



Statement of Work For Acquisition Various Cables Needed for aLIGO SUS

The following documents are incorporated into and made a part 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 End Item Data Package:

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

- 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.

3.0 Scope:

This SOW is for the procurement of several types of individually, twisted, shielded pair cables needed for the aLIGO Suspension System. The quantities, lengths and types are called out in the table in Section 4.0 of this document. Note that for each type of cable, there are multiple lengths required.

The description for each type of cable is shown in the table below. Click on the drawing number links to access the drawings.

Drawing Number	Description
D1002956-v1	DB25 Male to DB25 Female Cable with individually twisted, shielded pairs. The shield is terminated at the Male connector end only and the pairs are per the table in the schematic.
D1002958-v1	DB15 Male to DB15 Female Cable with individually twisted, shielded. The shield is terminated at the Male connector end only and the pairs are per the table in the schematic.

Each of the drawings for the desired cables call out a specific example of a cable type to be used for the manufacture of these cables, specifically Alpha 6017C and Alpha 6014C for D1002956 and D1002958, respectively. These specific Alpha cables are meant to be representative of the type of cable to be used for fabrication. Alternative, equivalent cable types can be used, but must meet or exceed the Alpha cable types in the following areas:

- Each twisted pair must have it’s own individual shield
- Minimum 22 AWG wire
- 300V insulation rating

- In the case of D1002958, Alpha 6014C is a 9 pair cable type, but only 7 pairs are needed. Alternative cable types may have 7 individual pairs.

If alternative cable types are proposed for fabrication the quote should state the cable type to be used and a datasheet for that cable type shall be included with the quote.

4.0 Quantity Required:

The quantities for each length of the DB25 Male to DB25 Female Cable (D1002956) are shown in the table below.

Drawing Number	Length	Quantity
D1002956	6 feet	75
D1002956	10 feet	100
D1002956	50 feet	50
D1002956	75 feet	25
D1002956	90 feet	15
D1002956	100 feet	20
D1002956	140 feet	25

The quantities for each length of the DB15 Male to DB15 Female Cable (D1002958) are shown in the table below.

Drawing Number	Length	Quantity
D1002958	90 feet	15
D1002958	100 feet	20
D1002958	140 feet	25

5.0 Delivery Requirements:

The deliveries are FOB at the destination 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.

LHO Cable Totals:

The following tables detail the cables that will be delivered to the LIGO Hanford Observatory.

Drawing Number (DB25 Cable)	Length	Quantity
D1002956	6 feet	20
D1002956	50 feet	10
D1002956	75 feet	10
D1002956	140 feet	10

Drawing Number (DB15 Cable)	Length	Quantity
D1002958	140 feet	10

Shipping Location:

LIGO Hanford Observatory
127124 North Route 10
Richland, WA 99354

Attn: Hugh Radkins and Jodi Fauver

LLO Cable Totals:

The following tables detail the cables that will be delivered to the LIGO Livingston Observatory.

Drawing Number (DB25 Cable)	Length	Quantity
D1002956	6 feet	55
D1002956	10 feet	100
D1002956	50 feet	40
D1002956	75 feet	15
D1002956	90 feet	15
D1002956	100 feet	20
D1002956	140 feet	15

Drawing Number (DB15 Cable)	Length	Quantity
D1002958	90 feet	15
D1002958	100 feet	20
D1002958	140 feet	15

Shipping Location:

LIGO Livingston Laboratory
19100 LIGO Lane
Livingston, LA 70754

Attn: Derek Bridges and Tom Gentry

Shipping Containers:

The contractor is responsible for providing shipping containers and transportation that protects these parts from damage from the transportation environment (weather, handling, accidents, etc.). Mating edges of parts should be especially protected from damage during shipping.

Delivery Schedule:

Delivery is expected within 8 weeks ARO.

6.0 Special Considerations:

It is recognized that there are minimum quantity purchases for the types of cable material that is being requested. If the quantities requested in this statement of work do not allow the vendor to meet these minimum quantities, the quote should state the number of additional feet of each type of cable that would be required to meet the minimum quantity.