

QUALIFICATION PACKET
for
SPECIAL TESTING AND INSPECTION SERVICES

June 2008

I. INTRODUCTION

The Lawrence Berkeley National Laboratory (LBNL) is seeking a written proposal from qualified firms to perform Special Testing and Inspection services as described under Item II below for Project 12314A, Computational Research and Theory Building (CRT) Building.

A. GENERAL DESCRIPTION OF WORK:

This PROJECT involves pre-construction and construction services for the construction of a new three story 130,000 GSF research building to house The National Energy Research Scientific Computing Center (NERSC). The program will house supercomputers and provide office space.

The structural system is a structural steel buckling restrained braced frame over a concrete foundation system supported on drilled piers and spread footings. The estimated construction cost is for the entire project is \$85,000,000.

The project will achieve LEED Silver Level. The project will also demonstrate with calculations that the design energy cost is a minimum of 20% lower than the energy cost budget as defined by California Title 24 Energy Code.

The project delivery method is CM/Contractor with design-build subcontractors for the MEP and exterior wall systems. The construction schedule is 27 months with the anticipated start of construction occurring in July/August 2008.

B. The CM/Contractor selected by the LBNL is DPR.

II. PROPOSED SCOPE OF SERVICES

The scope of services to be provided shall be in accordance with the California Code of Regulations – Title 24 Requirements, latest edition and all other related applicable standards, and will include but not be limited to the following scope:

A. Observe Contractor's operations to ensure conformance with specifications and applicable standards, and perform special testing and inspections in accordance with the State Fire Marshal approved Contract Documents, including but not limited to the following:

1. Cast-in-Place Concrete

- a. Review mix designs and certificates of compliance for materials Contractor proposes to use.
- b. Visit batch plant prior to initial batching to verify plant quality controls are adequate.
- c. Collect and review tickets for each batch of concrete delivered. Annotate water or admixtures added subsequent to batching.
- d. Special Inspect concrete placement, as required by CBC Section 1701.5, Item 1, for conformance with the Contract Documents.
- e. Compressive Strength: Test concrete for compressive strength in accordance with CBC Section 1905.6 and ASTM C39. Conform to testing frequency of CBC 1905.6.1. Take 4 specimens per sample, test one at seven days, one at 14 days and two at 28 days, and retain one specimen.
- f. Sample and test for slump and temperature at same frequency as compression tests.
 - i. Slump: ASTM C143; one test at truck at start of placement and for each compressive strength sample.
 - ii. Temperature: ASTM C1064; one test hourly. Take additional tests where warranted by weather conditions, delays in delivery.
- g. Base plate Grouting: Inspect mixing and placing of non-shrink grout. Test for compressive strength in accordance with ASTM C109. Make one sample for each 10 cubic feet of grout placed, but not less than one sample for each day's placement.

2. Reinforcing Steel

- a. Review Quality Assurance procedures for maintaining identification of steel.
- b. Collect certificates of compliance for reinforcing steel for record purposes.
- c. Collect available test reports for record purposes.
- d. Review and verification of any submitted welding procedure specifications and qualification tests.
- e. Special Inspect placement of reinforcement for conformance with the Contract Documents, as required by CBC Section 1701.5, Item 4.
- f. Special Inspect installation of mechanical couplers in accordance with requirements of applicable ICC Evaluation Report.
- g. Test mechanical couplers in tension to failure. Test 2 specimens at the start of installation for each coupler size for the first 100 installed, then 1 for each 100 additional couplers.
- h. Inspect welding as required by CBC Section 1701.5, Item 5.3, for compliance with AWS D1.4; including checking materials, equipment, procedure and welder qualification as well as the welds. Inspectors will use nondestructive testing or any other aid to visual inspection that they deem necessary to assure themselves of the adequacy of the weld.

3. Structural Steel, Miscellaneous Metal & Prefabricated Metal Stairs

- a. Review manufacturer's test reports for compliance with specified requirements.

- b. Review welding procedure specifications.
- c. Verify material identification.
- d. Randomly sample and tension test 3 high strength anchor bolts for conformance with ASTM A354, Grade BD. Test full size samples for ultimate strength and yield strength; do not proof load test. If full size specimens fail yield test; machine samples and retest for yield.
- e. Inspect high-strength bolted connections as required by CBC Section 1701.5, Item 6, for conformance with RCSC Specification.
- f. Inspect welding as required by CBC Section 1701.5, Item 5, in accordance with AWS D1.1.
- g. Ultrasonically inspect base metal thicker than 1½ inches for discontinuities behind welds in accordance with CBC Section 1703, Item 3. Inspect column base plates thicker than 1-1/2 inches when column flanges are complete penetration welded to base plates.
- h. Nondestructive test all complete penetration groove welds larger than 5/16 inches by ultrasonic methods for conformance with the weld quality and standard of acceptance of AWS D1.1, Table 6.2.
- i. For "Seismic Critical Welds", perform QA inspection tasks in accordance with FEMA-353, Section 6.6 and Table 6-2. Unless otherwise noted on Drawings, use Inspection Category 2.
 - i. Use Inspection Category 1 for CJP groove welded column splices.
 - ii. Use Inspection Category 3 for fillet welds.
- j. For "Seismic Critical Welds", nondestructive test in accordance with procedures of FEMA-353, Section 6.7, and the following testing schedule.
 - i. Complete Penetration Groove Welds: MT test 25% of joints, full length. Test in accordance with provisions of FEMA-353, Section 6.7.1 for conformance with Section 5.8.2. UT test 100% of joints, full length, for conformance with the weld quality and standard of acceptance of AWS D1.1, Table 6.2. Reduce frequency to 25% of joints with low reject rate, subject to approval of University's Representative.
 - ii. Partial Penetration Groove Welds: MT test 25% of joints, full length. Test in accordance with provisions of FEMA-353, Section 6.7.1 for conformance with Section 5.8.2. Reduce testing to 25% of joints, partial length with low reject rate, subject to approval of University's Representative.
 - iii. Test weld access holes in accordance with FEMA-353, Section 6.7.4.6.
 - iv. Test column web for cracking above and below continuity plates after welding in accordance with FEMA-353, Section 6.7.4.4. Use dye-penetrant or magnetic particle test.
- k. Periodically, inspect and test stud welding as required by CBC Section 1701.5, Item 5, in accordance with AWS D1.1; review pre-production testing and qualification, periodically inspect welding and perform verification inspection and testing.

- l. Inspect and test deck welding as required by CBC Section 1701.5, Item 5, in accordance with AWS D1.3. Review materials and qualification of welders and procedures prior to start of work, periodically inspect welding in progress, and perform final visual inspection of all welds.
 - m. Review Buckling Restrained Brace Manufacturer's Quality Assurance Plan, mill certificates and coupon test report.
 - n. Review Buckling Restrained Brace Manufacturer's quality assurance test and inspection reports.
 - o. Observe Buckling Restrained Brace fabrication and assembly as requested by University's Representative's representative.
4. Drilled dowels and anchors
- a. Review manufacturer's and ICC recommended installation and inspection procedures.
 - b. Special Inspect installation for conformance with Contract Documents, manufacturer's recommendations, and requirements of applicable ICC Evaluation Report.
 - c. Proof test dowels and threaded anchors to tension loads indicated on Drawings. There shall be no loosening or movement of dowel out of hole and no cracking or spalling of concrete in which dowel or bolt is set.
 - i. Test a minimum of 10 percent of each size dowel.
 - ii. Test a minimum of 3 of each size dowel.
 - iii. Perform tests at different locations and conditions to obtain representative sample.
 - iv. Should any dowel or bolt fail, increase testing of similar dowels to 25 percent. If other failures occur, test all similar dowels.
5. Fireproofing
- a. Thickness, density and bond strength testing of cementations fireproofing.
 - b. Intumescent painting mil thickness.
6. Sitework
- a. Testing of soil mix samples.
 - b. Compaction testing of subgrades and utility trenches.
- B. The following scope will be by others and is specifically EXCLUDED:
1. Hydrostatic or air pressure testing of pipes and fittings.
 2. Observations of formwork and shoring operations.
 3. Roofing and waterproofing inspections, including load testing of roof hatches and testing of gutters by flooding with water.
 4. Inspection of sheet metal flashing and trim.
 5. Inspection of firestopping work.
 6. Façade mock-up testing.
 7. Concrete moisture vapor emission testing.
 8. Testing of acoustical ceilings.
 9. Testing of exterior maintenance equipment.

10. Elevator testing.
11. Vibration isolation testing.
12. Sound attenuator testing.
13. Testing of mechanical, electrical, plumbing, security and telecommunication systems.
14. Testing of fuel oil storage and distribution system.
15. Testing of fire protection system.
16. Inspections for aesthetic acceptance.

III. STATEMENT OF PRICING INFORMATION (Attachments D & E)

- A. Provide unit rates for the estimated quantities and hours at a minimum for each category above on Attachments D & E.
- B. Provide a copy of your published standard rates.
- C. Provide the pricing information, Attachment D, Attachment E, and published standard rates, in a **separate envelope** labeled with firm name and project number and title. The envelope will be opened after the most qualified firm is selected. The pricing information will be used to negotiate the contract sum.

IV. CONTENT OF PROPOSAL

- A. Cover Letter of introduction (2 page limit)
- B. Respond to each item listed under the Selection Criteria, Attachment A.
- C. Complete Statement of Qualifications form, Attachment B.
- D. Complete Attachments D & E and submit in a separate envelop. Include the published standard rates in this envelop.

V. SUBMITTAL AND REVIEW PROCESS

- A. Four (6) copies of the submittal in one envelop and two (2) copies of the STATEMENT OF PRICING (Attachments D, E and published standard rates) in another envelop should be directed to:

UCB Capital Projects
Attention: Henry Martinez, Sr. Project Manager
1936 University Avenue, 2nd Floor
Berkeley, CA 94704-7027

PLEASE LABEL EACH ENVELOP ACCORDINGLY

- B. The submittal must be received no later than **12 Noon, Wednesday, 25 June 2008** in order to be considered.

- C. For overall project inquiries, please call Henry Martinez, Senior Project Manager at 510-486-6259.
- D. After a review of submittals from all interested candidates, all candidates will be ranked. Your firm may be contacted for an interview or contacted to discuss and to review your submittal. If the selected firm and the University are unable to reach a fee agreement, the University reserves the right to discuss proposals with the next qualified firm and so forth responding to this Qualification process.
- E. The firm will be required to sign the University's Professional Services Agreement, which is posted for review at <http://www.cp.berkeley.edu/PSA.pdf>.
- F. Final selection and appointment is contingent upon funding and budget approval.
- G. The University of California is an equal opportunity Employer. Every effort will be made to ensure that all persons, regardless of race, religion, gender, color and national origin have equal access to contacts and other business opportunities with the University.

VI. ATTACHMENTS

- Attachment A - Selection Criteria
- Attachment B - Statement of Qualifications
- Attachment C - Project Data Sheets, Projects #1 through #3
- Attachment D - Unit Cost – Testing and Inspection Services
- Attachment E - Travel and Other Costs

Attachment A
SELECTION CRITERIA

1. Capabilities of proposed special testing and inspection team. Capabilities of the proposed team and of the firm and/or individuals participating on the proposed team, as evaluated in terms of the functional, technical, and economic features of comparable special testing and inspection services provided for the University or other clients.
2. Required Experience: Provide three (3) projects, each project with a similar type and complexity to the Computational Research and Theory Building project and a minimum construction cost of \$75 million, completed within the last ten (10) years, where similar testing and inspection services were provided. (See Item II Proposed Scope of Services). If your firm does not have a similar project that meets the minimum dollar value, then it is acceptable to submit a project that is of similar size and complexity in building a Laboratory, Hospital, Education, or Public Facility. Additional points will be awarded if the projects submitted are: 1) Similar to the CRT Building, 2) in a University environment and/or 3) under the jurisdiction of the State Fire Marshal.
3. Personnel Assignments. Ability to identify and to commit key personnel with appropriate experience for assignments as necessary. Include the resumes of at least three (3) staff persons who may be assigned to the project. Include copies of the individual's certifications. Also, include resumes of any subconsultants proposed to be hired.
4. Program responsiveness. Previous experience that demonstrates success in providing special testing and inspection services which are consistent with program schedule, budget, and technical requirements, and are responsive to the specifics of the program.
5. Client relationships. Recognition of the need to work harmoniously and productively with UC Berkeley- Capital Projects & Facilities Management employees, contractor, construction manager, design professional and customers.
6. Production capability. Evidence of ability to perform inspection services for construction projects and produce inspection reports of superior quality and to meet the completion schedule of the projects.
7. Project management and coordination. Evidence of ability to conduct a smoothly and efficiently managed contractual engagement.
8. Proximity to LBNL or willingness to establish a local office. Explain business plan in addressing travel time for staff to and from the job site.
9. Equal Opportunity: Show evidence of its equal employment opportunity policy.

Firms who cannot satisfy the above minimum criteria will not be considered.

*Insurance requirements: **General Liability coverage:** \$1M each occurrence; \$1M Products completed, Operations Aggregate; \$1M Personal and Advertising Injury; \$2M General Aggregate. **Business Automobile Liability Insurance** for owned, scheduled, nonowned, or hired automobiles, with a combined single limit of no less than \$1,000,000 per accident. **Professional Liability Insurance:** \$1M per claim and \$1M in the aggregate.

Attachment B

STATEMENT OF QUALIFICATIONS

- 1. Firm Name: _____
- 2. Business Address: _____
- 3. Telephone: _____ Fax # _____
- 4. Type of Organization: (Check one)
a. Sole Proprietorship () b. Partnership () c. Corporation () d. Joint Venture ()
Ethnicity: _____
SBE (check): Yes____ No _____ WBE (Check): Yes____ No _____
- 5. Employer Identification Number (EIN): _____ (Not your SS Number)
- 6. Firm Established (Year): _____
- 7. Staff

	NAME	DEGREE, CERTIFICATE, OR LICENSE	ROLE ON TEAM
a.			
b.			
c.			
d.			

- 8. Number of staff employed in office:

List type of staff and #s: _____

Attachment B (continue)

9. Proposed Subconsultants, if any (include resume/brochure):

a. _____

b. _____

10. References: (Contact Name, Company, and Phone Number)

a. _____

b. _____

c. _____

11. Describe the quality of service that distinguishes your firm.

12. For the services your firm provides, what types of projects does your firm have experience in? (i.e. medical, housing, lab and research facilities, classrooms, etc.)

By: _____
(Signature) (Type Name)

Position: _____

Date: _____

Attach to this form any other information you wish us to consider, such as your firm's brochure or a discussion of your recent work.

ATTACHMENT C

PROJECT DATA SHEET FOR PROJECT #1
SPECIAL TESTING AND INSPECTION SERVICES
(One Form Per Project)

FIRM: _____

1. Project #1 Name: _____

2. Project Location: _____

3. Owner's Name: _____

Address: _____

Phone: _____

Contact Person: _____

4. Design Professional: _____

Phone: _____

Contact Person: _____

5. General Contractor: _____

Phone: _____

Contact Person: _____

6. Gross Square Feet: _____

7. Project Timetable:

A. Start Date: _____

B. Completion date: _____

8. Project Cost at Completion: \$ _____

ATTACHMENT C: SPECIAL TESTING AND INSPECTION SERVICES

NAME OF FIRM: _____

Project #1 Name: _____

9. Describe, briefly, the scope of project:

10. Describe the testing services provided on the project:

11. Describe the inspection services provided on the project:

ATTACHMENT C
PROJECT DATA SHEET FOR PROJECT #2
SPECIAL TESTING AND INSPECTION SERVICES
(One Form Per Project)

FIRM: _____

1. Project #2 Name: _____

2. Project Location: _____

3. Owner's Name: _____

Address: _____

Phone: _____

Contact Person: _____

4. Design Professional: _____

Phone: _____

Contact Person: _____

5. General Contractor: _____

Phone: _____

Contact Person: _____

6. Gross Square Feet: _____

7. Project Timetable:

A. Start Date: _____

B. Completion date: _____

8. Project Cost at Completion: \$ _____

ATTACHMENT C: SPECIAL TESTING AND INSPECTION SERVICES

NAME OF FIRM: _____

Project #2 Name: _____

9. Describe, briefly, the scope of project:

10. Describe the testing services provided on the project:

11. Describe the inspection services provided on the project:

ATTACHMENT C
PROJECT DATA SHEET FOR PROJECT #3
SPECIAL TESTING AND INSPECTION SERVICES
(One Form Per Project)

FIRM: _____

1. Project #3 Name: _____

2. Project Location: _____

3. Owner's Name: _____

Address: _____

Phone: _____

Contact Person: _____

4. Design Professional: _____

Phone: _____

Contact Person: _____

5. General Contractor: _____

Phone: _____

Contact Person: _____

6. Gross Square Feet: _____

7. Project Timetable:

A. Start Date: _____

B. Completion date: _____

8. Project Cost at Completion: \$ _____

ATTACHMENT C: SPECIAL TESTING AND INSPECTION SERVICES

NAME OF FIRM: _____

Project #3 Name: _____

9. Describe, briefly, the scope of project:

10. Describe the testing services provided on the project:

11. Describe the inspection services provided on the project:

Submit Attachments D & E in a separate envelop. (See page 5, Item III)

ATTACHMENT D

UNIT COST – TESTING AND INSPECTION SERVICES

Complete ONLY line item of “Cost” that applies to this project.

<u>No.</u>	<u>Description</u>	<u>Rate</u>	<u>Unit</u>	<u>Estimated Quantities</u>	<u>Extended Cost</u>
1	Verification of concrete mix designs.		/ ea	10 ea	
2	Compaction testing.		/ hr	120 hrs	
3	Testing of material samples. (lab curves, moisture/density, 6" mold).		/ ea	8ea	
4	Tensile test of reinforcement (sampling and tagging).		/ ea	20 ea	
5	Field inspection of reinforcement		/ hr	200 hr	
6	Concrete batch plant inspections.		/ hr	20 hrs	
7	Compression test for concrete.		/ ea	350 ea	
8	Field inspection of concrete sampling / slump / placement.		/ hr	400 hrs	
9	Floor flatness/levelness testing (10,000 square feet/visit).		/ hr	240 hrs	
10	Shop inspection of misc. & structural steel & welding		/ hr	500 hrs	
11	Field inspection of misc. & structural steel		/ hr	400 hrs	
12	Non-shrink grout placement / sampling		/ hr	40 hrs	
13	Compression test for non shrink grout		/ ea	40 ea	
14	Concrete anchors pull and torque testing.		/ hr	60 hrs	
15	Premium for work over 8 hours (onsite and offsite).		/ hr	40 hrs	
16	Premium for work on Saturdays (onsite and offsite).		/ hr	120 hrs	
17	Travel outside 60 mile radius of your office or project site.		/ hr	150 hrs	
18	Meeting attendance.		/ ea	40 hrs	
19	Final affidavit.		/ ea	2 ea	
Miscellaneous Services					
20	Project Manager		/ hr	25 hrs	
21	Project Engineer		/ hr	30 hrs	
22	Principal		/ hr	16 hrs	

The above Unit /hourly rates shall also serve as the basis for any additional services as may be required and will be made part of the contract by Authorization (See Exhibit A of PSA).

Notes

1. The Hourly Rate should include all main office and jobsite overhead, fees, main office costs to prepare and mail out test reports, mileage charges, etc. The University will pay for the number of hours the inspector is on the project plus agreed travel time.
2. The cylinders will be cast by the inspector paid under the hourly rate above. This charge shall include the cost to transport the cylinders to the lab, cure the cylinders properly, break the cylinders and prepare and distribute the proper reports.
3. The quantities set forth in the unit prices are estimates. University does not represent that the actual quantity of any unit price item will equal the estimated quantity stated above.

ATTACHMENT E

TRAVEL AND OTHER COSTS

1. MINIMUM HOURS CHARGED TO SHOW UP AT A JOBSITE OR FABRICATION FACILITY. _____ Hours

2. DO YOU HAVE A POLICY OF 4 HOURS OR 8 HOURS BILLING? _____

OR

DO YOU CHARGE THE ACTUAL HOURS WORKED OVER THE MINIMUM?

3. WHAT DO YOU BILL FOR 6 HOURS OF WORK? _____

4. HOURS TO BE ADDED EACH DAY FOR TRAVEL TIME TO AND FROM THE OFFICE TO THE PROJECT. _____ Hours

5. WHEN THE INSPECTORS ARE ON THE PROJECT FULL-TIME, WILL YOU STILL CHARGE TRAVEL TIME? YES _____ NO _____

6. LIST ALL OTHER CHARGES YOU NORMALLY CHARGE AND WILL ADD TO THE BILLING.

Description:

Cost:

A. _____

B. _____

C. _____

D. _____

E. _____
