

## **Statement of Work:**

### **Summary:**

The Laser Interferometer Gravitational-Wave Observatory (LIGO) is sponsored by the U.S. National Science Foundation (NSF) and is managed jointly by the California Institute of Technology (Caltech) and the Massachusetts Institute of Technology (MIT). The mission of the LIGO Project is to research, develop and implement techniques for the detection of astrophysical gravitational waves. The Observatory network is currently taking data at its design sensitivity. Facilities include research and development sites on the Caltech and MIT campuses and laser interferometer observatories in Hanford, Washington and Livingston, Louisiana.

The Louisiana Observatory is convenient to the New Orleans and Baton Rouge metropolitan areas. It is currently undergoing a period of upgrades to the various sub-systems that exist at the facility. Because of this, LIGO is also performing a number of maintenance actions, both preventative and regulatory in nature. LIGO is currently seeking bids for an "as needed" Electrical Contractor. More specifically, LIGO will contact the winning bidder when electrical work needs to be performed. When the specified work is completed, the winning bidder will then bill LIGO at the pre-determined hourly rate for the work performed. It is estimated that LIGO has approximately 2500-3500 man hours of work that will need to be performed before the upgrade period ends in the next 24 months. The description of expected work is listed below. The period of the contract starts upon award of contract through September 30th of 2013 with an option for a 1 year renewal at the end of that period. If the job descriptions listed below require a separate hourly rate or a job modifier rate for additional task requirements, please include that rate as a separate hourly rate item. Additionally, contractor may be required to purchase or rent equipment or material for work to be completed, please include mark-up rates as a separate rate quote.

### **Scope of Work:**

- Under general supervision, works on semi-routine assignments where some judgment is required
- Applies basic and advanced knowledge of electrical services to include, but not limited to: installing new electrical circuits to services the electrical needs of lab work. Work could include installing new breaker panels, adding to existing panels, replacing worn, defective or incorrect components, as well as installing new electrical fixtures.
- Electrical work will include low voltage (less than 50 VAC) and High voltage (up to 480 VAC).
- Work may involve running circuits through existing walls, ceilings, and conduits.
- Work will include electrical service, as well as signal/control wiring.
- Some work will be at heights over 25ft, and will require the use of ladders, lifts or scaffolding.
- Installation of various, non-electrical wiring or cables and components are also possible (coax, Ethernet, phone, etc.)
- Able to perform work in clean room environments, where specialty garments and debris control measures will be employed.

Additionally, some work will be performed in the Electronics Lab, Mechanical Lab, Vacuum Lab and Vacuum Equipment Area. This requires special care to assure the safety of highly technical equipment. In particular, the contractor personnel must be extremely careful working around optic tables, electronic test equipment, electronic control equipment and computing equipment. Additional tasks as required. All workers are subject to initial interview and orientation before working at the LIGO site. The following is a good faith estimate of the approximate work that will occur over the next 1-2 years:

- 500-1000 man hours of low voltage and/or signal wire installation within cable trays, existing walls, ceilings or other "non-conduit" runs.

- 1000-1500 man hours of installation of new or relocation of existing high voltage (120-480 VAC) circuits from existing service panels. Includes conduit install or modification where applicable.
- 500 man hours of new service panel installation or reconfiguration of existing panels.
- 500 man hours of fixture installation or replacement (including, but not limited to: low and high voltage electrical, environmental sensors, telecommunication and data.)

The proposal's cost estimate should describe whether and under what circumstances they would prefer or require more than one of their employees present to accomplish the work.

**Requirements for Contractor personnel:**

- High School education or equivalent
- Requires 1 - 3 years of relevant experience
- Valid drivers license
- Background checks are required, and must be provided.
- 10 hour OSHA industrial safety course for hazard recognition or equivalent
- Must provide a copy of State of Louisiana Electrical license that work will be performed under before any work is performed.

**Desired Skills, Knowledge & Abilities:**

- Self motivated person who follows through with plans/schedules
- Application of basic knowledge of policies and practices to assignments
- Contractor personnel should take responsibility and ownership of their own work
- Understanding that work results have some impact on quality and/or workflow within unit/department
- Prior experience using man-lift devices and fixtures
- Ability to interact daily with functional peer group and supervisor.
- Prior experience working in clean room environments.
- Performs routine support functions requiring application of standard techniques and/or procedures
- Contractor personnel should have previous work experience within a research facility similar to LIGO Livingston.