



Statement of Work for Fabrication and Delivery of LIGO Installation Cleanrooms

The following documents are incorporated into and made a part of this purchase order. Click on the following LIGO Document Control Center (DCC) links to access these documents or go on line to the LIGO Public DCC at <https://dcc.ligo.org/> to access the DCC#.

1.0 Terms:

<u>DCC #</u>	<u>Description</u>
C080185-v1	Laser Interferometer Gravitational Wave Observatory (LIGO) Commercial Items or Services Contract General Provisions California Institute of Technology “Institute”, LIGO Rev 11/12/08
F0810001-v4	Technical Direction Memorandum.

2.0 Quality Control:

<u>DCC #</u>	<u>Description</u>
Q0900001-v4	Advanced LIGO Supplier Quality Requirements, dated 2/10/10, describes following contractor/supplier QA/QC actions for this procurement:
3.1 Pre-Award Inspection	3.9 Discrepant Material Storage
<input checked="" type="checkbox"/> 3.2 Supplier In Process Quality Control	4.4 Calibration Program
<input checked="" type="checkbox"/> 3.3 In Process Inspection	3.10 Quality Records
<input checked="" type="checkbox"/> 3.4 Pre-Ship Inspection	<input checked="" type="checkbox"/> 4.5 Critical Interface
3.5 Receiving Inspection	<input checked="" type="checkbox"/> 3.11 Drawing and Specification Change Control
<input checked="" type="checkbox"/> 3.6 Discrepant Material	<input checked="" type="checkbox"/> 4.6 Cleanliness
3.7 Material Review Action	<input checked="" type="checkbox"/> 3.12 Welding Certification
<input checked="" type="checkbox"/> 3.8 Material Review Actions at Contractor	<input checked="" type="checkbox"/> 4.7 Packaging
	<input checked="" type="checkbox"/> 3.13 End Item Data Package (including Certifications of Compliance)
	<input checked="" type="checkbox"/> 4.8 Storage
	<input checked="" type="checkbox"/> 4.1 Design Verification
	<input checked="" type="checkbox"/> 4.9 Transport
	4.2 Raw Material Procurement
	4.10 Customs
	4.3 Traceability of Materials

For the above list the Supplier shall: 1) Identify the corresponding sections/paragraphs in their existing QA/QC system that 2) meet or exceed the design requirements contained in the attached engineering documents for each area called out.

LIGO prefers to utilize the vendors existing QA/QC programs to the fullest extent possible consistent with the LIGO QA and QC requirements. All bidders are requested to submit a written description/plan of their existing QA/QC system with their quotes. The bidder must also submit QA/QC plans for managing subcontractor work and materials.

In the event that a prospective contractor lacks an existing quality control system, the contractor/vendor shall develop and implement a quality assurance program in compliance with requirements negotiated at contract/PO award.

3.0 Scope:

This SOW is for the fabrication of cleanrooms detailed in the specification, drawings, and descriptions (LIGO-T1000489) included in this package. These cleanrooms will be assembled by LIGO.

4.0 Bid Data Package:

At the time of bid, the Supplier shall provide:

- Drawings and specifications of proposed cleanrooms
- Proposed mechanism for “nesting” Type B under Type A cleanroom
- Itemized list of unit price
- Alternative delivery schedule, if applicable.

5.0 Quantity and Delivery Schedule:

Table 1 states the delivery schedule and locations. If this schedule cannot be accommodated, please propose an alternative delivery schedule for consideration with your bid package. Early and/or partial deliveries are welcome.

Table 1

Type	LIGO Function	Size	Total Quantity	Suggested Delivery Schedule with Specific Quantity and Location		
				4/1/2011	5/1/2011	7/1/2011
A	End SEI Test Stand	10' x 12' footprint, +/-3" 14' interior height, +6"/-0"	2	1 LHO	1 LHO	
B	VEA Work Space	8' x 10', +/-3" 9' interior height, +/-3"	3	1 LHO	1 LHO	1 LLO
C	Garbing/Staging	7' x 10' footprint, +/-3" 8' interior height, +/-6"	12	4 LHO	4 LHO	4 LLO
D	Buffer	8'6" x 7'3" footprint, +/-3" 8' interior height, +/-6"	2	1 LHO	1 LHO	
E	Fiber Welding	10' x 15' footprint, +3"/-0" 7'6" interior height, +3"/-0"	4	1 LHO	1 LHO	2 LLO
F1	TMS/ALS	8' x 7' footprint, +3"/-0" 7'6" interior height, +3"/-0"	2	1 LHO	1 LHO	
F2		7' x 6'6" footprint, +3"/-0" 7'6" interior height, +3"/-0"	2	1 LHO	1 LHO	
G	Vertex SEI Test Stand	16'x16' footprint, +/-3" 14' interior height, +3/-0	4	1 LHO	1 LHO	2 LLO

6.0 Manufacturing:

All materials and finishes shall be as specified in [T1000489-v9](#).

7.0 End Item Data Package:

At the time of delivery of the cleanrooms, the Supplier shall also provide the following data, as a minimum:

- Assembly instructions/manuals
- Any as-built modifications (with approval of the LIGO Contracting Officer) as mark-ups to the drawings
- Certificate or statement of compliance with all contract and drawing process restrictions.

8.0 Delivery Requirements:

The deliveries are FOB at the destinations listed below, i.e. the contractor has responsibility for shipping title and control of goods until they are delivered and the transportation has been completed. The contractor selects the carrier and is responsible for the risk of transportation and for filing claims for loss or damage.

Shipping Location:

These items will be shipped to:

LIGO Hanford Observatory (LHO)
Attn: Jodi Fauver or Terry Santini
127124 North Route 10
Richland WA 99354

LIGO Livingston Observatory (LLO)
Attention: Bryan Smith or Willie Hawkins
19100 LIGO Lane
Livingston LA 70754

Shipping Containers:

The contractor is responsible for providing shipping containers and transportation which protects these parts from damage from the transportation environment (weather, handling, accidents, etc.).