THE COUNTY OF GALVESTON

RUFUS G. CROWDER, CPPO, CPPB
PURCHASING AGENT

GWEN MCLAREN, CPPB
ASST. PURCHASING AGENT

COUNTY COURTHOUSE
722 Moody (21st Street)
Fifth (5th) Floor
GALVESTON, TEXAS 77550

March 20, 2019

PROJECT NAME: Bayshore & Gregory Park Pavilions

SOLICITATION NO: B191040

RE: ADDENDUM #1

To All Prospective Proposers,

The following information is being provided to aid in preparation of your proposal submittal(s):

Exhibit B:
Please find attached, Exhibit B, Engineer's Compensation.

Question #1: ***The pavilion at Bayshore Park has a mechanical ridge vent. Is this going to be removed and replaced or will the existing one be reinstalled.***

Response: It should be removed by the contractor and replaced with a new vent structure.

As a reminder, all questions regarding this proposal must be submitted in writing to:

Rufus G. Crowder, CPPO CPPB
Galveston County Purchasing Agent
722 Moody, Fifth (5th) Floor
Galveston, Texas 77550
E-mail: purchasing.bids@co.galveston.tx.us

If you have any further questions regarding this proposal, please address them to Rufus Crowder, CPPO CPPB, Purchasing Agent, via e-mail at purchasing.bids@co.galveston.tx.us, or contact the Purchasing Department at (409) 770-5371.

Please excuse us for any inconvenience that this may have caused.

Sincerely,

Rufus G. Crowder, CPPO CPPB
Purchasing Agent
Galveston County

Exhibit B

Engineer's Compensation

Bayshore Park Pavilion repair of deteriorated roofing and structure

Professional Engineering Services	$15,312	
Texas Windstorm Certification	$1,801	
Engineering Inspection	$4,503	
Total:		$21,616

Gregory Park Pavilion repair of deteriorated roofing and structure

Professional Engineering Services	$16,144	
Texas Windstorm Certification	$1,899	
Engineering Inspection	$4,748	
Total:		$22,791
Not to exceed price:		$44,407

THE COUNTY OF GALVESTON

RUFUS G. CROWDER, CPPO, CPPB
PURCHASING AGENT

GWEN MCLAREN, CPPB
ASST. PURCHASING AGENT

COUNTY COURTHOUSE
722 Moody (21st Street)
Fifth (5th) Floor
GALVESTON, TEXAS 77550
(409) 770-5371

March 25, 2019

PROJECT NAME: **Bayshore & Gregory Park Pavilions**

SOLICITATION NO: **RFP #B191040**

RE: **ADDENDUM #2**

To All Prospective Proposers,

The following information is being provided to aid in preparation of your proposal submittal(s)

AMENDED OPENING DATE:
RFP #B191040, Bayshore & Gregory Park Pavilions, originally scheduled to be opened on Thursday, March 28, 2018, at 2:00 P.M., has been re-scheduled. The new deadline for submitting a proposal is as follows:

Date: Thursday, April 11, 2019
Time: 2:00 P.M.

As a reminder, all questions regarding this proposal must be submitted in writing to:

Rufus G. Crowder, CPPO CPPB
Galveston County Purchasing Agent
722 Moody, Fifth (5th) Floor
Galveston, Texas 77550
E-mail: rufus.crowder@co.galveston.tx.us

If you have any further questions regarding this proposal, please address them to Rufus Crowder, CPPO CPPB, Purchasing Agent, via e-mail at rufus.crowder@co.galveston.tx.us, or contact the Purchasing Department at (409) 770-5371.

Please excuse us for any inconvenience that this may have caused.

Sincerely,

Rufus G. Crowder, CPPO CPPB
Purchasing Agent
Galveston County

THE COUNTY OF GALVESTON

RUFUS G. CROWDER, CPPO, CPPB
PURCHASING AGENT

GWEN MCLAREN, CPPB
ASST. PURCHASING AGENT

COUNTY COURTHOUSE
722 Moody (21st Street)
Fifth (5th) Floor
GALVESTON, TEXAS 77550
(409) 770-5371

April 4, 2019

PROJECT NAME: Bayshore & Gregory Park Pavilions

SOLICITATION NO: RFP #B191040

RE: ADDENDUM #3

To All Prospective Proposers,

The following information is being provided to aid in preparation of your proposal submittal(s):

Question #1: ***Addendum #1 was sent with the "Engineer's Compensation". Is this cost of $44,407.00 supposed to be included in the base proposal?***

Response: The pay estimate was from the engineering firm to the County and should not have been sent out to the prospective proposers. Please disregard this information.

Question #2: ***Will an Alternate be added for a lean-to structure shown in specification section 133419?***

Response: No lean-to structure is required.

Question #3: ***Will the roof and gable side walls be insulated per specification section 133419?***

Response: No insulation is required.

Question #4: ***Specification section 133419 says to provide engineering for the entire building assembly. Drawings S-2 and S-2A say to only provide engineering for the roof and walls down to the purlins. Which do we provide engineering for?***

Response: Engineering and design are required for the metal deck and walls, support purlins, and roof bracing elements. The side wall vertical members are to be replaced so they need to be engineered as well. The main frames will suffice as they are and do not need to be checked.

Question #5: ***The Addendum 1 included engineering fees and I am not sure why they are included. If I am understanding the specifications correctly the owner is hiring and paying for engineering, inspections and testing.***

Response: Please refer to the response for Question #1.

Question #6: ***There is no proposal form to write in the bid amount.***

Response: Proposers can use their own sheet(s) on company letter head to submit bid amounts.

Question #7: ***The Table of Contents is the following divisions but they are not included in the spec book.***
012100
012300
015000
015713
015714
015715
015723
015725
016100
017000
017329
017423

Response: Please find attached, an updated Table of Contents and the Special Provisions from the previously posted bid packet.

Question #8: ***Division 014000 page 2 Item 1.5***
Paragraph A states owner to hire and pay for inspections and testing. Paragraph B states owner will select and appoint a firm to test and inspect and contractor to pay for services from allowance specified in Section 01210. There is no Section 01210.

Response: To be addressed in a separate future addendum…

Question #9: ***Division 014529 Page 1 Item 1.2***
Paragraph A and B contradict each other. Paragraph A states owner hires and pay, and B states contractor. Paragraph C states contractor to include an allowance in bid.

Response: Please refer to the response to question #8.

As a reminder, all questions regarding this proposal must be submitted in writing to:

Rufus G. Crowder, CPPO CPPB
Galveston County Purchasing Agent
722 Moody, Fifth (5th) Floor
Galveston, Texas 77550
E-mail: purchasing.bids@co.galveston.tx.us

If you have any further questions regarding this proposal, please address them to Rufus Crowder, CPPO CPPB, Purchasing Agent, via e-mail at purchasing.bids@co.galveston.tx.us, or contact the Purchasing Department at (409) 770-5371.

Please excuse us for any inconvenience that this may have caused.

Sincerely,

Rufus G. Crowder, CPPO CPPB
Purchasing Agent
Galveston County

GALVESTON COUNTY

722 Moody, Galveston, TX 77550

Specifications

for

Galveston County
Park Structures
Gregory Park and
Bayshore Park

February 7, 2019

Prepared by

PAUL ENGINEERING INC
SOLVING AMERICA'S ENGINEERING NEEDS

STATE OF TEXAS
DENNIS ROBERT PAUL
74523
REGISTERED
PROFESSIONAL ENGINEER
2-7-19

626 ½ Barringer Ln, Suite A, Webster, TX 77598
Phone: 281-280-9972, Fax: 281-280-0250

PEI Project No.: 18-25. 1

GALVESTON COUNTY
Park Structures

TABLE OF CONTENTS

SECTION 011100

SUMMARY OF WORK

PART 1 - GENERAL

1.1 SECTION INCLUDES

A Summary of the Work including work by Owner, Owner furnished products, Work sequence, future Work, Contractor use of Premises, and Owner occupancy.

1.2 WORK COVERED BY CONTRACT DOCUMENTS

A Work of the contract is for the renovation and re-construction of an existing park structure pavilion. Work also includes the demolition of the existing roof and side wall structures. All Work is more fully described in the Construction Documents.

1.3 WORK SEQUENCE

A. Construct Work in phases to accommodate Owner occupancy requirements. Provide phases as requested by County during the construction period. Coordinate construction schedule and operations with Owner's Representative:

1. Phase 1: Demolish existing structural elements.

2. Phase 2: Reconstruction of the existing structure.

SECTION 012973

SCHEDULE OF VALVES

PART 1 - GENERAL

1.1 GENERAL

A. Submit a schedule of values at least 10 days prior to submitting the first application for payment. Upon request, support values given with data that will substantiate the amounts. Use schedule of values only as basis for application for payment.

B. List quantities of designated materials and materials specified under unit price allowances.

C. Payment for materials stored on-site will be limited to those materials listed in a schedule of unit material values.

1.2 FORM OF SUBMITTAL

A. Submit typewritten schedule of values on AIA document G703 or on 8-1/2" by 11 ", plain bond, white paper. Use the table of contents of this project manual as a format for listing costs of work by sections under Divisions 02 through 49.

1.3 PREPARING SCHEDULE OF VALUES

A. Itemize separate line item cost for each of the following general cost items:
   1. Performance and payment bonds.
   2. Field supervision and layout.
   3. Temporary facilities and controls.
   4. Insurance.

B. Itemize the work into line items that follow generally the sequence of the table of contents of these specifications. The work must be subdivided so as to give line items that are readily measurable for the purposes of pay estimates. Further subdivide each line item of work to show the following amounts, when applicable.
   1. Costs of material delivered to the jobsite (do not include overhead and profit).
   2. Cost of labor for installation (include all overhead and profit for this line item).
   3. Cost of Operation and Maintenance Manuals when required.
   4. Cost of all testing and all training required for each item.

C. Break down installed costs into :
   1. Delivered cost of product, with taxes paid.
   2. Installation cost, with overhead and profit.
   3. Testing cost.
   4. O&M materials cost.

D. Round off figures to nearest dollar, except for one item if needed to make total equal the contract amount.

E. Make sum of total costs for all items listed in the schedule equal to the total contract sum.

1.4 REVIEW AND RESUBMITT AL

A. After review by the Architect/Engineer, revise and resubmit the schedule of values or material values, if required. Resubmit revised schedules in the same manner as the original schedules. Initial Application for Payment will not be processed until Schedule of Values is approved. Payment for stored materials will not be made until the Schedule of Unit Material Values has been approved.

SECTION 013000

ADMINISTRATIVE REQUIREMENTS

PART 1 - GENERAL

1.1 PROJECT COORDINATION

A. Coordination with Other Contractors and Subcontractors.
   1. Coordinate scheduling, submittals and work of the various sections of specifications to assure efficient and orderly sequence of installation of interdependent construction elements.
   2. Verify utility requirement characteristics of operating equipment are compatible with building utilities.
   3. Coordinate space requirements and installation of mechanical and electrical work which are indicated diagrammatically on drawings. Follow routing shown for pipes, ducts and conduit as closely as practicable.
   4. In finished areas, conceal pipes, ducts and wiring within the construction.

B. Project Meetings.
   1. A preconstruction conference will be scheduled for all affected parties within a week of award of the contract.
   2. Progress meetings shall be held at the project site weekly throughout the progress of the work. Architect/Engineer/Contractor will preside at meetings; record minutes and distribute copies within 2 days to those affected by decisions made at meetings.
   3. When required in an individual specification section, convene a preinstallation conference at project site prior to commencing work of the section. Meeting shall be scheduled immediately prior to a regular progress meeting.

C. Field Engineering. Employ a Land Surveyor to locate reference datum and establish survey control and reference points; establish elevations, lines and levels; and certify that locations and elevations of the work conform with the Contract Documents.

1.2 CONSTRUCTION SCHEDULES

A. Format. Provide a horizontal bar chart with a separate bar for each trade or operation. Show first day of each week. Show schedule for shop drawing submittal and review, delivery of materials, execution of the work and critical path.

B. Submission. Submit initial construction schedule within 10 days after award of contract. Indicate progress and revise schedule as necessary with each application for payment.

1.3 FORMS

A. Schedule of Values. Submit AIA fom1 G703 (or equivalent information in Contractor's preferred format) within 21 days after date of Owner-Contractor Agreement.

B. Application for Payment. Submit three copies of each application on AJA form G702. Utilize Schedule of Values for listing items in Application.

C. Change Procedure. AJA form G701 will be used for Change Orders.

1.4 SUBMITTAL PROCEDURES

A. Transmit each submittal with AJA Form G810.

B. Transmit each submittal with an Owner-approved form that includes:
1. Identify project, Contractor, subcontractor or supplier; pertinent drawing sheet and detail number(s), and specification section number, as appropriate.
2. Identify variations from contract documents and product or system limitations which may be detrimental to successful performance of the completed work.

C. Apply Contractor's stamp, signed or initialed, to each item submitted, certifying that review and verification of products required, field dimensions, adjacent construction work, and coordination of information is in accordance with the requirements of the work and contract documents. Submittals not bearing this certification will be returned without review.

D. Revise and resubmit submittals as required; identify all changes made since previous submittal.

E. After review, distribute copies to all concerned parties.

1.5 SUBMITTALS

A. Shop Drawings. Submit in the form of one reproducible transparency and two opaque reproductions. The transparency will be returned after review. Reproduction of contract drawings for use as shop drawings will not be allowed.

B. Shop Drawings. Submit the number of opaque reproductions which Contractor requires, plus two copies which will be retained by Architect/Engineer. Reproduction of contract drawings for use as shop drawings will not be allowed.

C. Product Data.
1. Submit the number of copies which the Contractor requires, plus two copies which will be retained by the Architect/Engineer.
2. Mark each copy to identify applicable products, models, options and other data. Do not use highlighters. Delete inapplicable portions or use arrows to indicate applicable portions. Supplement manufacturers' standard data to provide information applicable to this project.

D. Samples.
1. Submit samples to illustrate functional and aesthetic characteristics of the product, with integral parts and attachment devices. Coordinate sample submittals for interfacing work.
2. Submit samples of finishes from the full range of manufacturers' standard colors, textures and patterns for selection.
3. Include identification on each sample, with full product information.

4. Submit two samples (unless other quantity is specified in a specific Section), one of which will be retained.

E. Manufacturer's Instructions.
1. Submit manufacturers' printed instructions for delivery, storage, assembly, installation, start-up, adjusting and finishing, and operations and maintenance in quantities specified for Product Data.
2. Identify conflicts between manufacturers' instructions and contract documents.

F. Manufacturer's Certificates.
1. When scheduled below, submit manufacturers' certificates in quantities specified for Product Data.
2. Indicate material or product conforms to or exceeds specified requirements. Submit supporting reference data, affidavits and certifications as appropriate.
3. Certificates may be recent or previous test results on material or product, but must be acceptable to Architect/Engineer.

PART 2 - PRODUCTS

2.1 TECHNICAL SUBMITTAL CHECKLIST

Section	Material	Shop Dwgs.	Prod. Data	Samples	Cert./ Warranty	Maint. Matls.	O&M Manual	Instal- lation Check	Training Hrs. Req'd.	Other
Sec #	Material Name	X	X		5 yr.					

PART 3 - EXECUTION

3.1 SUBMITTAL SCHEDULE

A. Within 21 days of the effective data of Owner-Contractor Agreement, submit a schedule showing the date by which each submittal listed in Part 2 of this section will be made. Allow at least 21 days for review and approval of each submittal. Schedule submittals so that approved submittals will be in the Contractor's hands before the work is scheduled to be done.

END OF SECTION 013000

Galveston
County

SECTION 013213

CONSTRUCTION SCHEDULES

PART 1 - GENERAL

1.1 INTENT

A. Within 15 days after award of the contract, the Contractor shall prepare and submit to the Architect /Engineer a proposed construction schedule for the work, with sub schedules of related activities which are essential to its progress.

1.2 RELATED REQUIREMENTS

A. Summary of the Work. Section 01 11 00.

B. Allowances. Section 01 21 00.

C. Submittals. Section 01 33 00.

D. Shop Drawings, Product Data and Samples. Section 01 33 23.

1.3 FORM OF SCHEDULE

A. Prepare construction schedule in the form of a horizontal bar chart.
   1. Provide separate horizontal bar for each trade or operation.
   2. Horizontal Time Scale. Identify first work day of each week.
   3. Scale and Spacing. To allow space for notations and future revisions.

B. Prepare construction schedule using network analysis system.

C. Format of Listings. Table of contents of this Project Manual.

D. Format of Listings. Chronological order of the start of each item of work.

E. Identification of Listings. By major specification section numbers.

1.4 CONTENT OF SCHEDULES

A. Construction Schedule.
   1. Show complete sequence of construction by activity.
   2. Show dates of beginning and completion of each major element of construction. Specifically list:
   3. Show projected percentages of completion for each item, as of the first day of each month.
   4. Indicate the critical path for completion of the entire project.

B. Schedule for Submittals of Shop Drawings, Product Data and Samples. Show:
   1. The dates for Contractor's submittals.
   2. The date's submittals will be required for Owner-furnished products.
   3. The dates reviewed submittals will be required back from the Architect/Engineer.

C. Products Delivery Schedule. Show delivery dates for:
   1. Products furnished by Owner, Section 01 11 00.
   2. Products specified under Allowances, Section 01 21 00.

D. Prepare and submit sub schedules for each separate stage of work specified in Section 01 11 00.

E. Provide sub schedules to define critical portions of prime schedules.

1.5 PROGRESS REVISIONS

A. Indicate progress of each activity to date of submission.

B. Show changes occurring since previous submission of schedule.
   1. Major changes in scope.
   2. Activities modified since previous submission.
   3. Revised projections in progress and completion.
   4. Other identifiable changes.

C. Provide a narrative report as needed to define:
   1. Problem areas, anticipated delays and the impact on schedule.
   2. Corrective action that will be taken by the Contractor to get the project back on schedule. This item is required whenever the progress of the job is behind the original progress schedule.
   3. The effect of changes on schedules or on other prime contractors.

1.6 SUBMISSIONS

A. Submit initial schedules within 15 days after award of contract.
   1. Architect/Engineer will review schedules and return review copy within 10 days after receipt.
   2. If required, resubmit within 7 days after return of review copy.

B. Submit revised progress schedules with each application for payment.

C. If size is greater than 11 x 17 inches, submit one reproducible transparency and two opaque reproductions; otherwise, submit two copies.

1.7 DISTRIBUTION

A. Distribute copies of reviewed documents to concerned parties.

B. Instruct recipients to report promptly to Contractor, in writing, any problems anticipated by the projections shown in the schedules.

SECTION 013323

SHOP DRAWINGS, PRODUCT DATA AND SAMPLES

PART 1 - GENERAL

1.1 RELATED REQUIREMENTS

A. Construction Schedules. Section 01 32 13.

B. Record Documents. Section 01 78 39.

1.2 SHOP DRAWINGS

A. Submit shop drawings, product data and samples for each item on or before the date given by the Contractor in the Schedule for Submittals that is required by Section 01 32 13, Construction Schedules. Shop drawings which are not required will not be reviewed.

B. Preparation by a qualified detailer is required.

C. Where necessary for clarity, identify details by reference to sheet and detail numbers, schedule or room numbers as shown on the contract drawings.

D. Field dimensions shall be clearly indicated as such.

E. Prepare a reproducible transparency and two opaque prints of each shop drawing.

F. Reproduction of contract drawings for use as shop drawings will not be allowed.

G. The use of reproductions of the contract drawings by any contractor, subcontractor, erector, fabricator or material supplier in lieu of preparation of shop drawings signifies his acceptance of all information shown hereon as correct, and obligates himself to any job expense, real or implied, arising due to any errors that may occur hereon. In addition, all references to **PEI,** including all Engineers' seals, are to be removed if the contract drawings are used as shop drawings.

1.3 PRODUCT DATA

A. Modify the manufacturer's standard schematic drawings to delete or supplement information as applicable.

B. For manufacturer's catalog sheets, brochures, diagrams, schedules, performance charts, illustrations and other descriptive data:
   1. Clearly mark each copy to identify materials, products or models which are being submitted for review.
   2. Show dimensions and clearances required.
   3. Show performance characteristics and capacities.

4. Show wiring or piping diagrams and controls.

C. Submit the number of copies which the Contractor requires, plus two copies to be retained by the Architect/Engineer. Total number of copies shall not exceed ten.

1.4 SAMPLES

A. Submit samples of sufficient size and quantity to clearly illustrate functional characteristics of product or materials including integrally related parts and attachment devices, and full range of available colors.

B. Erect field samples and mock-ups at the project site in an acceptable location. Construct each sample complete, including work of all trades required in finished work.

C. Submit two samples unless greater quantity is specified in technical section. One sample will be retained unless noted otherwise.

1.5 SUBMISSION REQUIREMENTS

A. Accompany each submittal with a dated transmittal letter (AJA document G810) which includes:
1. Submittal number. Number submittals sequentially beginning with "001".
2. Project title and number.
3. The names of:
   a. Contractor.
   b. Subcontractor.
   c. Supplier.
   d. Manufacturer.
4. Identification of product or material.
5. Relation to adjacent structure or materials.
6. Specification section number and/or drawing number.
7. Applicable standards, such as ASTM number or Federal Specification.
8. Identification of deviations from the contract documents.

B. Provide a blank space on each shop drawing, approximately 5"by 5" {120 x 120}, for the Architect / Engineer's stamp.

C. Contractor's stamp, dated and initialed or signed, certifying review of submittal, verification of field measurements and compliance with contract documents shall be placed on each submittal item. Any submittal items that do not have the Contractor's stamp will be returned without review.

D. Insofar as practical, make all submittals for each of the following categories at one time.
1. Roofing, roof insulation, flashing and roof accessories.
2. Doors, frames and hardware.
3. Mechanical.
4. Plumbing.
5. Electrical.

1.6 ARCHITECT'S / ENGINEER'S DUTIES

A. Review and return submittals with reasonable promptness.

B. Review will be only for conformance with the design intent and with the contract documents.

C. Affix stamp and initials or signature, and indicate approved or requirements for resubmittal.

D. Return submittals to Contractor for distribution or for resubmission.

1.7 RESUBMISSION REQUIREMENTS

A. Assign a submittal number that is the same as the original submittal number plus a sequential letter suffix beginning with "A".

B. Revise documents as required and resubmit as specified for initial submittal. Indicate on drawings any changes which have been made, including those requested by the Architect/Engineer.

1.8 DISTRIBUTION AFTER REVIEW

A. Distribute copies of shop drawings and product data which carry the Architect / Engineer's stamp to:
   1. Contractor's file.
   2. Job site file.
   3. Record document file.
   4. Subcontractors.
   5. Supplier.
   6. Fabricator.

B. Distribute returned samples as needed.

PART 2 - PRODUCTS

A. Products which require shop drawings, product data and samples are listed in Section 01 33 00.

PART 3 - EXECUTION (Not Used)

END OF SECTION 013323

Galveston
County

SECTION 014000

QUALITY REQUIREMENTS

PART 1 - GENERAL

1.1 RELATED REQUIREMENTS

A. Inspections and Tests Required by Regulatory Agencies. The responsibility for compliance lies with the Contractor. See General Conditions.

B. Specific Product Testing. Tests to be performed by an independent testing laboratory are described in the various specification sections.

1.2 QUALITY ASSURAN CE / CONTROL OF INSTALLATION

A. Exercise quality control over suppliers, manufacturers, products, services, site conditions and workmanship to produce work of specified quality.

B. Comply fully with manufacturers' instructions, including each step in sequence. Should manufacturers' instructions conflict with contract documents, request clarification from Architect /Engineer before proceeding.

C. Comply with specified standards as a minimum quality for the work except when more stringent tolerances, codes or specified requirements indicate higher standards or more precise workmanship.

D. Perform work by persons qualified to produce workmanship of specified quality.

E. Secure products in place with positive anchorage devices designed and sized to withstand stresses, vibration, physical distortion or disfigurement.

1.3 REFERENCE STANDARDS

A. Conform to reference standard by date of issue current on date of contract documents.

B. Should specified reference standards conflict with contract documents, request clarification for Architect/Engineer before proceeding.

C. The contractual relationship of the parties to the contract shall not be altered from the contract documents by mention or inference otherwise in any reference document.

1.4 FIELD SAMPLES

A. Install field samples for review at the site as required by individual specifications sections.

B. Acceptable samples represent a quality level for the work.

C. Where field sample is specified in individual sections to be removed, clear area after field sample has been accepted by Architect/Engineer.

1.5 TESTING LABORATORY SERVICES

A. Owner will appoint, employ and pay for services of an independent firm to perform inspection and testing.

B. Owner will select and appoint an independent firm to perform specified inspection and testing. Contractor shall pay for services from an allowance specified in Section 01210.

C. The independent firm will perform inspections, tests and other services specified in individual specification sections and as required by the Architect /Engineer.

D. Reports will be submitted by the independent firm to the Architect/Engineer, in duplicate, indicating observations and results of tests and indicating compliance or noncompliance with contract documents.

E. Cooperate with independent firm; furnish samples of materials, design mix, equipment, tools, storage and assistance as requested.
   1. Notify Architect / Engineer and independent firm 48 hours prior to expected time for operations requiring services.
   2. Make arrangements with independent firm and pay for additional samples and tests required for Contractor's use.

F. Retesting required because of nonconformance to specified requirements shall be performed by the same independent firm on instructions by the Architect / Engineer. Payment for retesting will be charged to the Contractor by deducting inspection or testing charges from the contract sum.

1.6 MANUFACTURERS' FIELD SERVICES AND REPORTS

A. Submit qualifications of observer to Architect/Engineer 30 days in advance of required observations. Observer is subject to approval by the Owner/Architect/Engineer.

B. When specified in individual specification sections, require material or product suppliers or manufacturers to provide qualified staff personnel to observe site conditions; conditions of surfaces and installation; quality of workmanship; start-up of equipment; testing, adjusting and balancing of equipment; and installation as applicable, and to initiate instructions when necessary.

C. Report observations and site decisions or instructions given to applicators or installers that are supplemental or contrary to manufacturers' written instructions. Submit report in duplicate within 14 days of observation.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION O14000

SECTION 014219

REFERENCE STANDARDS

PART 1 - GENERAL

1.1 QUALITY ASSURANCE

A. For work specified by association, trade of Federal Standards, follow requirements of the standard to the extent referenced, except when more rigid requirements are specified or are required by applicable codes or by Contract Documents.

B. Follow reference standard effective 60 days prior to date of Project Manual.

1.2 PARTIAL LIST OF REFERENCES

AA Aluminum Association
1525 Wilson Blvd., Suite 600
Arlington, VA 22209
(703) 358-2960
www.aluminum.org

AABC Associated Air Balance Council
1518 K Street, NW
Washington, DC 20005
(202) 737-0202
www.aabchq.com

AAMA American Architectural Mfrs Assn.
1827 Walden Office Sq., Suite 550
Schaumberg, IL 60173-4268
(847) 303-5664
www.aamanet.org

AASHTO American Assn. of State Hwy.
& Transportation Officials
444 North Capitol Street, NW,
Suite 249
Washington, DC 20001
(202) 624-5800
www.transportation.org

ACI American Concrete Institute
PO Box 9094
Farmington Hills, MI 48333-9094
(248) 848-3700
www.concrete .org

AEIC Assn. of Edison Illuminating Cos.
PO Box 2641
Birmingham, AL 35291-0992
(205) 257-2530
www.aelc.org

AGC Associated General Contractors of America
2300 Wilson Blvd., Suite 400
Arlington, VA 22201
(703) 548-3118
www.agc.org

AGMA American Gear Manufacturers Assn.
500 Montgomery Street, Suite 350
Alexandria, VA 22314-1581
(703) 684-0211
www.agma.org

AHA American Hardboard Assn.
1210 W. Northwest Hwy.
Palatine, IL 60067
(847) 934-8800

AI	Asphalt Institute 2696 Research Park Drive Lexington , **KY** 40511-8480 (859) 288-4960 www .asphaltinstitute.org
AIA	American Institute of Architects 1735 New York Avenue, NW Washington, DC 20006-5292 (800) 242-3837 www .aia.org
AISC	American Institute of Steel Construction 1 E. Wacker Drive, Suite 700 Chicago, IL 60601-1802 (312) 670-2400 www. aisc.org
AISI	American Iron & Steel Institute 1140 Connecticut Ave., NW Suite 705 Washington, DC 20036 (202) 452-7100 www.steel.org
AITC	American Institute of Timber Construction 7012 S. Revere Parkway, Suite 140 Centennial, CO 80112 (303) 792-9559 www.aitc-glulam.org
AMCA	Air Movement & Control Assn. Intl., Inc. 30 West University Drive Arlington Heights, IL 60004 -1806 (847) 394-0150 www .amca.org
ANSI	American Natl. Stds . Institute 25 W. 43rd Street , 4th Floor New York, NY 10036 (212) 642-4900 www.ans1.org
APA	APA - The Engineered Wood Assn. (formerly American Plywood Assn.) 7011 S. 19th Tacoma, WA 98466 (253) 565-6600 www.apawood.org
API	American Petroleum Institute 1220 L Street, NW Washington, DC 20005-4070 (202) 682-8000 www .ap1.org
AREMA	American Railway Engrg. & Maintenance-of-Way Assn. 1 0003 Derekwood Lane, Suite 210 Lanham, MD 20706 (301) 459-3200 www.arema.org
ARI	Air-Conditioning & Refrigeration Institute 4100 N. Fairfax Dr., Suite 200 Arlington, VA 22203 (703) 524-8800 www.an.org
ASHRAE	American Soc. of Heating, Refrig. & Air Conditioning Engrs, Inc. 1791 Tullie Circle, NE Atlanta, GA 30329 (800) 527-4723 www.ashrae.org
ASME	American Soc. of Mech. Engrs. 3 Park Avenue New York, NY 10016-5990 (800) 843-2763 www.asm e.org
ASTM	ASTM International (fom1erly American Society for Testing & Materials) 100 Bar Harbor Drive W. Conshohocken, PA 19428-2959 (610) 832-9500 www .astm.org

AWI	Architectural Woodwork Institute 46179 Westlake Drive, Suite 120 Potomac Falls, VA 20165 (571) 323-3636 www .awinet.org
AWPA	American Wood Protection Assn. (formerly American Wood Preservers' Assn.) PO Box 361784 Birmingham, AL 35236-1784 (205) 733-4077 www.awpa.com
AWPI	American Wood-Preservers' Inst. 2750 Prosperity Ave., Suite 550 Fairfax, VA 22031-4312 (800) 356-AWPI www .awp1.org
AWS	American Welding Society 550 N.W. LeJeune Road Miami , FL 33126 (800) 443-9353 www.aws.org
AWWA	American Water Works Assn. 6666 West Quincy Avenue Denver, CO 80235 (800) 926-7337 www .awwa.org
BHMA	Builders' Hardware Mfrs. Assn. 355 Lexington Ave., 15th Floor New York, NY 10017 (212) 297-2122 www.buildershardware.com
BIA	Brick Industry Association 1850 Centennial Park Dr., Ste 301 Reston, VA 20191 (703) 620-0010 www.gobrick.com
CFR	Code of Federal Regulations Government Printing Office Mail Stop IDCC 732 N. Capitol Street, NW Washington, DC 20401 (866) 512-1800 www.gpoaccess.gov
CGA	Compressed Gas Association 4221 Walney Road, 5th Floor Chantilly, VA 20151-2923 (703) 788-2700 www.cganet .com
CLFMI	Chain Link Fence Mfrs. Institute 10015 Old Columbia Rd., Ste B-215 Columbia, MD 21046 (301) 596-2583 www.chai nlinkinfo.org
CRSI	Concrete Reinforcing Steel Inst. 933 N. Plum Grove Road Schaumburg, IL 60173-4758 (847) 517-1200 www .crs1.org
CTI	Cooling Technology Institute PO Box 77383 Houston, TX 77273-3383 (281) 583-4087
DHI	Door and Hardware Institute 14150 Newbrook Drive, Suite 200 Chantilly, VA 20151 (703) 222-2010 www.dhi.org
EIA	Environmental Information Assn. 6935 Wisconsin Ave., Suite 306 Chevy Chase, MD 20815-6112 (301) 961-4999 www.eia-usa.org

EJMA	Expansion Joint Mfrs. Assn. 25 N. Broadway Tarrytown, NY 10591 (914) 332-0040 www .eJma.org	IEEE	Inst. of Electrical & Electronics Engineers 445 Hoes Lane Piscataway, NJ 08854 (800) 678-4333 www.1eee.org
EPA	Environmental Protection Agency Ariel Rios Building 1200 Pennsylvania Ave., NW Washington, DC 20460 www.epa.gov	ISA	The Instrumentation, Systems & Automation Society (formerly International Society for Measurement & Control) 67 Alexander Drive Research Triangle Park, NC 27709 (919) 549-8411 www .1sa.org
FAA	Federal Aviation Administration 800 Independence Ave., SW Washington, DC 20591 (866) 835-5322 www .faa.gov	ISO	International Organization for Standardization Geneva, Switzerland
FM	Factory Mutual Research Corp. 1151 Boston-Providence Turnpike Norwood, MA 02062 (781) 762-4300	MIL	Military Standardization Documents (U.S. Dept of Defense) Document Automation & Production Service Bldg. 4/D, 700 Robbins Ave. Philadelphia, PA 19111-5 094 (877) 327-7226 dodssp.daps.dla.mil
FS	Federal Standardization Documents General Services Administration Specifications Unit (WFSIS) 7th and D Streets, SW Washington, DC 20406 (203) 472-2205	MSS	Mfrs. Standardization Society of the Valve & Fittings Industry 127 Park Street, NE Vienna, VA 22180 (703) 281-6613 www .mss-hq.com
GANA	Glass Assn. of North America 2945 S.W. Wanamaker Dr., Suite A Topeka, KS 66614-5321 (785) 271-0208 www .glas swebsite.com	NAAMM	Natl. Assn. of Arch. Metal Mfrs. 800 Roosevelt Road Bldg. C, Suite 312 Glen Ellyn, IL 60137 (630) 942-6591 www.naamm.org
IAPMO	International Assn. of Plbg. & Mech. Officials 5001 E. Philadelphia St. Ontario, CA 91761 (909) 472-4100 www .iapmo.org		
ICEA	Insulated Cable Engineers Assn. PO Box 1568 Carrollton, GA 30112 www .icea.net		

NACE	NACE International (formerly Natl. Assn. of Con-osion Engrs.) 1440 South Creek Drive Houston, TX 77084-4906 (281) 228-6200 www.nace.org	NRCA	Natl. Roofing Contractors Assn. 10255 West Higgins Rd., Suite 600 Rosemont , IL 60018-5607 (847) 299-9070 www .nrca.net
		NRMCA	Natl. Ready Mixed Concrete Assn. 900 Spring Street Silver Spring, MD 20910 (888) 846-7622 www.nrmca.org
NAIMA	North American Insulation Manufacturers Assn. 44 Canal Center Plaza, Ste 310 Alexandria, VA 22314 (703) 684-0084 www.na1ma.org	NSF	NSF International (formerly National Sanitation Foundation PO Box 130140 789 N. Dixboro Road Ann Arbor, MI 48113-0140 (800) 673-6275 www.nsf.org
NCMA	Natl. Concrete Masonry Assn. 13750 Sunrise Valley Drive Herndon, VA 20171-4662 (703) 713-1900 www .ncma.org		
NEC	National Electrical Code (see NFPA) www.necplus.org	NTMA	National Ten-azzo & Mosaic Assn. 201 N. Maple, Suite 208 Purcellville, VA 20132 (800) 323-9736 www .ntma.com
NEMA	National Electrical Mfrs. Assn. 1300 N. 17th Street, Suite 1752 Rosslyn, VA 22209 (703) 841-3200 www.nema.org	OSHA	Occupational Safety & Health Admin. 200 Constitution Ave., NW Washington, DC 20210 (800) 321-6742 www.osha.gov
NESC	National Electrical Safety Code www.standar ds.ieee.org/nesc		
NFPA	National Fire Protection Assn. 1 Batterymarch Park Quincy, MA 02169 (800) 344-3555 www.nfpa.org	PCA	Portland Cement Association 5420 Old Orchard Road Skokie, IL 60077 (847) 966-6200 www .cement.org
NIST	Natl. Inst. of Standards & Tech. 100 Bureau Dr., Stop 1070 Gaithersburg , MD 20899-1070 (301) 975-6478 www .nist.gov	PCI	Precast/Prestressed Concrete Inst. 209 W. Jackson Blvd., Suite 500 Chicago, IL 60606-6938 (312) 786-0300 www .pc1.o rg

PDI	Plumbing & Drainage Institute 800 Turnpike Street, Suite 300 North Andover, MA 01845 (800) 589-8956 www.pdionline.org
PIMA	Polyisocyanurate Insulation Manufacturers Assn. 7315 Wisconsin Ave., Ste 400E Bethesda, MD 20814 (301) 654-0000 www.p1ma.org
PPI	Plastics Pipe Institute 105 Decker Court, Suite 825 Irving, TX 75062 (469) 499-1044 www.plasticpipe .org
RCSC	Research Council on Structural Connections c/o Sargent & Lundy Engineers 55 East Monroe St. Chicago, IL 60603 (866) 413-6677 www .boltco uncil.org
RMA	Rubber Manufacturers Assn. 1400 K St., NW, Suite 900 Washington, DC 20005 (202) 682-4800 www.rma.org
SDI	Steel Deck Institute PO Box 25 Fox River Grove, IL 60021 (847) 458-4647 www.sdi.org
SDI	Steel Door Institute 30200 Detroit Road Westlake, OH 44145 (440) 899-0010 www.steeldoor.org
SIGMA	Sealed Insulating Glass Mfrs. Assn. 401 No. Michigan Ave., Suite 2400 Chicago, IL 60611 (312) 644-6610
SJI	Steel Joist Institute 3127 Mr. Joe White Ave. Myrtle Beach, SC 29577-6760 (843) 626-1995 www.steeljoist.org
SMACNA	Sheet Metal & Air Conditioning Contractors National Assn. 4201 Lafayette Center Dr. Chantilly, VA 20151-1209 (703) 803-2980 www.smacna.org
SPIB	Southern Pine Inspection Bureau PO Box 10915 Pensacola, FL 32524-0915 (850) 434-2611 www.spib.org
SSPC	The Society for Protective Coatings 40 24th St., Sixth Floor Pittsburgh , PA 15222-4656 (877) 281-7772 www.sspc.org
STI	Steel Tank Institute /Steel Plate Fabricators Assn. 570 Oakwood Road Lake Zurich , IL 60047 (847) 438-8265 www.steeltank.com
TAS	Texas Accessibility Standards Texas Dept. of Licensing & Regulation PO Box 12157 Austin, TX 78711 (800) 803-9202 www.license.state.tx.us/ab /abtas.htm

TCNA	Tile Council of North America 100 Clemson Research Blvd. Anderson, SC 29625 (864) 646-8453 www.tileusa.com	UNI-BELL	UNI-BELL PVC Pipe Association 2711 LBJ Freeway, Suite 1000 Dallas, TX 75234 (972) 243-3902 www.uni-bell.org
TCEQ	Texas Commission on Environmental Quality PO Box 13087 Austin, TX 78711-3087 (512) 239-1000 www.tceq.state.tx.us	WCLIB	West Coast Lumber Inspection Bureau P.O. Box 23145 Portland, OR 97281 (503) 639-0651 www.wclib.org
TxDOT	Texas Department of Transportation 125 E. 11th Street Austin, TX 78701 (512) 305-9500 www.do t.state.tx.us	WDMA	Window & Door Mfrs. Assn. (formerly National Woodwork Manufacturers Assn., NWMA) 410 N. Michigan Ave., Suite 2200 Chicago, IL 60611 (800) 223-2301 www.wdma .com
UL	Underwriters' Laboratories, Inc. 333 Pfingsten Road Northbrook, IL 60062-2096 (847) 272-8800 www.ul.com	WWPA	Western Wood Products Assn. 522 SW 5th Avenue, Suite 500 Portland, OR 97204-2122 (503) 224-3930 www.wwpa.com

1.3 PARTIAL LIST OF PHRASES

A. Read "includes" and "including" as having the phrase "but not necessarily limited to" immediately following the words, if not otherwise written out.

8. "Required" means products, labor and services provided by the Contractor to properly complete the Work following the Contract Documents and the design concept expressed therein, such required work being determined and governed by field or shop conditions.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION 014219

SECTION 014529

TESTING LABORATORY SERVICES

PART 1 - GENERAL

1.1 RELATED REQUIREMENTS

A. General Conditions of the Contract for Construction. Inspections and testing required by laws, ordinances, rules and regulations or orders of public authorities are the responsibility of the Contractor.

B. Specification Sections. Contained in the various specification sections are requirements for certification of products, testing, adjusting and balancing of equipment; and other tests and standards.

C. Subsurface Exploration. Section 00 31 32.

D. Testing, Adjusting and Balancing of HVAC Systems. Section 23 05 93.

1.2 PAYMENT

A. The Owner will employ and pay for services of an independent testing laboratory to perform specified testing.

B. The Contractor shall employ and pay an independent testing laboratory for the specified testing services. Approval of the testing lab by the Owner must be obtained.

C. The Contractor's bid includes an amount specified as an allowance to cover the cost of services for an independent testing laboratory, which will be selected by the Owner. Payments to the laboratory shall be made by the Contractor upon authorization of the Architect/Engineer.

D. The Owner will pay monthly for testing services based on mutually agreeable unit prices for services rendered. Submit the laboratory invoice for review. The Architect/Engineer will forward the invoice to the Owner for payment.

E. Employment of a testing laboratory by the Owner in no way relieves the Contractor of his obligation to perform the work according to the contract documents.

1.3 WORK INCLUDED

A. Testing is required for the following items of work:
   1. Soils compaction control.
   2. Pile load tests.
   3. Asphalt concrete paving.
   4. Asphalt densities.

5. Portland cement concrete paving.
6. Concrete reinforcement.
7. Cast-in-place concrete.
8. Precast, prestressed concrete.
9. Mortar.
10. Structural metal framing.
11. Structural steel welding.
12. Roofing installation.
13. Sound reduction construction.
14. Radiation shielding.
15. Electromagnetic shielding.

1.4 TESTING LABORATORY QUALIFICATIONS

A. Standards.
1. Meet "Recommended Requirements for Independent Laboratory Qualification," latest edition, published by American Council of Independent Laboratories.
2. Meet basic requirements of ASTM E 329, "Standards of Recommended Practice for Inspection and Testing Agencies for Concrete and Steel as Used in Construction."
3. Submit copy of report of inspection of facilities made by Materials Reference Laboratory of National Bureau of Standards during most recent tour of inspection; with memorandum of remedies of any deficiencies reported by inspection.

B. Testing Equipment.
1. Calibrate at maximum 12-month intervals by devices of accuracy traceable to either the National Bureau of Standards or accepted values of physical constants.
2. Submit copy of certificate of calibration, made by accredited calibration agency.

1.5 CONTRACTOR'S RESPONSIBILITIES

A. Cooperate with laboratory personnel; provide access to the work or to manufacturer's operations.

B. Provide to laboratory, preliminary representative samples of materials to be tested, in required quantities.

C. Furnish copies of mill test reports.

D. Furnish labor and equipment:
1. To provide access to the work to be tested.
2. To obtain and handle samples at the site.
3. To facilitate inspections and tests.
4. For laboratory's exclusive use for storage and curing of test samples.

E. Notify the Architect/Engineer and laboratory at least 48 hours in advance of operations to allow for his assignment of personnel and scheduling of tests.

F. Arrange with the laboratory and pay for additional samples and tests required for the Contractor's convenience.

PART 2 - PRODUCTS

2.1 STEEL

A. Observation and testing of shop welds and bolted work and nondestructive tests of completed welds when directed by Architect/Engineer.

2.2 ROOFING

A. When directed by Architect/Engineer, take samples and test in accordance with ASTM D 2829.

PART 3 - EXECUTION

A. Cooperate with the Architect/Engineer and Contractor; provide qualified personnel promptly on notice.

B. Perform specified inspections, sampling and testing of materials and methods of construction :
   1. Comply with specified standards; ASTM or other recognized authorities, and as specified.
   2. Ascertain compliance with requirements of the contract documents.

C. Promptly notify the Architect/ Engineer and Contractor of irregularities or deficiencies of work which are observed during performance of services.

D. Prepare and distribute reports of inspections and tests within 3 days of test completion or weekly on continuous work as follows:
   1. Architect / Engineer: two copies.
   2. Contractor: two copies.
   3. Owner: one copy.

E. Include the following information for each test as well as additional data specified in the applicable section.
   1. Date of test.
   2. Location of test.
   3. Specified standards.
   4. Test results.
   5. Remarks.

F. The laboratory is not authorized to stop the work or:
   1. Release, revoke, alter, or enlarge on requirements of the contract documents.
   2. Approve or accept any portion of the work.
   3. Perform any duties of the Contractor.

END OF SECTION 014529

SECTION 017834

WARRANTIES AND BONDS

PART 1 -GENERAL

1.1 RELATED REQUIREMENTS

A. General Warranty of Construction. Conditions of the Contract.

B. Contract Closeout. Section 01 70 00 or 01 77 00.

1.2 SUBMITTALS

A. Requirements.
1. Assemble two original signed copies of all warranties, bonds, and service and maintenance contracts, executed by each of the respective manufacturers, suppliers and subcontractors.
2. Provide complete information for each item, including, but not limited to, the following information:
   a. Product or work item.
   b. Firm, with name of principal, address and telephone number.
   c. Scope.
   d. Date of beginning and duration of warranty, bond, or service and maintenance contract.
   e. Proper procedure for Owner's personnel in case of failure.
   f. Instances which might affect validity of warranty or bond.
3. Provide a table of contents, neatly typed, in orderly sequence.
4. Place a copy of the equipment warranties in the Operations and Maintenance Manual for the equipment.

B. Form.
1. Prepare submittals in duplicate packets bound in 3-ring binders of commercial quality with cleanable plastic covers.
2. All materials should be 8-1/2" x 11" (larger sheets shall be folded to fit binders), punched to fit the 3-ring binders.
3. Include a cover sheet identifying each packet with the title: "WARRANTIES AND BONDS." Also list the project title and name of Contractor.

C. Time of Submittals.
1. For equipment or component parts of equipment put into service during progress of construction, submit documents within 10 days after inspection and acceptance.
2. Make submittals within 10 days after date of substantial completion, and prior to final request for payment.

3. For items of work where acceptance is delayed materially beyond the date of substantial completion, provide updated submittal within 10 days after acceptance, listing the date of acceptance as the start of the warranty period.

D. Required Submittals. Submit warranties, bonds, service and maintenance contracts as specified in the section listed in Section 01 3.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION 017834

SECTION 017839

PROJECT RECORD DOCUMENTS

PART 1- GENERAL

1.1 SUMMARY

A. Prepare and maintain record documents for the project to reflect accurately the construction as built. Documents must be submitted at work completion as a condition of final acceptance.

1.2 MAINTENANCE OF RECORD DOCUMENTS

A. Maintain at the job site, one copy of the following as Project Record Documents:
   1. Contract drawings.
   2. Project Manual.
   3. Addenda.
   4. Reviewed shop drawings.
   5. Approved samples.
   6. Change orders and field orders.
   7. Field and laboratory test records.
   8. Correspondence.

B. Store record documents in an approved location apart from documents used for construction. Do not use record documents for construction purposes. Provide files and racks for orderly storage. Maintain documents in clean, dry, legible condition. Make documents and samples available at all times for inspection by the Architect/Engineer.

1.3 MARKING DEVICES

A. Mark all changes legibly in a contrasting color.

1.4 RECORDING

A. Keep record documents current. Do not permanently conceal any work until required information has been recorded.

B. Label each document "PROJECT RECORD" in neat, large, printed letters. Legibly mark contract drawings to record actual construction, showing:

   1. Depths of various elements of foundation in relation to surrounding structures.
   2. Horizontal and vertical location of underground and under slab utilities and appurtenances referenced to permanent surface improvements.
   3. Location of internal utilities and appurtenances referenced to permanent surface improvements.
   4. Field changes of dimension and detail.

5. Changes made by change order or field order.
6. Details not on original contract drawings.

C. Legibly mark specifications and addenda to record:
1. Manufacturer, trade name, catalog number and supplier of each product and item of equipment actually installed.
2. Changes made by change order or field order.
3. Other matters not originally specified.

D. Legibly annotate the following shop drawings to record changes made after review:
1. Metal framing drawings.
2. Framing detail drawings.

E. Delete Architect's / Engineer's seals from record documents.

1.5 SUBMITTAL

A. At project completion, submit record documents as required in Section 01 77 00. Place all letter-sized material in a 3-ring binder, neatly indexed. Bind contract drawings and shop drawings in rolls of convenient size for ease of handling.

B. Accompany the submittal with a transmittal letter in duplicate, containing:
1. Date.
2. Project title and number.
3. Contractor's name and address.
4. Title and number of each record document.
5. Certification that each document as submitted is complete and accurate.
6. Signature of Contractor.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION 017839