

Attachment A.6

Requirements for Drafting Construction Plans and Specifications

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Section 44A of Chapter 149 of the Massachusetts General Laws governs all contracts for construction, reconstruction, installation, demolition, maintenance or repair of any building, including modular buildings, estimated to cost more than \$25,000. Chapter 149 applies to all contracts over \$25,000 which include building work, regardless of its cost.

Chapter 30, Section 39M applies to contracts for construction, reconstruction, alteration, remodeling or repair of any public work (e.g., "horizontal construction" - sewers, water lines, roads, etc.) or construction materials estimated to cost more than \$10,000 and to building work estimated to cost between \$10,000 and \$25,000.

All projects subject to Chapter 30 or Chapter 149 of the Massachusetts General Laws require a detailed design set forth in plans and specifications. The awarding authority must issue complete specifications so that all bidders are bidding on the same work and are therefore on an equal footing. "Design-build" projects do not comply with statutory requirements as Contractors cannot be tasked with designing anything which is to be physically integrated into the Work.

The following standards and procedures must be used in drafting and bidding all construction contracts:

I DIVISION ZERO

A. General

1. Standard Division Zero Documents

The Authority's Procurement Department ("Procurement") will provide the Authority's standard Division Zero (front end) documents to the Consultant, through the Project Manager. In general, Division Zero will consist of the Table of Contents, Advertisement for Bids, Instructions to Bidders, Bid Form [c. 30]/Form for General Bid [c.149], Authority-Contractor Agreement, General Conditions, and Supplementary Conditions.

2. Changes to Division Zero Documents

The Authority's standard Division Zero documents may not be adapted, retyped or altered by the Consultant, except as indicated in the remainder of this paragraph and in Paragraph I.A.3 below. If necessitated by specific project requirements, Division Zero documents may be changed or supplemented with Procurement approval. All such changes will be drafted by Procurement.

3. Completion of Division Zero Documents

Prior to submitting the Contract Documents for review, the Consultant will fill in all blank spaces in the Advertisement for Bids, Bid Form/Form for General Bid, Form for Sub-bid (Chapter 149), Authority-Contractor Agreement, Form for Subcontract (Chapter 149), and Supplementary Provisions for Equal Employment Opportunity, Antidiscrimination, and Affirmative Action, except those to be completed by the bidders or by the Authority after bid. If the Work requires unit price items, the Consultant will prepare a Bid Schedule for insertion into the Bid Form/Form for General Bid, in the format specified in **Appendix 1 - Bid Schedule**.

4. Citation to Division Zero Documents

Division Zero documents may not be cited, repeated, replicated, or rephrased for any reason within Divisions 1 through 16 because these documents, by their own terms, apply to the entire Work of the contract. Restating, summarizing, or requiring conformance with sections of Division Zero leads to conflicts within the Contract Documents, varying interpretations of contractual requirements, and change orders/claims.

B. Cover and Title Page

1. Contents

The cover and title page for specification volumes must indicate that the volume contains either "Specifications for" or "Contract Documents for [the contract title]"; the name and address of the MWRA; the name, address, and stamp of the Consultant; and a date. For SRF funded projects, the cover sheet must also include the CWSRF or DWSRF number assigned by DEP. These pages cannot contain extraneous information or headings such as "Information for Bidders", "Proposal", or "Bidding Requirements, Forms and Conditions" as these are not Contract Documents.

2. Contract Title

The contract title must be as short as possible (for ease in completing forms, computer system contract tracking, and lessening advertising costs) and must be referenced in exactly the same manner throughout the Contract Documents.

C. Table of Contents

1. General

The Consultant will prepare a Table of Contents using the standard format provided by Procurement and include a table in each volume of the specifications.

2. Page Count

The Consultant will complete the Number of Pages column using the total count of the number of pages in each section.

3. Headings

Division numbers (e.g., "Division 15") may be used as headings to separate the section number entries for Divisions 2 through 16 but division titles (e.g., Plumbing) are not to be included.

D. Advertisement for Bids

1. Dates

a. When and By Whom Determined

The dates for the general bid opening, sub-bid opening (Chapter 149), pre-bid conference, site visit (if necessary), and document availability, are to be determined by the Project Manager, the Consultant, and Procurement and inserted in the Advertisement after the Contract Documents are approved for advertising by Procurement. The need for a pre-bid conference will be determined based on the type and complexity of the project. A site visit will be scheduled following the pre-bid conference if site conditions dictate.

b. Minimum Time Period - General Bids

As a minimum, general bids may not be opened less than two weeks after the advertisement appears in the Central Register and a newspaper of general circulation [G.L. c. 149, §44J(1)]. The advertising time may be increased based on the complexity of the project and the necessity for filed sub-bids.

c. Minimum Time Period - Filed Sub-bids

If filed sub-bids are required, the filed sub-bid opening date must be scheduled a minimum of two weeks prior to the general bid opening date to provide sufficient time to qualify all filed sub-bidders and mail a tabulation of filed sub-bids (see Paragraph IV.E.5 below).

2. Estimated Project Cost

In Chapter 149 contracts, the estimated project cost must be included in the Advertisement for Bids.

3. DCAM Certification

a. Requirements

In Chapter 149 contracts, the Advertisement must specify the DCAM categor(ies) of work in which the bidder must be certified.

b. Certification Categories

DCAM currently certifies contractors in the following categories of work:

Alarm Systems, Asbestos Removal, Deleading, Demolition, Doors and Windows, Electrical, Elevators, Energy Management Systems, Fire Protection Sprinkler Systems, Floor Covering, General Building Construction, Historical Building Restoration, Historical Masonry, Historical Painting, Historical Roofing, HVAC, Masonry, Mechanical Systems, Modular Construction/Prefab, Painting, Plumbing, Pumping Stations, Roofing, Sewage and Water Treatment Plants, Telecommunications Systems, Waterproofing.

The list of categories is periodically revised by DCAM. The current list of categories must be verified prior to specifying categories in the Advertisement for Bids.

c. Determination of Categories

The appropriate categor(ies) must be determined by the Project Manager and the Consultant based on all the Work included in the project. Multiple categories may be specified but the successful bidder is only required to be certified in one of the categories listed. Therefore, all categories listed must have application to all of the Work of the Contract.

4. Summary of Work

The summary of work is included to inform prospective bidders of the general type of work to be performed so that they may determine if they are interested in obtaining a set of plans and specifications. The summary must be as succinct as possible in order to lessen advertising costs.

E. Bid Form/Form for General Bid

1. Bid Schedule

a. Number of Bid Items

The number of Bid Items must be kept to a minimum in order to avoid bid mistakes and locking the Authority into unreasonable prices. The Contract Price

should be broken down in the Schedule of Values, where the breakdown is subject to Authority approval, and not in the Bid Schedule.

b. Lump Sum Prices

All work that can be bid on a lump sum basis must be included in a single lump sum bid item.

c. Unit Price Items

Separate unit price items are only to be established in the Bid Schedule when site conditions or the type of work are such that quantities can only be estimated (e.g., obstructions, excavation).

d. Allowances/Options

Allowances for items of labor or labor and materials to be performed by the Contractor are prohibited in Chapter 149 contracts. This prohibition does not include the provision of services by others such as police and fire services. Options are not permitted in any contract governed by either Chapter 30 or Chapter 149.

e. Measurement and Payment

A corresponding Measurement and Payment section, which identifies each bid item included in the Bid Schedule by number, and specifies what work is included in each bid item, must be included in Division One. The explanation of each bid item must clearly indicate what is being measured, how it is being measured, and how it will be paid for. See **Appendix 2 - Sample Measurement and Payment Items** for examples of unit price and lump sum measurement and payment items.

f. Submittals With The Bid Prohibited

With the exception of statutory (DCAM Certificate and Update Statement) and affirmative action requirements, under no circumstances is it acceptable to require submittal of any document with the bid. All submittals necessary prior to award (e.g. qualifications) are to be submitted within a specified number of days after bid opening.

2. Alternates

Alternates, if any, must be set up in accordance with G.L. c.149, §44G and approved by Procurement. Alternates must be selected in the order listed (i.e., Alternate No. 2 cannot be selected unless Alternate No. 1 is also selected). If no alternates are included, "N/A" must be inserted in the blanks indicated for bidding alternates.

F. Authority-Contractor Agreement

1. Contract Time

The Contract Time must be specified in the Authority-Contractor Agreement, expressed in the number of calendar days following Notice to Proceed estimated to be necessary for the Contractor to complete the Work. The Contractor is required to reach Substantial Completion of the Work, as defined in the Contract Documents, at or before the expiration of the Contract Time, in order to avoid assessment of liquidated damages. Therefore, the specified Contract Time must be estimated by the Consultant to include sufficient time for mobilization, procuring all necessary materials, and completing the Work.

2. Interim Milestones

a. When to Establish

If completion of portions of the Work prior to the expiration of the Contract Time is critical to the project, milestones, with liquidated damages attached to each, should be established and specified as a number of calendar days following Notice to Proceed in a schedule section (usually Section 01015). If the Contractor fails to complete the specified work within the milestone date, liquidated damages will be assessed for each calendar day after the milestone date for which the Contractor fails to complete the Work of the milestone.

b. Definition

The portion(s) of the Work to be completed must be identified in sufficient detail to avoid question as to what Work must be completed prior to the expiration of the milestone.

c. Substantial Completion Not A Milestone

1. Multiple Substantial Completion Dates

Unless more than one Substantial Completion date is necessary, completion of a portion of the Work is not to be established as a substantial completion date requiring release of retainage, punchlist, and commencement of warranties on that portion of the Work.

2. Where to Enter Substantial Completion Date

Substantial Completion of the Work is not to be listed in Division One as a milestone. The Substantial Completion date is established in the Notice to Proceed based on the number of calendar days specified in the Authority-Contractor Agreement.

d. **Deadlines Not Established as a Milestone**

If defined portions of the Work must be completed in a time period shorter than the Contract Time, but no liquidated damages are to be attached to the completion date for that work, the required completion date must be stated as a number of calendar days following Notice to Proceed and those portion(s) of the Work to be completed must be identified in sufficient detail to avoid question as to what work must be completed prior to the specified date. (For example, the requirement should be "Furnish and install ... no later than 100 days following Notice to Proceed. Time is of the essence in performance of this work.") If the Contractor fails to complete the specified work within that time, it will be in breach of the contract and subject to actual damages.

3. **Liquidated Damages**

a. **Basis**

Liquidated damages must be based on the best estimate of actual damages which would be incurred if the contract is not substantially complete within the Contract Time, or if an interim milestone is not met. The Consultant, in conjunction with the Project Manager, will establish a liquidated damage amount, prorated on a per day basis, individually for the expiration of the Contract Time and for each milestone, if any. The liquidated damage amount must be supported by memo detailing all potential damages including: added administrative costs; MWRA staff costs (payroll plus overhead) including engineering, inspection, supervision, and inactive status; consultant engineering and inspection costs; potential impact from delay to other contracts; potential impact on the facility under construction or other facilities; and incurrence of fines or penalties. The memo must be submitted to the Procurement Department with the initial submittal of the Contract Documents and is subject to Procurement approval.

b. **Where to Enter**

The approved liquidated damages amount associated with failure to complete all of the Work within the Contract Time is entered in the space provided in the Authority-Contractor Agreement. The liquidated damages amount(s) for interim milestones are entered in the schedule section in Division One (see Paragraph I.F.2 above).

G. **Wage Rates**

1. **Requirements**

If directed by the Project Manager, the Consultant will complete the application and obtain project specific wage rates from the Commonwealth's Department of Labor and Workforce Development ("DLWD"). Page numbers, expressed as 00830-1, etc., must

be added to the wage rates obtained from the Department of Labor and Workforce Development.

2. Expiration

Wage rates determined by DLWD remain valid for 90 days from issuance. New rates must be obtained if general bids are not opened within 90 days of the issuance date.

H. Notice Package

1. Contents

The Consultant will prepare a Notice Package, containing:

- all forms listed on its cover page,
- a copy of the Bid Form/Form for General Bid which appears in the final Contract Documents, and
- a separate copy of the Form for Sub-bid which appears in the final Contract Documents for each category for which a filed sub-bid is required. A copy of the Form for Sub-bid must be adapted for each filed sub-bid category to include:
 - Division Number and title of each filed sub-bid required by the Technical Specifications on the first page, and
 - Paragraph E (see Paragraph II.B.3.a.1 below) filled in with:
 - a list of each category of work for which the Technical Specifications require a Paragraph E listing (i.e., specialty work within a sub-trade), if any, or
 - "N/A" to indicate that there are no Paragraph E requirements in the Technical Specifications for that filed sub-bid category.

A Notice Package is bound separately from, and distributed with, the Contract Documents, for the convenience of bidders.

2. No Changes

The Notice Package is not a part of the Contract Documents and is not to be changed by addendum. If any of the Contract Documents included in the Notice Package (Bid Form/Form for General Bid, Form for Sub-bid (Chapter 149), or Supplementary Provisions forms, are changed during the bid period, those forms must be changed by addendum.

II DIVISIONS ONE THROUGH SIXTEEN

A. General Guidelines

The plans and specifications provide the basis of bid, and must be complete. The responsibilities of the Contractor must be clearly defined, the Contractor's performance must be objectively measurable, and the contract provisions must be readily enforceable.

1. Vague Terminologies

Lack of definition in the plans and specifications will result in items that the bidder cannot price and Contractor responsibilities that the Authority cannot enforce. Therefore, vague references such as the following are unacceptable:

- subjective modifiers with no standards by which to determine the quantity/quality required (e.g., "ample", "suitable", "reasonable"),
- terms which reserve a determination of what's required until after bid (e.g., "as directed by the CM", "if necessary", "including, but not limited to"),
- terms which lack direction and measurement (e.g., "ensure"), and
- indefinite references to other parts of the specifications not followed by a section/paragraph cite.
 - The reference "as specified", followed by a section/paragraph cite, is the preferred reference for specifications.
 - When referencing drawings, the phrase "as indicated" is preferred. The phrase must be defined once in Division One (e.g., "as indicated" means as indicated in the drawings) and shorthanded throughout.

2. Undefined and Misused Titles

a. Engineer

The term "Engineer" is limited to its definition in the General Conditions (the Division Director of the respective Authority Division) and cannot be used in the Technical Specifications to refer to anyone else, including the Consultant.

b. Other Titles

References to representatives of the Authority (other than the "Engineer"), must name that person, i.e., Construction Manager, Construction Coordinator, Resident Engineer, Authority's Consultant, etc.; must be clearly defined; and

must be used consistently. Undefined terms, identified in capital letters (e.g., "Project") are not acceptable.

3. Abbreviations

All shorthand methods of reference in the Technical Specifications (e.g., ASTM, NFPA) must be defined before use (preferably in a Division 1 section titled Abbreviations).

4. Direction to the Contractor

a. Method

Specifications must be drafted in the imperative style (e.g., "Furnish and install. . .", "The Contractor shall. . ."). References to tasks to be performed by the Authority should be prefaced with "The Authority will. . .".

b. To Whom Directed

The Authority's contract is with the Contractor, not the manufacturer, installer, or the various subs. Therefore, all direction within the specifications must be to the Contractor or to a filed subcontractor in a filed sub-bid section (e.g., "Electrical Subcontractor").

5. Cost References

The only reference to "cost" or "expense" should be the phrase "at no additional cost to the Authority" used to indicate work which will not be compensated, as in the situation where the Contractor causes and must repair damage at his own expense. The phrase "at Contractor's expense" should not be used, especially in this instance, as it is normally interpreted to mean that the referenced costs are reimbursable. It is not necessary in references to tasks to be performed by the Contractor (e.g., obtaining permits) as it is clearly part of the Work and therefore will be paid for by the Authority.

6. Means and Methods

Means, methods, techniques, and sequence of the Work are generally to be determined by the Contractor to avoid the risk of Authority liability. However, the Consultant, in conjunction with the Project Manager, may specify a particular method, if made necessary by the location or circumstances under which the Work must be performed. In such case, the method must be clearly specified and a statement made that this method cannot be changed during construction.

B. Specific Requirements

1. Qualifications

a. Chapter 149 Contracts

All bidders on Chapter 149 contracts are required to include a DCAM Certificate of Eligibility (indicating their Single Project Maximum, Aggregate Rating Limit, and the categories of work in which they are certified) and an Update Statement, with their bid. If the bidder is a joint venture, the joint venture, and not the individual members, must be certified by DCAM. An update statement from the joint venture, or from each individual member, is acceptable.

1. Single Project Maximum

The Single Project Maximum, as established by the Department of Capital Asset Management, indicates the maximum amount per project that a bidder is qualified to perform. In order to be qualified to bid, a bidder's Single Project Maximum must equal or exceed its bid price.

2. Aggregate Rating Limit

A bidder's Aggregate Rating Limit, established by DCAM, is the total amount of work a bidder is qualified to perform at one time. The bidder must include the value and percent complete for all work in progress in its Update Statement.

3. DCAM Certification

Chapter 149 requires that bidders be DCAM certified in one of the categor(ies) of work specified by the Authority in the Advertisement for Bids (see Paragraph I.D.3.b above).

4. Additional Qualifications

In addition to the above, specific qualifications may be required if particular experience is necessary due to unusual or complex characteristics of the Work. If additional qualifications are specified, they shall comply with Paragraph II.B.1.b below.

b. Chapter 30 Contracts and Filed Sub-bidders

1. When Established

Specific qualification requirements for the general bidder on a Chapter 30 contract or for a filed sub-bidder on a Chapter 149 contract should only be specified by the Consultant if particular experience is required to complete

the Work. If particular qualifications are specified, they must be reasonable, necessary, and multiple potential bidders must be able to meet the requirements.

2. Content

All qualifications must be specific (i.e., "performed at least # projects of similar size and complexity") and the time period during which the experience must have been gained clearly expressed (i.e., "during the past 5 years" instead of "5 years experience"). The evidence to be submitted as proof of meeting the qualifications, and the required time for submittal of such proof, must be clearly specified.

3. Location

Any requirements applicable to filed sub-bidders must appear in Part I of the first section of the filed sub-bid work. Requirements for the general bidder, must appear in a separate section following the Instructions to Bidders titled "Supplementary Instructions - Qualifications".

4. Time for Submittal

Submittal of qualifications required of a general bidder, or a filed sub-bidder, is usually required within 5 calendar days after bid but a shorter period may be specified if the contract must be awarded quickly. Evidence of qualifications is never to be required as a submittal with the bid since failure to submit these documents would require that the bid be rejected.

5. Non-Contractor Qualifications Not A Condition of Award

Qualifications of persons to be hired by the Contractor (e.g., subcontractors, employees, consultants, testing labs) must appear in Part III of the Technical Specification section to which the qualifications relate. Submittals to verify these qualifications are to be made after issuance of the Notice to Proceed (because these qualifications are a condition of contract, not a condition of award) and are subject to approval during the Contract Time.

2. Three or Equal

a. Statutory Requirements

"For each item of material [to be incorporated into the Work] the specifications shall provide for either a minimum of three named brands of material or a description of material which can be met by a minimum of three manufacturers or producers, and for the equal of any one of said named and described

materials." (G.L. c. 30, §39M). The statute defines "material" as an "article, assembly, system or any component part thereof".

The specifications must name at least three manufacturers (and model numbers, if appropriate), as well as any unique and important characteristics, for each item of material specified, so that there is no question as to what products are "equal" to that specified. If it is not possible to name manufacturers, the Consultant must verify that the product can be manufactured in the usual course of business by more than three manufacturers prior to specifying the material and must carefully review the Contractor's submittals during performance of the Work to ensure that the product proposed is equal to that specified.

These requirements cannot be met by listing only one manufacturer and stating that the "manufacturer is listed solely to establish a level of quality..."

b. Statutory Definition

Chapter 30, Section 39M(b) of the Massachusetts General Laws defines a product as equal "if (1) it is at least equal in quality, durability, appearance, strength and design, (2) it will perform at least equally the function imposed by the general design for the...work being contracted for or the material being purchased, and (3) it conforms substantially, even with deviations, to the detailed requirements for the item in the...specifications."

c. Proprietary Items

If there are three or less manufacturers of the item of material required, or if no "equal" will be accepted, and there are "sound reasons in the public interest" why this particular type of material must be specified, justification for the inclusion of this item of material must be prepared by the Consultant, in conjunction with the Project Manager. The justification must be in writing, to be prepared after reasonable investigation, in the form of a memo to, and subject to the approval of, the Director of Procurement, signed by and containing a recommendation from, the appropriate Division Director. The memo must specify why this item of material is the only one which will satisfy the Authority's needs (e.g., MWRA operating requirements; functionality cannot be matched by other products, materials or services; excessive O & M costs of other items; standardization; durability; experience; uniqueness). If the item of material is approved as proprietary, the specifications must contain the name of the manufacturer, the model number and any other identifying characteristics of the item of material, and the following language: **"THIS IS A PROPRIETARY ITEM. SUBSTITUTION OF PRODUCTS FROM OTHER MANUFACTURERS WILL NOT BE PERMITTED"**.

3. Filed Sub-bid Sections

a. Statutory Requirements

All Chapter 149 contracts for which the construction estimate for any trade listed below exceeds \$10,000 must require filed sub-bids for those trades. The list of trades included in G.L. c. 149, §44F is as follows:

- roofing and flashing
- metal windows
- waterproofing, damp-proofing and caulking
- miscellaneous and ornamental iron
- lathing and plastering
- acoustical tile
- marble
- tile
- terrazzo

(**Note:** the Authority may receive a combined filed sub-bid on marble, tile, and terrazzo work. However, these filed sub-bids should be kept separate unless previously approved by Procurement.)

- resilient floors
- glass and glazing
- painting
- plumbing
- heating, ventilating and air-conditioning
- electrical work (including direct electrical radiation for heating)
- elevators
- masonry

The full scope of the work required to be performed by a filed sub-bid trade must be completely included within the technical specification sections identified as being part of the filed sub-bid for that trade. All drawings containing work to be performed by a filed sub-bid trade must be listed in the first of the sections identified as being part of the filed sub-bid for that trade. A filed subcontractor is not be responsible for performing work which is not included in the technical specification sections identified as being part of the filed sub-bid for that trade or which is on drawings not included in drawings list.

1. Paragraph E - Specialty Work

The statute requires that all filed sub-bid sections which include a class of work estimated to cost in excess of \$10,000 which is not customarily performed by a filed sub-bidder in that sub-trade with employees on its own payroll (i.e., specialty work), must identify those classes of work and instruct filed sub-bidders to identify who will perform such work.

(Examples of specialty work in an HVAC filed sub-bid include insulation, testing and balancing, ductwork, and temperature control.)

b. Construction Estimate

A construction estimate, broken down by trade, and any sub-trades which are customarily performed under sub-contract with a filed sub-bidder, must be submitted by the Consultant, with the specifications, so that the required filed sub-bids may be verified prior to bid and documented for the contract file.

c. Format

All filed sub-bid sections must be set up as in the **Appendix 3 - Filed Sub-bid Sections**.

4. Warranties

The General Conditions provide that the Contractor will warrant the entire Work for a period of one year following substantial completion. If a Contractor's warranty for a longer period of time or beginning at a different point in time is required, the language specified in II.B.4.a below must be used. If a manufacturer's warranty for particular items of equipment is required in addition to the Contractor's one year warranty, the language in Paragraph II.B.4.b below must be used. If both a Contractor's warranty and a manufacturer's warranty are required for a period longer than one year following substantial completion, the language in both Paragraphs II.B.4.a & b below must be used. In no instance shall a manufacturer's warranty be required for a period when no Contractor's warranty is in effect.

a. Contractor's Warranty

"For a period of (time) from the date of (substantial completion/final acceptance/some other point in time), the Contractor warrants to the Authority that (item) conforms to these specifications and is free from defects in materials and workmanship. The Contractor shall repair or replace, at the sole option of and at no cost to the Authority, any work found to be defective within said warranty period. Such repair or replacement shall include the cost of removal and reinstallation."

b. Manufacturer's Warranty

"The Contractor shall obtain from the manufacturer its warranty that (item) will be free from defects in design [if applicable], materials, and workmanship for a period of (time) following (substantial completion/final acceptance/some other point in time). Said warranty, containing no exclusions or limitations, shall be in a form acceptable to, and for the benefit of, the Authority and shall be submitted by the Contractor as a condition of final payment.

5. Drawing Scale

Pursuant to Chapter 149, Section 44B(1) of the General Laws, all Chapter 149 contracts must have "plans drawn on a scale of not less than one-eighth inch to one foot except for site plans" that have not been mechanically reduced.

6. Weather Protection

Chapter 149, Section 44F(1) of the General Laws requires "specifications for the installation of weather protection and..that the general contractor shall install the same and that he shall furnish adequate heat in the area so protected during the months of November through March" in all Chapter 149 contracts.

7. Appendices

Appendices attached to the Technical Specifications must be listed in the Table of Contents with the exact title and number of pages appearing on the Appendix and must have sequential page numbers (e.g., Appendix A - 1 of 2, 2 of 2).

III PROCEDURES PRIOR TO ADVERTISING

A. Submittal of Contract Documents

A complete set of 100% Contract Documents, together with a contract requisition signed by the Division, AACU, Budget, and Risk Management; the construction estimate; Liquidated Damages memo; and a memo justifying proprietary items, if any; must be submitted to Procurement for review. Procurement will review and approve, or return comments regarding, the documents. (In unusual circumstances, if determined necessary by Procurement, in conjunction with the Project Manager, Procurement will review 90% documents.)

B. Contract Document Revisions

1. Revisions/Meetings

The Consultant will revise the documents to comply with Procurement comments, as directed by the Authority's Project Manager. The Consultant may be required to attend meeting(s) to discuss Procurement comments.

2. Highlighting Required

All changes in specifications made after initial Procurement review, including but not limited to those made in response to Procurement comments, must be highlighted, either by word processor or by hand, prior to submittal of the revised documents to Procurement.

C. Contract Document Approval

Procurement will approve and advertise the Contract Documents when all Procurement comments have been resolved and the Contract Documents are 100% complete and ready for printing. No documents are to be printed prior to Procurement approval.

D. Contract Document Printing

After the Contract Documents have been approved by Procurement, a minimum of twenty-five copies must be submitted to Document Distribution on or before the availability date identified in the Advertisement. Specifications must be bound with screw posts. ACCO fasteners, shrink wrapping, etc. are not acceptable. Plans/drawings which are to be distributed rolled must be individually rolled before delivery to Document Distribution. Printing will be done by the Consultant if required by the terms of the Consultant's contract with the Authority.

IV PROCEDURES DURING BID PERIOD

A. Bid Opening Times

Filed Sub-bids are opened at 11:30 a.m. General Bids are opened at or after 2:00 p.m. Bid openings are not to be scheduled on Monday or the day after a holiday. A conference room is available for bid openings on Tuesdays and Thursdays. Bid openings may be scheduled on Wednesdays or Fridays if required by project schedule.

B. Pre-Bid Conferences/Site Visits

Consultant shall attend Pre-Bid Conferences and Site Visits, when scheduled by the Project Manager. Minutes of Pre-Bid Conferences, including any questions, must be drafted by the Consultant and submitted to Procurement for approval. Written Questions and Answers, and Pre-Bid Conference Minutes, if any, will be distributed by Procurement to all persons listed in Document Distribution as having received plans and specifications.

C. Addenda

1. Preparation

If it is necessary to change the Contract Documents during the bid period, the Consultant will prepare all necessary addenda. Addenda must be prepared in the format specified in **Appendix 4 - Addendum Format** and approved by Procurement prior to mailing. After approval, a sufficient number of copies to include all persons

listed in Document Distribution as having received plans and specifications, plus 20, must be delivered to Procurement prior to release of any copies.

2. Distribution

Bidders must have addenda in hand for at least 5 full business days prior to the bid opening. If the time remaining prior to bid opening is insufficient to meet this deadline, the bid opening date will be extended. Overnight mail is only used in emergencies.

3. Addenda Relating to Filed Sub-bids

In Chapter 149 contracts requiring filed sub-bids, addenda containing changes in any section (or drawing) which includes filed sub-bid work cannot be issued less than five business days before the sub-bid opening without extending the sub-bid opening date. Any addenda issued after the sub-bid opening cannot contain changes in a section/drawing which includes filed sub-bid work. If such changes are determined to be necessary after sub-bid opening, the Consultant shall inform the Project Manager and Procurement and that filed sub-bid section must be rebid.

D. Questions and Answers

1. Rules

All bid questions will be handled in accordance with Section 4 of the Instructions to Bidders. As indicated in Section 4, Questions and Answers are issued for the purpose of interpretation only and do not become part of the Contract Documents. If any question indicates a need to change the Contract Documents, an addendum must be issued. The Contract Documents cannot be changed or clarified by questions and answers.

2. Format

The Consultant will prepare responses to all bidder questions which require an answer. All questions must be answered in writing and submitted to Procurement for approval and distribution to all persons listed in Document Distribution as having received plans and specifications. Answers must be in one of the two forms indicated in **Appendix 5 - Questions and Answers Format**. The answers to all questions must be made available to all prospective bidders at the same time. Under no circumstances is the Consultant authorized to answer individual bidder questions.

E. Review of Filed Sub-bids

1. Review Requirements

All filed sub-bids not rejected by Procurement must be reviewed by the Consultant to determine that each filed sub-bidder is responsible and qualified to perform the work, that each filed sub-bidder customarily performs the sub-trade work with workers on its

own payroll, that the work can be performed for the price bid (i.e., the price bid is not unreasonably low), and that the bid price includes the payment of applicable minimum wage rates. The Consultant shall make an independent determination that each filed sub-bid meets these requirements. Questioning the filed sub-bidder as to whether it understands the work and its intention to pay prevailing wages is insufficient (reference Paragraph IV.F.2 below).

a. All Filed Sub-bids Rejected

If all filed sub-bids are rejected pursuant to Chapter 149, Sections 44E(1) or 44F(3) [reference Chapter 149, Section 44F(a)(2)], the Contractor is instructed by addendum to carry a specified allowance [see **Appendix 4 - Addendum Format**]. By statute, this addendum must be issued with the filed sub-bid tabulation. In addition, a new Form for General Bid, in which the allowance is entered on the line provided for that filed sub-bid, must be issued in the same addendum. New filed sub-bids will then be solicited by Procurement. The Consultant, in conjunction with the Project Manager, will prepare a solicitation list, including, but not limited to, those persons who submitted a filed sub-bid for that sub-trade.

b. No Filed Sub-bids

If no filed sub-bids or no unrestricted filed sub-bids are received [reference Chapter 149, Section 44F(4)(a)(1)], the Contractor is instructed by addendum to include in the cost of its own work (Item 1) an amount to cover all work required for that sub-trade [see **Appendix 4 - Addendum Format**]. By statute, this addendum must be issued with the sub-bid tabulation. In addition, a new Form for General Bid, in which all references to that sub-trade are removed from Item 2, must be issued in the same addendum.

c. Less Than Two Filed Sub-bids

If less than three filed sub-bids are received or, if through rejection or withdrawal less than three filed sub-bids remain, the Consultant must review the filed sub-bids to determine if the prices are reasonable without further competition. This review shall include a verification of the estimate for that sub-trade; verification of each remaining filed sub-bid by reviewing prices with each remaining filed sub-bidder; and a survey of other potential filed sub-bidders to determine if there is additional interest in the project.

2. Bidder Interview

If necessary, the review of filed sub-bids will include an interview with a filed sub-bidder and an examination of the methodology used in preparation of its bid.

3. Review of All Filed Sub-bids

A review of all filed sub-bids is necessary because a general bidder may choose any filed sub-bidder included on the sub-bid tabulation.

4. Filed Sub-bids By General Bidders

Special scrutiny must be applied to filed sub-bids submitted by general bidders to verify that "the general bidder can show (a) he does so customarily perform such sub-trade [with employees on his own payroll who are mechanics or laborers], and (b) he is qualified to do the sub-trade work". G.L. c.149, §44F(5).

5. Consultant's Written Recommendation

A written determination of the qualifications of all filed sub-bidders, in accordance with the above requirements, including the Consultant's recommendation regarding acceptance/rejection of each filed sub-bid, must be submitted to the Authority as soon as possible after bid opening. The filed sub-bid tabulation must be prepared and mailed to general bidders by Procurement to ensure that bidders have the sub-bid tabulation in hand no later than five business days prior to the scheduled general bid opening date. If the filed sub-bid tabulation cannot be mailed to meet this deadline, the general bid opening date will be extended.

F. Review of General Bids

1. Review Requirements

a. General

Chapter 149, Section 44A requires that contracts be awarded to the "lowest responsible and eligible general bidder."

- "Responsible" is defined as demonstrably possessing the skill, ability and integrity necessary to faithfully perform the Work based on a determination of competent workmanship and financial soundness.
- "Eligible" means able to meet all requirements set forth in Chapter 149. Chapter 30, § 39M also requires award to the "lowest responsible and eligible bidder" which is defined, in part, as the lowest bidder possessing the skill, ability and integrity necessary for the faithful performance of the Work.

b. Review Process

The general bids of at least the lowest apparent responsive bidder (review of the three (3) lowest general bidders is preferred) must be reviewed by the Consultant to determine if each bidder: