow (CSO) facilities, and two CSO storage facilities.

Since its creation in 1985, MWRA has invested more than \$6 billion in essential new facilities. In addition to the clean-up of Boston Harbor and the modernization of the region's water system, MWRA maintains hundreds of miles of water and sewer pipes, and dozens of other facilities that regularly require either upgrades or replacements. MWRA has also established aggressive maintenance programs to ensure that these facilities never fall back into a cycle of disrepair.

Massachusetts Department of Conservation and Recreation (DCR):

The DCR manages state parks and oversees more than 450,000 acres throughout Massachusetts. It protects, promotes, and enhances the state's natural, cultural, and recreational resources. Within the DCR, the Division of Water Supply Protection (DWSP), Office of Watershed Management, manages and protects the Quabbin Reservoir, Ware River, Wachusett Reservoir and Sudbury Reservoir watersheds. The purpose is to protect the source of drinking water that is treated and distributed by the MWRA. MWRA reimburses the DCR DWSP, Office of Watershed Management for expenses.

The DCR-DWSP is in need of a new Maintenance Building at Quabbin Reservoir to replace the current 80-year old facility that is functionally obsolete and structurally deficient. The proposed new space will accommodate oversized vehicles and heavy equipment, include a vehicle wash bay and space for support staff and equipment needs. Consistent with a Memorandum of Understanding between DCR and the MWRA regarding the protection, construction, operation, maintenance and improvement of water supply resources, facilities and infrastructure within the watershed and waterworks system, the MWRA has agreed to design and construct this facility on behalf of DCR.

PROJECT OVERVIEW

DCR has proposed to build a new Maintenance Building at Quabbin Reservoir to replace an existing facility that is currently housed in the West Garage at the main Quabbin Administration Building (QAB) complex. After investigating the current maintenance facility, staff determined that considerable investment would be required to stabilize deteriorating conditions and to repair the structural deficiencies. However, investments to repair the existing facility would not be enough to overcome the space constraints, operational limitations and building shortcomings that severely limit the effectiveness of the DCR fleet maintenance program.

A conceptual design/study of the facility was prepared by the DCR and Hill Engineers, Architects, Planners Inc. The building, as conceptualized in the report, will consist of a pre-engineered hybrid steel/block building with a footprint of approximately 8,100 square feet. The proposed building will include an open shop floor area, three bay service garage, vehicle wash bay, office space, lunchroom, bathrooms with showers/locker room, storage and mechanical room. The design shall include associated site work including foundation with frost walls, front porch, parking, universal access, related utility connections, fire sprinkler system and water supply treatment. Demolition of two existing sheds (including hazardous materials abatement) will be required.

The study was reviewed by the Division of Capital Asset Management and Maintenance (DCAMM); both the DCR Commissioner and DCAMM certified that the proposed facility reflects the current needs of DCR, including DCR’s long range capital facility plans (Certified Study). The information contained in the Certified Study will serve as a basis in the preparation of the project’s Final Design. Please refer to the Supporting Documents Section for a copy of the Certified Study and for Background Information on the project including but not limited to, site map, concept plans, site data, pre-demolition hazardous materials survey, other supporting documents, and performance specifications.

PROJECT GOALS

The Design Team shall prepare plans and specifications at defined progress levels to ensure consistency with the Project requirements and objectives. The Design Team submittals shall include, Technical Memos, Preliminary Design Report, 60%, 100%, and final submissions of plans, specifications, and construction cost estimates, including life cycle cost analyses. All work shall be consistent with applicable federal, state, and local codes, regulations and guidelines; and MWRA cost estimating guidelines.

The Design Team shall provide all technical services necessary to complete the Project, including civil, structural, mechanical, electrical, and engineering services. The project consists of the design and construction of a pre- engineered steel building to house vehicle maintenance equipment, supplies and staff.

SCHEDULE

A Project Schedule is included below as Table 1. A detailed Schedule is included the Supporting Documents Section.

The Authority expects that this Project will require one construction contract Contract No. 7577. Project Administration (Task 1) and Design and Bidding Services (Task 2) will start with the Award of this contract. Engineering Services During Construction (Task 3) and Resident Engineering (Task 4) will start with the award of the construction contract. A separate written Notice to Proceed (NTP) is required for each Task. Work performed without authorization is at the Design Team’s own risk.

Table 1

	<i>From</i> <u>Notice –to- Proceed</u>	<u>To</u>
Task 1: Project Administration	7/1/20	1/1/22
Task 2: Design and Bidding Services	7/1/20	1/1/22
Task 3: Engineering Services During Construction	1/1/22	7/1/23
Task 4: Resident Engineering/Resident Inspection	1/1/22	7/1/23

SCOPE OF WORK

Under this scope, the Design Team shall prepare contract plans, specifications, and cost estimates for bidding and construction. Assume the project will be packaged into one Chapter 149 Construction Contract.

This scope of services has six (6) tasks:

- 1) Task 1: Project Administration
- 2) Task 2: Design and Bidding Services
- 3) Task 3: Engineering Services During Construction
- 4) Task 4: Resident Engineering/Resident Inspection
- 5) Task 5: Technical Assistance Allowance
- 6) Task 6: Alternative Analysis Allowance

All services provided under this scope shall comply with the General Requirements included in the Supporting Document Section.

TASK 1 –Project Administration

1.1 Project Management

The Design Team shall establish a framework to provide ongoing management of Project schedules, meetings, budgets and contracts to keep the MWRA fully and accurately informed with all aspects of the Project for the entire duration of the project.

1.1.1 Prepare a Project Notebook that includes the project plan and schedule; a contact list for the project Team, including but not limited to addresses, phone numbers, e-mail addresses, fax numbers, and mobile phone numbers; a project library (list of project references); a copy of the executed contract; and the list of all project deliverables with the approximate dates for each deliverable. The Project plan and schedule shall detail work activities, sequence of events, milestones, starting and completion dates, and personnel allocations for all work elements within this Scope of Services. Within the work schedule, provide fifteen working days (3 weeks) for Authority review of each submittal. Include in the schedule the Notice to Proceed date, all subtasks of the Scope of Services (designated at the first i.e., 0.1 decimal level), and all deliverables. Include draft and final deliverable submissions providing for Authority draft document review time and time for draft document revision by the Design Team.

1.1.2 Prepare and implement a Quality Assurance/Quality Control (QA/QC) Plan in order to maintain the highest quality of design. These procedures shall address the use of quality control reviews, engineering, calculation checking, design checking, CADD interference and interface checking, construction and operation issues, and other measures necessary to maintain a consistent, complete, high quality and compatible design. Provide in-house or third party, QA/QC review of every submittal prior to delivery to the Authority. These reviews apply to all memoranda, reports, specifications, and drawings generated for this Project, and shall include the design rationale, design calculations, data gathering, base mapping, specifications, bid items, quantities and details. Recommend for approval by the Authority PM, either uninvolved, experienced members of in-house staff or, alternatively, engage an independent consultant to perform these reviews. The QA/QC Plan shall be submitted to the MWRA Project Manager for approval within 21 days of Contract NTP.

1.1.3 Monthly invoices shall provide sufficient detail, with supporting data to show the computational basis for all invoice charges. The invoices shall show direct labor, indirect labor, fee, and other direct costs for the the Design Team, and the total cost for that time period by task. Detailed back up for direct labor shall include employee's name, labor classification, hours, rate and time sheet and detailed back up for other direct costs shall include copies of paid receipts.

1.1.3.1 The monthly invoices shall present costs incurred at the subtask (e.g. 1.1,) level. The monthly progress reports described below shall, as appropriate, describe work performed to the level of detail of the second decimal level (i.e., 1.1.1).

1.1.3.2 Monthly invoices shall include all costs incurred during that month's billing period. "Holding" charges for subsequent invoicing in a later month's period will not be allowed.

1.1.3.3 Invoice dates shall correspond to the date the invoice is mailed to the Authority. Invoices that are dated more than 5 days prior to receipt will be returned for correction.

1.1.4 Provide Monthly Progress Reports to the Team. Monthly progress reports shall include shall include, but are not limited to the following:

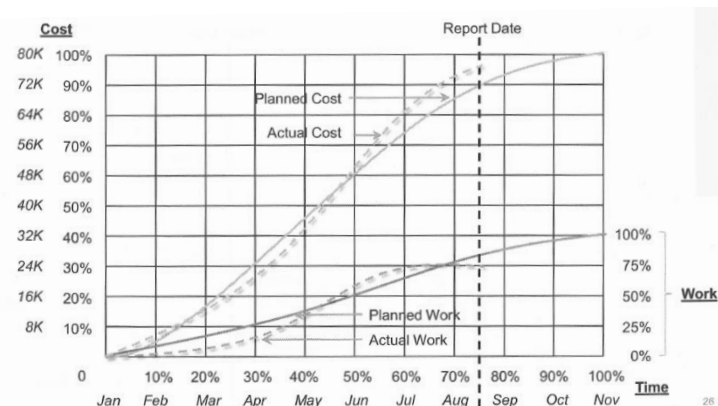
1.1.4.1 Executive Summary summarizing all work performed during the reporting period for each task;

1.1.4.2 Schedule of Deliverables listing all deliverables of the contract with initial target submittal dates in one column and the actual submittal dates of draft and final deliverables in adjacent columns;

1.1.4.3 Summary of Work by Subtask which describes in detail the work performed during the reporting period. Include for each subtask the following sections: Summary of Work Performed during the Reporting Period; Ongoing Work; Projected Work; Problems Encountered; Proposed Corrective Action; and Additional Remarks;

1.1.4.4 Bar Chart Schedule indicating for each subtask: Design Team effort; draft and final deliverable submissions including MWRA review time; and other significant contract services as appropriate.

1.1.4.5 Monthly Financial Charts for each subtask indicating in chart format budgeted costs and actual costs. The Monthly Financial Charts shall indicate total costs invoiced through the reporting period and shall be revised to reflect any costs debited from the previous month's invoice. The financial charts shall include an Integrated Cost and Work Graph over Time, showing planned percent of cost, actual cost, planned percent of work completed, and actual work completed for each month from the start of the project:



1.1.4.6 Monthly Financial Summary indicating costs invoiced to date by subtask, task, and contract total. Include direct, indirect, other direct, extraordinary, and fixed fee costs. Include subtask budgets, total spent to date, amount remaining and percentage remaining for each cost category. The Monthly Financial Summary shall be revised monthly to reflect any costs debited from the previous month's invoice.

1.1.4.7 Project Resource Allocation Charts for each subtask indicating budgeted personnel hours and actual hours used through the reporting period.

1.1.4.8 Labor Usage Summary for the Design Team presenting labor usage by classification over the most recent month and cumulative labor usage by classification over the course of the contract. The report shall present the number of hours worked by each labor category and the average cost for those hours. Include in the report the percentage of the total hours and total cost for each firm and for the total contract constituted by each classification for both the month and the contract to date.

1.1.4.9 MBE/WBE Summary presenting copies of the MBE/WBE compliance reports submitted that month to the MWRA Affirmative Action and Compliance Unit.

1.1.4.10 Statement of Costs and Schedule declaring the Design Team's opinion of whether costs incurred to date are reflective of the work performed, and the adequacy of the remaining funds and time to complete the entire Project.

1.1.4.11 QA/QC shall summarize for each subtask the QA/QC activities that were performed. Include copies of all documentation generated by the QA/QC review.

1.1.5 Monthly Project accrual report shall summarize for each task and subtask, the percent completion of work and the percent of the total budget consumed for the accrual reporting period; a “bullet listing” of the major accomplishments completed during the accrual reporting period; and an estimate of the total monthly cost for the accrual reporting period.

1.1.6 Employee salary adjustment summaries for the Design Team shall be made in accordance with the annual labor inflation factors as agreed to in Attachment E to the contract (Please refer to Table E-5 of the Cost Submittal Requirements in the Supporting Documents section of this advertisement.), and in accordance with each firm’s standard personnel policies to be included as an attachment to the contract. The employee salary adjustment summary shall be submitted at least one month prior to the effective date of the adjustments and shall be subject to the approval of the Authority. Any increased direct labor rates invoiced without prior approval of the Authority shall be disregarded and the most recent approved direct labor rate shall apply instead. In instances where annual review/salary increase periods do not coincide among the Design Team, the employee salary increase summary shall be updated and submitted for approval as many times during the year as necessary to ensure advance Authority review and approval of salary adjustments for all firms prior to their effective dates. In instances where employees have been granted increases due to promotions or other reasons out of sequence with the standard review policy for the firm, a letter must be sent to the Authority at least one month in advance of the effective date for the revised salary, explaining the reasons for the adjustment and providing justification for Authority allowance of the adjustment under the contract. All changes to direct labor rates are subject to approval of the Project Manager.

1.2 Meetings

1.2.1 Meetings: Prepare for and participation in meetings to discuss Project progress, schedule, budget, project issues, potential problems, and their resolution.

1.2.1.1 Prepare for and participation in monthly progress meetings during the design including a Project Kickoff meeting. The progress meetings will be held at the project site. Assume fifteen (15) progress meetings to be attended by the Design Team’s Project Manager and Project Engineer and the meeting will last for two (2) hours excluding travel time.

1.2.1.2 Detailed briefing meetings shall be presented to senior staff at the start and completion of major milestones. The objective of the briefings shall be to give a practical presentation of the Project issues to Authority/DCR senior staff who are interested in the functionality of the Project. These meetings shall occur sufficiently before each formal submittal to incorporate staff input received at the meetings. Assume there will be three (3) briefings, each of four (4) hours excluding travel time, and that each will be attended by the Design Team’s Project Director, Project Manager, and Project Engineer.

1.2.1.3 Comment response meetings will be held following receipt of MWRA’s comments regarding major submittals of Task 2. Assume three (3) major submittals. At these meetings, the Design Team shall address all reviewer comments and, resolve any issues with the reviewers during this meeting. Assume three (3) meetings each of which will be three (3) hours excluding travel time and shall be attended by the Design Team’s Project Manager and Project Engineer and by senior Authority staff, together with the Authority reviewers. If, after this meeting, issues remain unresolved, the Design Team shall then prepare a written summary of any remaining unresolved issues. This summary shall include the review comments, together with the Design Team response and any further input obtained at the meetings with reviewers. This summary will be forwarded to the MWRA for final resolution. If the Design Team disagrees with any review comments made by the Authority pertaining to proper design or which have negative impacts upon construction cost or schedule, it is the Design Team’s responsibility to provide written notification to the Authority of the disagreement and the reasons for the disagreement. Absent such documentation, the Authority will assume that the Design Team concurs and accepts full responsibility for that portion of the design.

1.2.1.4 Agendas and Minutes: Prepare agendas prior to all meetings and minutes following all meetings. Submit agendas three (3) business days prior to the meeting date and meeting minutes within three (3) business days following the meeting date.

1.3 Project Site and Access

1.3.1 Location: The Project Site is located within the Quabbin Reservoir South Campus on Blue Meadow Road, in Belchertown, MA. Access to the site is from Route 9 (Ware Road), turning north on Winsor Dam Road, travelling approximately 900 feet, thence turning west on Blue Meadow Road and travelling approximately 0.7 miles.

1.3.2 Site Access: No public access is allowed on Blue Meadow Road, within the Quabbin South Campus – including the Project Site. A secure, locked, gate is located on Blue Meadow Road – restricting access to the Project site, at times. On weekdays, the gate typically remains open during DCR operation hours, but is locked at the end of each day and on the weekends.

1.3.3 Key Issuance: The DCR authorizes temporary issuance of keys to allow site access. DCR has a formal procedure in place and each request is addressed on a case-by-case basis.

1.3.4 Site Access Permits: The DCR authorizes Site Access Permits to secure areas, such this project Site. DCR has a formal procedure in place to acquire the proper Site Access Permits.

Task 1 - Deliverables:

- 1) Project Notebook within seven (7) days of the NTP.
- 2) Project QA/QC Manual within twenty one (21) days of the NTP.
- 3) Monthly Invoices, Monthly Progress Reports and salary adjustment requests, within fifteen (15) days of the close of the monthly billing cycle.
- 4) Accrual Report within seven (7) days of the close of the monthly billing cycle.
- 5) Agendas, Meeting Minutes and Comment Response.

TASK 2 - Design and Bidding Services

2.1 Project Initialization/Familiarization

2.1.1 The Design Team's Project Manager and Project Engineer shall attend the Project Initialization/ Familiarization meeting (approximately four (4) hours excluding travel time) with Authority staff to the site. The site visit will be conducted with designated representatives of the Authority, representatives from the DCR and other personnel as needed. During this time, items of interest to all parties will be brought to the attention of the Design Team.

2.1.2 The Design Team shall conduct an independent assessment/value engineering analysis of all pertinent information relative to the project (see Supporting Document Section). The background information includes but is not limited to the March 26, 2019 Conceptual Design Report (Rev. July 16, 2019) prepared by DCR staff with supporting information from Hill Engineers, Architects, Planners Inc., Kehes Group, Whitewater Systems, Inc., RAN Fire Protection Engineering and site survey information.

2.1.3 The Design Team shall assume the following: The existing Quonset Hut and Shed located at the site shall be demolished prior to Maintenance Building construction. These structures contain hazardous materials which shall be abated in accordance with local, state and federal regulations. The Maintenance Building will utilize the new well for water supply; design of a new water treatment and storage system shall be included in the scope.

2.1.4 The Design Team's review of existing information shall seek to optimize elements of the conceptual design and highlight any areas that need to be further analyzed/improved. For any recommended alternatives which differ from those previously recommended in the background information reports, the Design Team shall describe proposed alternatives and rationale. If detailed design of recommended alternatives are needed, the effort will be performed under Task 6 Alternative Analysis.

2.1.5 Prepare a draft and final Summary Report Technical Memorandum that summarizes the site walk, existing information, independent assessment and recommends any alternatives that enhance the project design. For any recommended alternatives, describe proposed alternatives and rationale. Submit five (5) copies of the draft and final memo.

2.2 Regulatory Support

2.2.1 The Design Team shall identify all required permits for the project. Required permits shall include but are not limited the following: Massachusetts Department of Environmental Protection (DEP), the Massachusetts Department of Public Safety, local Conservation Commission, and local fire department. The Design Team shall identify any necessary code variances or design modifications that may be needed in order to comply with all Code requirements.

2.2.2 The Design Team shall prepare a draft and final Permitting Technical Memorandum that identifies all required permits including a timeline for obtaining permits to ensure that the permitting process does not interfere with the project design and construction schedule. The memo shall identify those permits that shall be obtained during the design phase vs. during the Construction phase (to be obtained by the Contractor).

2.1.2.1 Site Survey and Base Plans – An existing conditions survey and base plan, prepared by DCR-DWSP Staff, is provided as a convenience for informational purposes only (Exhibit II – Site Data). See These electronic files represent preliminary plans and are conceptual in nature. These plans are not final and DCR makes no warranty of any kind, expressed or implied, with respect to the data. Data contained in these Files is provided solely for use in connection with this project and shall not be used for any other purpose. The Recipient agrees not to use, or allow others to use, the Electronic Document Files, in whole or in part for any purpose or project other than as stated herein without the express prior written permission of DCR.

2.1.2.1.a The provided site survey and base plans are based on compiled field work completed by DCR, MA-GIS, other available sources and record plans. Locations of utilities are shown on the plan as a result of field survey, based on surface evidence, plans of record and other available sources. The provided information does not necessarily depict the exact location of all utilities which may exist at this time within the premises.

2.1.2.1.b The provided site survey and base plan Horizontal Datum is assumed. No horizontal datum references or ties have been made. The survey is oriented north in a general sense, and all collected points are relative to each other; however, no ties have been made to a local or global Horizontal Datum. A closed loop traverse was completed at the site in December 2016; however, DCR cannot guarantee condition or status of these points.

2.1.2.1.c The provided site survey and base plan Vertical Datum is Metropolitan District Water Supply Commission (MDWSC). This Datum is integral to the Quabbin Reservoir and all related infrastructure. Datum was established by DCR record benchmarks. Two (2) Permanent Benchmarks (vertical only) are established at the site and are indicated on the plan. MDWSC Datum of Elevations is 6.049 feet below "Mean Sea Level" as determined by U.S. Coast and Geodetic Survey, First Order Level Net New England Preliminary Adjustment of January 1928 (with 1929 General Adjustments). MDWSC Datum is **not** equivalent to Boston City Base.

2.2.3 The Design Team shall provide the necessary technical input, prepare and obtain all permits required during the design phase, when authorized by the MWRA.

2.3 Energy Analysis

2.3.1 The Design Team shall perform an energy analysis on the proposed Maintenance Facility. The analysis shall identify energy conservation and energy efficient measures to be incorporated into the design. The Design Team shall assist MWRA in seeking National Grid incentives through baseline energy reduction.

2.3.2 The design shall include, but not be limited to, exceeding the Massachusetts Energy Code performance requirements with sustainable design elements, such as the use of premium efficiency LED lighting, low-flush toilets and other water conserving fixtures; and ecological landscaping practices. Ensure/evaluate the installation of insulated energy efficient windows and doors. Evaluate providing ventilation setbacks to save energy in accordance with NFPA 820.

2.3.3 The Design Team shall coordinate filing of appropriate forms and provide the utility with all required information and documentation. In conjunction with the contractor the Design Team shall complete and submit utility rebate applications for energy efficient equipment.

2.3.4 Prepare a draft and final Energy Analysis Technical Memorandum that summarizes the information in items 2.3.1 – 2.3.3. Submit five (5) copies of the draft and final memo.

2.4. Preliminary Design Technical Memo

Utilizing the information obtained in Subtasks 2.1 through 2.3, the Design Team shall prepare a draft and final Preliminary Design Technical Memo.

2.4.1 Prepare a draft and final Preliminary Design Technical Memo (TM). The TM shall summarize the design, energy analysis, permitting requirements, construction sequence and cost estimate. The TM shall identify all building design elements and include all ancillary facilities such as water supply (treatment, and storage). The report will be used as a basis for the Final Design/ development of detailed Construction Contract Documents. Submit five (5) copies of the draft and final memo.

2.5. 60% Design

2.5.1 Prepare 60% design documents. The design shall be based on Design Team's recommendations of the review of existing information provided in Section (above). Refer to the documents in the Design Submittal Requirements included in the Supporting Documents Section of this advertisement. Drawings and specifications shall conform to these requirements. Prepare construction cost estimates and operation and maintenance costs.

2.6 100% Design

2.6.1 Prepare 100% contract documents. Drawings and specifications shall conform to the requirements of the Appendices. The Documents shall conform to the requirements of Mass. General Law Chapter 149. Refer to the Design Submittal Requirements including, but not limited to the "Requirements for Drafting Construction Plans and Specifications" in the Supporting Documents section of this advertisement.

2.6.2 Prepare an updated detailed final pre-bid construction cost estimates, and construction schedules, reflecting all comments/revisions made as a result of permit requirements, progress reviews and draft and Final Design document reviews.

2.6.3 100% Contract Documents will be reviewed by the MWRA Procurement Department for compliance with state bidding laws.

2.7 Bid Documents

2.7.1 The Design Team will be required to make corrections and changes as noted during the Procurement review. Prepare REV 1 Bid Documents that incorporate the Procurement Department's comments and a comment response memorandum.

2.7.2 The REV 1 Bid Documents will be reviewed by the MWRA Procurement Department. The Design Team will be required to make corrections and changes as noted during the REV 1 Procurement review. The Design Team will prepare REV 2 Contract Documents that incorporates the Procurement Department's comments and a comment response memorandum.

2.7.3 The REV 2 Bid Documents will be reviewed by the MWRA Procurement Department. The Design Team will be required to make corrections and changes as noted during the REV 2 Procurement review. The Design Team will prepare Final Contract Documents that incorporates the Procurement Department's comments and a comment response memorandum.

2.7.4 The Final Contract Documents will be stamped by a professional engineer registered in the Commonwealth of Massachusetts and that is completely biddable and will result in a fully-integrated, constructible, operable, reliable and maintainable section(s) of the Authority's water supply system. Documents shall reflect all Authority review comments and permit requirements. The Design Team will provide to the Authority electronic .pdf copies of the Final Contract Document for posting on the MWRA Supplier Portal and one (1) full size drawings, and three (3) specifications (hard copies) of the Final Contract Documents.

2.8 Bidding Process

The Authority will be responsible for advertising for bids and for distributing Contract Documents to potential bidders. However, the Design Team will provide the following services:

2.8.1 Pre-Award Services: Coordinate, prepare agendas, and attend a pre-bid conference and site visit for the contract to describe the Project and emphasize key elements of the Contract Documents to prospective bidders. Prepare written responses to questions raised at conference and site visit.

2.8.1.1 Respond to inquiries from contractors, subcontractors, suppliers, or other third parties through the Authority. Document all inquiries and draft responses.

2.8.1.2 Advise the Authority as to the acceptability of substitute materials equipment proposed by Contractor(s) when substitution prior to the award of contracts is allowed by the bidding documents.

2.8.1.3 Prepare any required addenda and Questions/Answers (Q and A) to the plans and specifications, or other documents (i.e., text and/or sketches as appropriate) during the bidding periods for review by the Authority.

2.8.1.4 Plans, specifications and any other documents used in the bidding of the Project(s), shall comply with all public bidding laws and regulations. The Design Team shall submit to the Authority any revised and reissued plans, specifications, or other documents found to be in non-compliance with any such law or regulation, at its expense and at no additional cost to the Authority.

2.8.1.5 Review an itemized bid tabulation of all bids received and opened, including review and notation of any mathematical errors made by the bidders.

2.8.1.6 Review Filed Sub Bidders' qualifications, including review of Filed Sub Bidder's Certification records from the Massachusetts Division of Capital Asset Management and Maintenance (DCAMM), and attend a de-scoping meeting, as necessary; Make a written recommendation to the Authority.

2.8.2 Award Services: For the apparent three (3) low general bidders on the contract, obtain three (3) references and provide the following services:

2.8.2.1 Advise the Authority as to the acceptability of construction qualification statements, supporting documentation, and persons and organizations proposed by the contractors.

2.8.2.2 Perform previous project reference checks.

2.8.2.3 Review Contractor's Certification records from DCAMM.

2.8.2.4 Determine if the bidders are financially and technically qualified to perform the required work, and have included prevailing wage rates in the preparation of their bids.

2.8.2.5 Evaluate the bids to determine if bids are complete, accurate and balanced, including the attendance of de-scoping meeting, as necessary.

2.8.2.7 Prepare a written Reference Review Results and Recommendation to Award the contract to the lowest responsive, qualified bidder within seven calendar days after the bids are opened.

2.9. Conformed Documents

2.9.1 Prepare Conformed Contract Documents (drawings and specifications) which incorporate all Addenda issued during the bid period. Conformed Contract Documents shall include four (4) full size drawings, twelve (12) half-size drawings and sixteen (16) specifications. The Conformed Documents shall include one reproducible and two (2) AutoCAD and TIFF compatible disks. All documents shall be prepared in accordance the Design Submittal Requirements included in the Supporting Documents Section of this advertisement.

Task 2 - Deliverables:

- 1) Draft and Final versions of the Summary Report Technical Memorandum
- 2) Draft and Final versions of the Permitting Technical Memorandum
- 3) Draft and Final versions of the required permitting documents.
- 4) Draft and Final versions of the Energy Analysis Technical Memorandum.
- 5) Draft and Final versions of the Preliminary Design Technical Memorandum
- 6) 60% Design Documents and cost estimates.
- 7) Response to review comments on the 60% documents.
- 8) Draft 100% Design Documents, cost estimates, and schedules.
- 9) Response to review comments on the draft 100% documents.
- 10) REV 1 Bid Documents.
- 11) Response to review comments on the REV 1 Bid documents.
- 12) REV 2 Bid Documents.
- 13) Response to review comments on the REV 2 Bid documents.
- 14) Final Contract Documents.
- 15) Draft addendum and Q/A, and final addendum and Q/A based on Authority comments.
- 16) Bid tabulation.
- 17) Draft and Final Qualifications memo for General Contractor and all Filed Sub Bid Categories
- 18) Conformed Documents.

TASK 3 - Engineering Services During Construction

*Services under Task 3 require a separate Notice of Authorization issued by the MWRA.

The Design Team shall provide overall administration services and act as the Authority's representative during the entire construction, start-up and warranty periods of this project. The Design Team shall provide a Resident Engineer, who will oversee and coordinate all services to be provided during construction. The Design Team shall provide the following services during construction of the project.

3.1 Construction Management and Administration

- 3.1.1. The Design Team shall provide administration of the Contract for construction of the Project. Provide advice and counsel to the Authority on all matters concerning construction of the Project. The Design Team shall also authorize minor changes in the work consistent with the Scope and intent of the Contract Documents, which do not require a change in contract price or time.
- 3.1.2. The Design Team's Project Manager (PM) is to oversee and administer Engineering Services During Construction and Resident Engineering / Inspection services.
- 3.1.3. Coordinate and maintain a project management program that provides for the efficient and effective use of Design Team Services and keeps both the Design Team and the Authority up to date on this phase of the Project.
- 3.1.4. Prepare for and attend the pre-construction meeting with the Authority construction staff. The Project Manager shall attend construction progress meetings and other meetings with federal, state, local agencies, utility companies, interested groups and affected property owners as required. The Design Team shall assume two (2) hours for each meeting for a total of thirty six (36) meetings. The Project Manager will provide assistance to the Resident Engineer in resolving critical issues.
- 3.1.5. Work with the MWRA Construction Coordinator to provide coordination services with other Authority projects. Support the Resident Engineer and the MWRA Construction Coordinator by preparing agendas prior to and minutes following all meetings.
- 3.1.6. Maintain complete and accurate project files including but not limited to all approved shop drawings, design changes and clarifications, plans, reports, correspondence and calculations such that they can be transferred to the MWRA Construction Coordinator upon project completion. Maintain submittal and document tracking systems to control and manage all documents and correspondence.
- 3.1.7. This project has been designed to incorporate equipment approved for energy efficiency incentives. Coordinate filing of appropriate forms and provide utility with all required information and documentation. In conjunction with the contractor complete and submit utility rebate applications for energy efficient equipment.

Subtask 3.1 - Deliverables:

- 1) Provide assistance (including but not limited to materials, letters, research) for pre-construction and progress meetings,
- 2) Agendas and meeting minutes.
- 3) Transfer project files to the Authority upon project completion.

3.2 Submittal Review

The Design Team shall provide a Pre-Determined Level of Effort (PDLE) of 250 submittals/2,000 hours for Subtask 3.2.

The Design Team shall provide technical review of submittals related to the construction of this Project to ensure that operable, reliable, and maintainable facilities are built in a safe manner and in accordance with all design documents, codes, permits, and regulations.

- 3.2.1. Provide technical review of submittals related to the construction of this Project to ensure that an operable, reliable, and maintainable system is built in a safe manner and in accordance with all design documents, codes, permits, and regulations.
- 3.2.2. Review and approve, reject, or take other appropriate action on construction layouts for all work areas, staging areas and temporary benchmarks established for the Project by the Contractor.

3.2.3. Review and approve, reject or take appropriate action on Contractor submittals and resubmittals such as shop, construction or working drawings, diagrams, samples and schedules, the results of tests and inspections and other data submitted by the Contractor or its subcontractors in order to document conformance with the design concept as described in the Contract Documents. Such action shall be taken with reasonable promptness, and within the times required by the Contract Documents, so as not to cause delay.

3.2.4. Review and make recommendations regarding Contractor requests for substitution of specified materials or equipment consistent with Contract Documents, applicable law and industry standards.

3.2.5. Review the schedule developed by the Contractor for completeness. Monitor the actual submittals received against the checklist of required submittals. Provide a copy of the updated checklist to the MWRA Construction Coordinator on a monthly basis for use in identifying overdue submittals from the Contractor.

Subtask 3.2 - Deliverables:

- 1) Review and markup of Construction Layout of the construction sites and staging areas submitted by the Contractor.
- 2) Review Contractor submittals' and return to the Contractor within time required.

3.3 Respond to Requests for Information and Non-Conformance Reports

The Design Team shall provide a PDLE of 100 RFI's / 800 hours for Subtask 3.3.

3.3.1. Respond to Requests for Information (RFIs) of the Contract Documents and approved submittals. Authorize minor changes in the work consistent with the Scope and intent of the Contract Documents, and which do not require a change in contract price or time. Interpret and clarify (other than legal interpretations and clarifications) the requirements and intent of the Contract Documents and render with reasonable promptness such interpretations and clarifications (in the form of Drawings or otherwise) necessary for the proper execution and/or progress of the Work.

3.3.2. Review and advise the acceptability of the Contractor's recommendations to correct unsatisfactory work that cannot be changed to meet the contract requirements. Unsatisfactory work will be documented on Non-Conformance Reports (NCRs).

Subtask 3.3 - Deliverables:

- 1) Provide written response to Requests for Information and Non-Conformance Reports.
- 2) Review and approve or reject or take other appropriate action on construction layouts for all work areas, staging areas, connections to existing structures, and temporary benchmarks established for the Project by the Contractor.

3.4 Technical Support to Construction

The Design Team shall provide a PDLE of 250 hours for Subtask 3.4.

3.4.1 Provide technical support and field assistance to the Resident Engineer as required during construction to resolve construction issues including those related to: quality, schedule, environmental compliance, permitting, claims, and disputes. Provide qualified staff to assist the Resident Engineer with inspection in specialty disciplines such as electrical, instrumentation, mechanical, architectural, environmental, and structural.

3.4.2 Review Contractor's disputes and claims in accordance with the "Disputes" and/or "Claims" article of the Contract Documents and make recommendations in writing to the Authority for the resolution of such disputes or claims.

3.4.3 Prepare Existing Conditions Survey as required by the Massachusetts Department of Public Safety (DPS).

- 3.4.4 If the area of construction disturbance is over an acre, perform Site Inspections as required by the EPA NPDES Construction General Permit for Discharges from Construction Activities, Part 4.1. Design Team's Inspectors shall meet the training specified under Part 4.1.1. of the EPA NPDES Construction General Permit.
- 3.4.5 Furnish the services of a Massachusetts Licensed Site Professional (LSP) as defined in 310 CMR 40.0000 to act as the LSP of Record for the MWRA, including but not limited to the activities specified below:
1. Coordinate between each Construction Contractor's Environmental Professional/LSP and the MWRA with regard to all aspects of the work related to M.G.L. c.21E and the Massachusetts Contingency Plan, 310 CMR 40.0000. The Contractor and Contractor's Environmental Professional will implement all MCP Response Actions during the Project. The Contractor's LSP will prepare all draft forms, plans, reports, Bills-of Lading, manifests, and Opinions required by the MCP for all Response Actions relating to both pre-existing environmental contamination and contamination caused by the Contractor's activities. However, with regard to Response Actions for pre-existing contamination, the Contractor's LSP will not serve as the LSP of Record for the Project but will prepare all draft documents pertaining to existing contamination and provide them to the LSP of Record for review. Following the LSP of Record's review, the Contractor's LSP will finalize the documents as required so that, with MWRA approval, the LSP of Record may sign, stamp, and submit the documents to DEP. With regard to MCP Response Actions relating to contamination caused by the Contractor's activities, the Contractor's LSP will also prepare draft documents and Opinions for review by the LSP of Record, but in this case will, after revising the documents as required by the LSP of Record and the MWRA, finalize, sign, stamp, and submit the documents to DEP. Specifically, the LSP of Record will be required to perform the following:
 - A. Direct construction/remediation activities to comply with the requirements of the Massachusetts Contingency Plan (MCP, 310 CMR 40.0000 et seq.) as they relate to the Contractor's work in areas of pre-existing environmental contamination by oil or hazardous materials (OHM) during the course of their work.
 - B. Verify that the Contractor's construction/remediation activities comply with the requirements of the MCP as they relate to the Contractor's requirement to respond to accidental releases of OHM caused by the Contractor.

Subtask 3.4 - Deliverables:

- 1) Comments on the Contractor's SOP for construction.
- 2) Provide the technical support required by the Resident Engineer to resolve construction issues and assure that the project is constructed in accordance with the contract requirements and the approved design.
- 3) Recommendations on Contractor's disputes and claims.

3.5 Technical Support for PCOs and COs

The Design Team shall provide a PDLE of 25 Proposed Change Orders (PCOs) and 10 Change Orders (COs) / 280 hours.

3.5.1 Provide technical support and recommendations regarding the need and appropriateness of Proposed Change Orders (PCOs) and Change Orders (COs) which affect the design. Develop independent cost and schedule estimates of the impact that the design change will have on construction. Develop detailed "Blue-Book" Fair Cost Estimates (FCEs), PCOs and COs to support construction changes. When requested by the Authority, participate in change order negotiations with the Contractor. When authorized in writing by the Authority, prepare necessary construction design documents, including instructions, directions, specifications and drawings, as needed to implement the change in Work.

Subtask 3.5 - Deliverables:

- 1) Review and provide comment on the need for Proposed Change Orders and provide cost and schedule analysis when required.
- 2) Provide sketches, design drawings, specifications and other direction needed to implement authorized design changes.
- 3) Prepare and submit PCOs, COs and FCEs to support construction changes.

3.6 Record Documentation

- 3.6.1 Prepare one set of detailed Record Drawings and Detail Records for all constructed facilities and update existing Auto Cad disks as appropriate to reflect 'as built' conditions of the work. Record Drawings and Detail Records shall incorporate changes shown on Contractor's as-built drawings, shop drawings, Contract Documents, and all approved design changes and clarifications. Submit Record Drawings and Detail Records in accordance with the Draft Guidelines for MWRA Waterworks Detail Records and Record Drawings and Guidelines included in the Supporting Documents Section of this advertisement. Prepare two draft submittals and incorporate review comments by the Authority for both draft submittals before submitting final Record Drawings and Detail Records. Submit drafts prior to testing and finals within three months of substantial completion.

Subtask 3.6 - Deliverables:

- 1) Submit six (6) sets of draft Record Drawings and Detail Records for review.
- 2) Submit two (2) sets of final draft Record Drawings and Detail Records.
- 3) Submit three (3) sets of prints of Record Drawings, twelve (12) sets of prints of
- 4) Detail Records, one (1) set of mylar Record Drawings and Detail Records, and an AutoCAD 2000 or later compatible disk and a TIFF Format disk of the Record Drawings and Detail Records, to the Authority upon completion of construction. TIFF files shall be prepared in accordance with MWRA ECD DISC-Scanning Technical Requirements, July 19, 2006.

3.7 Operations and Maintenance Manual

Prepare an Operations and Maintenance (O&M) Manual. O&M Manuals shall incorporate: vendor O&M manuals including component and wiring diagrams; set point limits; actual baseline test results from equipment checkout and system testing; and the design operating range for all equipment and systems. Please refer to documents included in the Operation and Maintenance Requirements of the Supporting Documents Section of this advertisement.

Subtask 3.7 - Deliverables:

- 1) Deliver the draft O&M Manual two months prior to training services. Comments shall be incorporated into the Final documents.
- 2) Submit three (3) final O&M Manuals and three CD of the same after testing and training.

3.8 Start-up, Testing and Training Services

3.8.1 Start up and Testing. The Design Team shall provide services for the startup of the Maintenance Building that enable a smooth transition for future facility operations. Startup service shall include start-up operation, a vendor training, assistance during the Warranty period, and the preparation of a Certification Report. The phasing of these services is to be closely coordinated with the Authority and DCR personnel.

3.8.1.1 Coordinate with MWRA/DCR to schedule training. The Design Team shall pro-actively work with the Contractor to develop a testing and start-up program and schedule that is acceptable to the Authority. Submit the final testing, start-up program to the Authority one month before testing begins. As a minimum, the program shall include but not be limited to the following:

- 3.8.1.2 Vendor Testing and System Operations Testing.
- a) Substantial Completion Testing.
 - b) Final Inspection.

- c) Development of Start-up Procedures and Testing.
- d) Technical Assistance during Start-up.
- e) Facility Performance Evaluation and Certification.
- f) Lockout/tag out procedures.

3.8.1.3 The Design Team/ Contractor/ Vendor shall test the new facilities only in the presence of the Authority.

3.8.1.4 Monitor testing and start-up by the Contractor in accordance with Contract Documents.

3.8.1.5 Provide the technical assistance needed to resolve testing and start-up problems.
The Design Team shall conduct technical investigations, if needed.

3.8.1.6 Attend meetings with the Authority, as needed and when requested to address testing and start-up issues.

3.8.2 Training Services

3.8.2.1 The Design Team shall provide a Training Program consisting of Vendor (Equipment) Training and Facility System Training. Vendor Training is technical classroom training and on-site training on new equipment. Facility Training provides training to support staff in the operation and maintenance of the facility as a whole.

The Design Team shall coordinate the furnishing of all labor, materials, equipment and incidentals required to provide training on new equipment located at the facility. Training shall consist of sufficient information and skills training on the theory, design, and site-specific operation and maintenance practices, including, but not limited to, routine monitoring with normal and abnormal parameters, troubleshooting techniques, and preventive and corrective maintenance requirements to operate and maintain equipment.

3.8.2.2 Training shall include a combination of classroom, field observance, and hands-on operational applications. Training schedule will be prepared by the Design Team and approved by the Authority. Training shall be scheduled prior to substantial completion or start-up, whichever comes first when the equipment is installed, tested, and available for on-site demonstration.

3.8.2.3 The Design Team shall provide twenty-four (24) session hours (based upon four (4) hours per half-day or eight (8) hours per-day) for Vendor (Equipment) and Standard Operating Procedures (SOP) classroom and hands-on training. Please refer to the attached document "Facility Handbook and Standard Operating Procedure Development (August 5, 2005)" under "Design and Submittal Requirements" in the Supporting Documents section of this advertisement.

3.8.2.4 The Design Team shall develop a training schedule in conjunction with the Authority for each vendor, provide qualified instructors for class, field, and hands-on training, provide all materials required for all training including Training Manuals that cover all class, field, and hands-on training coordinate with Contractor to provide training to Authority Operations personnel. The Authority's will review and approve the Training Plans, Instructor Qualifications, training schedules, all training materials (training manuals, training diagrams, presentations, and training aids), and effectiveness of training sessions.

3.8.2.5 The Design Team shall submit Instructor Qualifications, in accordance with the Authority's approved format, three (3) copies of the Instructor Qualifications Training Instructors shall have detailed knowledge of the equipment and/or systems on which training will be held, factory certified for training, and have a minimum of three (3) years of testing and start-up experience on equipment and/or systems on which training will be held.

3.8.2.6 Training Manual

- a) The Design Team shall submit a Training Manual for each equipment curriculum that includes all of the information specified below and written at the journey level for operators, electrician specialists, mechanic specialists and instrument technicians, or other disciplines, depending upon the target audience.
- b) The purpose of the Training Manual is to define concepts and information that will be taught to each target audience and to describe the methods and materials to be used during the training. The Training Manual is designed to provide specific guidance to the Instructor regarding all aspects of the training program as well as provide an organized package of information for use by trainees during the training sessions and as reference material for operation and maintenance in the future.
- c) The Training Manual shall be consistent with the nomenclature and content of the approved Contractor O&M Manual required in Section 3.6 and the documents in the Operation and Maintenance Requirements included in the Supporting Documents Section of this advertisement. The O&M Manual cannot be substituted for the Trainee Manual.
- d) The Training Manual shall include a description of the equipment; parts and equipment graphics/photos, safety procedures/PPE, pre-start-up and start-up checks/operating procedures; overview of routine and non-routine operation; including startup and shut-down and operating parameters; lubrication schedule and type, troubleshooting procedures, and special maintenance practices.
- e) The Training Manual shall contain a Training Manual Cover Page, Table of Contents, one page Training Summary / Abstract (Format provided: Training Objectives, Target Audience, Length of Curriculum/Topics) and Standard Operating Procedure Format, a copy of all training materials (including but not limited to handouts, reference materials, aids, etc.), and a list of resource and/or referenced materials.
- f) With the exception of cutaway models or other items expressly exempt by the Authority, all training aids and trainee materials contained in the Training Manual or used in the delivery of training shall become the property of the Authority. The Contractor shall provide two (2) copies of any required approvals and/or copyright releases obtained from those who own proprietary and/or copyrighted materials so that the materials can be reproduced by the Authority for its sole use.

Subtask 3.8 - Deliverables:

- 1) Final Testing and Start-Up Program, one month before testing and start-up begins.
- 2) Testing & Startup Results Report.
- 3) In addition to fifteen (15) hard copies for classroom training attendees, three (3) hard copies of the Training Manual & materials including classroom presentation and one CD ROM containing an electronic file in/compatible with the Authority approved format shall be provided for each approved piece of equipment.

3.9 Warranty Services

- 3.9.1 Inspect facility operation prior to one-year period warranty period.
- 3.9.2 Prepare one (1) year certification report.

TASK 4 - Resident Engineer/ Resident Inspector

*Services under Task 4 require a separate Notice of Authorization issued by the MWRA.

The Design Team shall provide a PDLE of 3,300 hours for a Resident Engineer and 2,200 hours for a Resident Inspector for Task 4.

The Design Team shall provide Resident Engineering (RE) services during the entire construction and start-up periods of this Project in accordance with the estimated Project Schedule, and as required in the MWRA Resident Engineer Manual. Please refer to the Supporting Document Section of this advertisement to access this manual. The RE services shall include one full time Resident Engineer for eighteen (18) months to be at the construction site for the entire construction period. The Design Team shall provide the following services during construction of the project.

- 4.1. The Design Team's RE shall be physically on site on a daily basis to observe and document the progress and quality of the work throughout the construction period, and to determine if it is proceeding in accordance with the Contract Documents. The RE shall assist the Design Team's Project Manager (PM) in its responsibilities, and report said observations to the PM. The Design Team's RE shall attend progress meetings and other meeting as required with MWRA, DCR, communities, and federal/state agencies.
- 4.2. Maintain complete construction field files in accordance with the MWRA Resident Engineer's Manual.
- 4.3. Review and comment on the Contractor's base schedule, monthly update schedule, and any recovery schedule.
- 4.4. Review and approve Contractor's request for monthly payments. Insure contractor submits all certified payrolls on a weekly basis. Review certified payrolls and conduct interviews to verify prevailing wage rates are met. Provide Monthly Labor Compliance Report to MWRA Construction Coordinator with each monthly payment request from the Contractor.
- 4.5. Prepare draft proposed change orders and review contractor cost proposals.
- 4.6. Provide site inspection for all construction activities.
- 4.7. Assist the Contractor in understanding the intent of the Contract Documents.
- 4.8. Verify that specialty trade construction workers and test agency personnel meet the certification and qualification requirements of the contract, and that the Work is performed in accordance with the Contract Documents.
- 4.9. Verify that all construction and materials are in accordance with approved submittals and Contract Documents. Verify that the Contractor is inspecting equipment and material upon receipt at the job site, and that storage and maintenance is in accordance with manufacturer's requirements.
- 4.10. Verify that all field, equipment, system, and start-up testing are done in accordance with the approved submittals. Verify that test results are accurately recorded and meet Contract requirements.
- 4.11. Verify actual quantities and classifications for all work including any Unit Price or Time and Material work performed by the Contractor. Maintain Quantity Control Ledger (QCL) per RE manual.
- 4.12. Report to the MWRA Construction Coordinator whenever any work is unsatisfactory, faulty or defective; or is not in substantial conformance with the Contract Documents; or has been damaged; or does not meet the requirements of inspections, tests, or approvals. Advise the MWRA Construction Coordinator of work that should be corrected or rejected or should be uncovered for observation; or that requires special testing, or inspection, or approval.
- 4.13. Record and promptly advise the Contractor of work that fails to meet the contract requirements. Prepare and issue non-compliance reports to the Contractor.
- 4.14. Maintain a daily diary in accordance to MWRA's Resident Engineer's Manual which includes, but is not limited to, detailed descriptions of: hours, personnel and equipment on the job site, safety incidents, accidents, general description of daily activities, decisions, observations, detailed description of specific observations such as test procedures, weather conditions, work performed, verbal instructions or interpretations given to the Contractor, lists of

principal visitors and representatives of fabricators, manufacturers, suppliers and distributors to the project site, and other pertinent activities or occurrences that may affect the work or result in claims or change orders. Provide a copy each day to the MWRA Construction Coordinator and to the PM. Prepare weekly and monthly summary reports and submit them to the MWRA Construction Coordinator.

- 4.15 Verify that the Contractor's construction quality assurance/quality control (QA/QC) program has been reviewed by the Design Team prior to construction. Verify that the Contractor is using qualified inspectors to perform in-process and final inspection for all work and is using approved checklists to record all inspection results. Throughout construction verify that the Contractor is fully implementing the QA/QC Program. Perform inspections to verify that the Contractor is maintaining a QA/QC Program that is effective in finding, correcting, and preventing problems. At the end of each day, ensure that all inspection checklists have been signed and that all physically verified checklist items have been initialed.
- 4.16 Provide inspection services throughout the system pre-start-up, and start-up period, and for construction modifications required during the correction period.
- 4.17 Advise the MWRA Construction Coordinator and the Contractor, before commencing with any work, if a shop drawing or sample submission for that work has not been approved by the Design Team.
- 4.18 Observe and ensure on a monthly basis that the Contractor is updating and maintaining Record Drawings and Detail Records which accurately record all changes to the work including as-built dimensions and details. Verify that Record Drawings, Detail Records and Progress Photos are complete and meet MWRA requirements as a pre-requisite to processing the Contractor's progress payment request.
- 4.19 Update and maintain two complete sets of as-built marked plans on a continuous basis for review at the construction trailer, and for use in developing Record Drawings and Detail Records. Submit one copy to the Authority two weeks before facilities are accepted for beneficial use, as defined in the Contract Documents.
- 4.20 Prepare and maintain logs of all incoming and outgoing correspondence including submittals, change/clarification requests, and requests for information, non-compliance reports, field transmittal memorandums, and all other correspondence. Provide an up to date copy of the logs to the MWRA biweekly.
- 4.21 Take daily digital photographs to document progress of work. Label and electronically file photographs per MWRA standards.
- 4.22 Attend progress meetings.

Deliverables:

- 1) Recommend the need for independent testing.
- 2) Report safety incidents to the Authority.
- 3) Respond to requests from the Authority for assistance.
- 4) Witness testing and verify that results meet Contract Document requirements.
- 5) Daily Diaries and weekly and monthly summary reports
- 6) "As built" Marked Plans
- 7) Complete set of construction files
- 8) Schedule Reviews
- 9) Monthly Labor Compliance Report
- 10) Draft PCO's and CO's
- 11) Quality Control Ledger
- 12) NCR's (if any)
- 13) All Logs
- 14) Digital Photos (properly labeled)

TASK 5 – Technical Assistance – ALLOWANCE (\$50,000)

The Design Team shall provide supplemental technical services in an amount not to exceed \$50,000 for services if authorized by a written Task Order issued the Authority. The Technical Assistance allowance may be used for the following:

- 1) Independent Testing - Conduct, observe and report on shop, or laboratory tests of materials and equipment when authorized in writing by the Authority. Coordinate sample shipment to laboratory, witness shop testing, review test results, and issue reports.
- 2) Supplemental Technical and Permitting Support, and Additional Printing and Copying - Provide supplemental services, including technical and permitting support, and additional printing and copying.
- 3) Resolution of Bid Protest - In the event of a bid protest, provide assistance, testimony, opinion, and/or investigations in connection with bid protests. Attend protest hearing at the Attorney General's office and/or in court if necessary.
- 4) Other Unanticipated Services – Any additional unanticipated services necessary to successfully complete the scope of services described herein.

TASK 6 – Alternative Analysis– ALLOWANCE (\$25,000)

In addition to the services provided by the Design Team under subtask 2.1.2, the Design Team shall provide services in the amount up to \$25,000 to provide a detailed alternative analysis of any of the recommended alternatives, as authorized by a written Task Order issued by the Authority.

SUPPORTING DOCUMENTS

The scope of work for this project is supported by the materials listed below.

SCHEDULE

Project Schedule

BACKGROUND INFORMATION

Exhibit I thru V

- Exhibit I – Concept Plans
- Exhibit II – Site Data - [NOTE: AutoCAD versions of the Site Survey & Base Plan will be made available to the first-ranked Designer, upon request]
- Exhibit III – Pre-Demolition Hazardous Materials Survey
- Exhibit IVI– Other Supporting Documents
- Exhibit V – Performance Specifications

CERTIFIED STUDY

Quabbin Maintenance Building Study

- Quabbin Maintenance Building, July 16, 2019 (Rev)

- DCR Delegated Quabbin Maintenance Building – Transmittal of Certification - 190923

PROJECT REQUIREMENTS

Project Requirements

- General Requirements – DCR Quabbin Maintenance Building – November 2019
- "Requirements for Minority and Women Business Enterprise and Equal Opportunity Consultant Services"
 - EEO/AA-95-002 – MBE and WBE Consultant Utilization Analysis
 - EEO/AA-95-003 – MWRA Sworn Statement Regarding Equal Employment Opportunity
 - EEO/AA-95/004 – MWRA Project Employment Profile
- Electronic Record Keeping
 - Engineering Project Filing System – Standard Procedures for Professional Services Contracts, September 9, 2014
 - MWRA PDF Specification For Files and Engineering Plan Images – April 15, 2014
 - Construction Photographs/Videos (Section 01380) – April 30, 2015
- Cost Estimates
 - Massachusetts Water Resources Authority Guidelines for Life Cycle Cost Estimating
 - Massachusetts Water Resources Authority Life Cycle Cost Analysis Policy and Methodology
- Design and Submittal Requirements
 - Massachusetts Water Resources Authority, Design Information Systems Center (DISC) - Document Standards and Procedures, March 2013
 - Minimum Definitions for Consultant Design Submittals for Structures
 - Requirements for Drafting Plans and Specifications- November 27, 2000
 - Facility Handbook and Standard Operating Procedure Development – August 5, 2005
- Operation and Maintenance Requirements
 - Operation and Maintenance Manual Checklist
- Resident Engineer Manual- 2012

COST SUBMISSION REQUIREMENTS (upon final ranking by the Designer Selection Board)

Cost Submission Requirements

- Attachment B – Key Project Personnel by Classification
- Table E1 – Cost or Price Summary (5700 Form)
- Table E2 – Project Budget by Subtask by Consultant
- Table E3 – Direct Reimbursable Expenses by Task
- Table E4 – Extraordinary Reimbursable Expenses by Task
- Table E5 – Weighted Direct Labor Escalation Summary by Labor Classification and Fiscal Year
- Truth in Negotiations Certificate

CONTRACT AWARD AND EXECUTION

Contract Award and Execution

- MWRA Professional Services Agreement, with Attachments
- Consultant Disclosure Statement
- Professional Services EEO Forms
- Child Care Assistance Form
- Statement of Compliance – Northern Ireland
- Certificate of Non-Collusion

PROJECT REQUIREMENTS

Project requirements, general conditions and/or requirements of this public notice include, but are not limited to:

Threshold Requirements

Financial Stability

The highest-ranking firm selected by the DSB must provide how the design team will meet this Financial Stability analysis.

The Designer shall make a showing of its financial stability by stating in a letter as to whether, in the last seven years, a petition was ever filed by the Designer, or against the Designer with or without its consent, under any federal or state law concerning bankruptcy, reorganization, insolvency or relief from creditors including, without limitation, a petition for protection of a Bankruptcy Court. If this statement is in the affirmative, the Designer must describe the circumstances that led to the filing, the ultimate disposition of the matter (e.g., a reorganization with a payment plan to creditors), the current situation and substantial, detailed evidence of the firm's financial ability to complete this project if selected. The Designer may include any additional information, in the Designer's judgment that is sufficient to show its present financial stability.

In addition, if the Designer has audited financial statements on file at the MWRA for its most recently completed fiscal year, state its Financial Stability letter that the MWRA possesses the most recent audited financial statements of the firm. If said financial statements are not presently on file with MWRA; then the Designer needs to submit them to the Authority upon selection. Pursuant to M.G.L. ch. 7C s. 51, the Designer also is required to submit a statement from a CPA or PA that states that they have examined management's internal auditing controls and expresses their opinion regarding those controls to the Authority.

Affirmative Marketing

There are no minimum required percentages of participation by Minority Business Enterprises ("MBE") and Women Business Enterprises ("WBE") for this project. However, the Authority encourages such participation.

If MBE/WBE participation is proposed, the Designer shall comply with the terms and conditions, including all submission requirements, set forth in the MWRA's "Requirements for Minority and Women Business Enterprise and Equal Opportunity Consultant Services." This includes the submission of the Minority and Women (MBE/WBE) Consultant Utilization and Analysis Form EEO/AA-95-002, a "Sworn Statement Regarding Equal Employment Opportunity" EEO/AA-95-003, and the "Project Employment Profile EEO/AA-95-004.

The above referenced documents are included in the above Supporting Documents Section.

Applicants are advised that the Authority will recognize only minority, women or combination businesses (one firm cannot satisfy both the minority and women participation requirements) which have been certified by the Massachusetts Supplier Diversity Office ("SDO") or which have submitted an application for certification to SDO by the deadline for submission of the Proposals.

Policies & Procedures

Electronic Record Keeping

The Design Team shall submit one complete set of paper files of all documentation over the life of the project. In addition to paper submittals, the Design Team shall submit electronic copies of all submittals for the entire project. This includes design documents, reports (technical/progress/monthly), specifications, drawings, and other associated documents. During the Construction Administration Services phase, all shop drawings, information requests, change order/dispute, record drawings, and other associated documents shall also be submitted electronically. At the end of the project the Design Team shall provide all project related documents on DVD, rugged hard drive, or rugged flash drive, organized by Task and Subtask. Electronic folder, subfolder and file name lengths should not exceed 21 characters each and 100-character total (including spaces). Organization of file names and naming shall be discussed and agreed upon at the project kickoff meeting.

The following electronic standards, policies and procedures shall apply:

- Engineering Project Filing System – Standard Procedures for Professional Services Contracts, September 9, 2014
- MWRA PDF Specification For Files and Engineering Plan Images – April 15, 2014
- Construction Photographs/Videos – April 30, 2015

Please refer to the Supporting Documents Section above to access these policies.

Cost Estimates

Designer shall prepare capital and long-term operation and maintenance cost estimates utilizing the MWRA Guidelines for Life Cycle Cost Estimating.

Please refer to the General Requirements and the Guidelines for Life Cycle Cost Estimating in the Supporting Documents Section.

Design and Submittal Requirements

Designer shall prepare contract drawings and record drawings for this project utilizing CADD equipment and procedures. The CADD system utilized shall be compatible with the MWRA's AutoCAD version 2013 (or version currently in use at the Authority) for Microsoft Windows, or other acceptable and compatible software and prepared in accordance with the requirements of the MWRA Design Information Systems Center (DISC)- Document Standards and Procedures.

Unless specifically stated or approved otherwise by the Authority, Designer shall also provide the minimum amount of progress design submissions as set forth in the Authority's Minimum Definitions for Consultant Design Submittals for Structures.

Please refer to the Supporting Documents Section to access the above referenced requirements, standards or policies.

CONTRACT REQUIREMENTS

Cost Submittal Requirements (upon final ranking by the Designer Selection Board)

Prevailing Wages

MWRA shall provide the first-ranked Designer the Minimum Wage Rates for soils explorations and test borings prior to the Designer's Cost Submission as set forth in the following section.

Cost Submission (Table E)

The first-ranked Designer shall submit its best estimate of total costs (except as limited below) to provide the services described in the Scope of Services. As part of the fee negotiations, the DSB first-ranked Designer and its Team, shall complete and submit the following forms and tables in a single consolidated spreadsheet.

- Attachment E – Key Project Personnel by Classification
- Table E1 – Cost or Price Summary (5700 Form)
- Table E2 – Project Budget by Subtask by Consultant
- Table E3 – Ordinary Reimbursable Expenses by Task
- Table E4 – Extraordinary Reimbursable Expenses by Task
- Table E5 – Weighted Direct Labor Escalation Summary by Labor Classification and Fiscal Year

Definitions and allowable categories of costs are described in Attachment E of the MWRA Professional Services Agreement. All cost factors (direct labor, indirect costs, and other direct costs) used in preparing the above Table E tables shall be the most current, complete and accurate information available and shall be consistent with the information to be furnished in the Authority's Consultant Disclosure Statement following the appointment by the Commissioner of the Division of Capital Asset Management and Maintenance.

The first-ranked Designer and its Team shall propose and shall price its services at a provisional indirect cost rate cap or series of caps over the term of the Agreement. Upon the successful negotiation of costs, the Authority anticipates the award of a modified Cost Plus Fixed Fee ("CPFF") up to a Guaranteed Maximum Price and Cost Plus Percentage Fee ("PF") contract up to a Not-to-Exceed Amount. That is, the contract compensation will be on a reimbursable type contract with a guaranteed maximum amount or a not-to exceed amount for certain tasks that includes a component as a fixed fee and a component as a percentage fee, as applicable; provided however, that for any predetermined levels of effort and allowances listed in the Scope of Services, the compensation terms and instructions shall apply.

Predetermined Level of Effort. In the Scope of Work, the Authority assigned a number of hours, stated as a Pre-Determined Level of Effort ("PDLE") for completion of a specified task(s), subtask(s) or sub-subtask(s) (collectively referred to as the "Task(s)"). In such Task(s), the PDLE is expressed as an amount "X Hours". In completing Table E2 of the Cost Submission, the first-ranked Designer must list and price on Table E2, the total PDLE hours for each Task(s) that the Authority has listed in the Scope of Work, distributing those hours among the personnel classifications as identified below:

1. Managers and Above - including all project managers, project directors, and officers.
2. Project Engineer - including other classifications such as computer specialists, project biologist, etc., whose salaries approximate those of project engineers.
3. Engineer - including other classifications such as computer programmers, planners, etc., whose salaries approximate those of Engineers.
4. Other Special Design Disciplines - including those in the design project which may not be covered by these standard classifications including CADD designers/operators.
5. Office Technicians - including drafters, and other similar titles for work performed in the office. (To the extent that they are not included in the audited overhead rate.)
6. Clerical - including word processing clerks, typists and all other non-professional classifications. (To the extent that they are not included in the audited overhead rate.)

Truth-In-Negotiation Certificate

The Designer shall submit a truth-in-negotiation certificate to the Authority prior to the commencement of fee negotiations. The certificate shall contain the following information:

- (i) a statement that the wage rates and other costs used to support the designer's or interior designer's compensation are accurate, complete and current at the time of contracting; and
- (ii) an agreement that the original contract price and any additions to the contract may be adjusted within 1 year of completion of the contract to exclude any significant amounts if the Authority determines that the fee was increased by such amounts due to inaccurate, incomplete or noncurrent wage rates or other costs.

The Truth in Negotiations Certificate can be found in the link included in the above Supporting Documents Section.

Contract Award and Execution

Following MWRA Board Approval and appointment by the Commissioner of the Division of Capital Asset Management and Maintenance, Designer shall execute the MWRA Professional Services Agreement (Contract), with the following Attachments:

Attachment A	Scope of Services
Attachment B	Key Project Personnel
Attachment C	Services Schedule
Attachment D	Subconsultants (from the Designer's application)
Attachment E	Compensation (with Table E)
Attachment F	Professional Services Agreements – Security Provisions
Attachment G	Sample Task Order Format (if applicable)
Attachment H	Certifications of the Designer Made Under the Pains and Penalties of Perjury

The Designer shall also submit the following forms or certifications prior to the execution of the contract:

Consultant Disclosure Statement
Professional Services EEO Forms
Child Care Assistance Form
Statement of Compliance – Northern Ireland
Certificate of Non-Collusion

All of the above documents are available in the link in the above Supporting Documents Section.

CONDITIONS FOR APPLICATION

The applicant's current or updated Master File Brochure must be on file with the Board prior to the date of application. As a condition of application, each applicant, if selected for the new project, agrees to carry professional liability insurance in an amount equal to the lesser of \$5,000,000 or 10% of the Project's Fixed Limit Construction Cost, but in no event less than \$250,000 per claim in accordance with the Design Contract (i.e., minimum coverage of \$250,000 up to \$5,000,000 depending on the construction cost). Please refer to the MWRA's Professional Services Agreement for the specific professional liability insurance requirements for this project.

APPLICATION EVALUATION

Applications will be evaluated based on the DSB criteria for selection of semi-finalist and finalist appearing on the DSB website <https://www.mass.gov/files/documents/2018/12/19/criteria-for-selection-of-semi-finalists-and-finalists-160707.pdf>. The specific Personnel and Project Experience required is listed below.

PERSONNEL

1. Civil Engineer (**Prime Firm**)
 2. Architect
 3. Mechanical Engineer (M/P/FP)
 4. Electrical Engineer
 5. Structural Engineer
 6. Cost Estimator
 7. Environmental Engineer/LSP
- The title “architect” refers to design professionals that maintain a current registration with the Massachusetts Board of Registration of Architects; and
 - The title “landscape architect” refers to design professionals, licensed or unlicensed, that exhibit through their application that they possess acceptable experience to provide design services in the field of landscape architecture as needed for the project; and
 - The title “engineer” refers to design professionals that maintain a current registration in any one of the engineering categories governed by the Massachusetts Board of Registration of Professional Engineers and of Land Surveyors.

PROJECT EXPERIENCE

Applications will be evaluated based upon the requirements of M.G.L. Ch. 7C §49 and the work listed on DSB Application Form Sections 8, 9 AND 10 which illustrate current qualifications in the following areas:

1. Demonstrated experience with the design, permitting, bidding and construction administration for public procurement projects in Massachusetts.
2. Demonstrated experience with the design of public construction projects that employ a variety of building trades.
3. Minimum of 10 years experience in building design to include pre-engineered/pre-fabricated buildings.

APPLICANTS PLEASE NOTE

Please use the latest [DSB Application Form \(Updated July 2016\)](#) and follow the [General Instructions for Filing Applications](#).

Application Update: Please submit One Original, with the Sub-Consultant Acknowledgement forms and SDO Certification letters (by mail or hand deliver) and please email an electronic copy of the application form (do not include the Sub-Consultant Acknowledgment forms and SDO Certification letters) to applications.dsb@massmail.state.ma.us

Applications that are incomplete will be rejected. Applications that are submitted on a form other than **DSB Application Form (Updated July 2016)** may be rejected as non-compliant and not be considered by the Board. Applications received at the DSB Office after the advertised deadline will not be considered.