Dated: 28.9.2011

DEPARTMENT OF CIVIL ENGINEERING

Department of Civil Engineering, IIT Kanpur plans to procure Robotic Total Station for ongoing research activities. The set comprise the following equipment/SW:

The general specifications for this system are provided below. This is followed by the technical specification and other details.

Item: Total station - *Robotic reflectorless with capability of auto tracking targets. Should be offered with Robotic pole to remotely control Robotic Total station with 2.4GHz radio.*

GENERAL AND OTHER SPECIFICATIONS:

While quoting the prices for various items, the following guidelines should be followed:

1. Full details of the *standard* configuration of equipment along with *accessories* and *technical literature* should be provided. The standard configuration must be accompanied by associated brochure giving the complete and clear configuration of the system offered.
2. The vendor must provide a compliance document which should clearly specify how each technical requirement is satisfied by the system suggested by him.
3. All the accessories to be offered along with Total Station should be OEM make only.
4. The *authorized certificate and propriety certificates* must be attached with the offer.
5. Please note that as per the present Govt. of India notification, IIT-Kanpur is expected to pay custom and excise duty as applicable for academic institutions. The offer should, therefore, clearly and separately mention: (i) cost of equipment, (ii) mode of payment, (iii) academic institution discount, (iv) country of origin, (v) freight charges for delivery of equipment at IIT-Kanpur, (vi) warranty period
6. The quotation should be valid for *at least 6 months*.
7. The delivery of the equipment must be made within six weeks after payments as per institute rules.
8. The short listed vendor(s) may be asked to demonstrate the functionality of quoted equipment and associated software at IIT-Kanpur within two weeks of opening the quotations.
9. Please clearly mention the arrangements and cost of the following:
   a) Minimum warranty period (minimum one year and preferably five years or more).
   b) The annual maintenance contract (AMC) facility or provision of extended warranty and provide details of other terms and conditions, if any.
   c) Details of after-sales service (a) how will the services be provided, details of in-house facilities for the same, turn-around time with acceptable solution, availability of spare parts and their warranty (minimum five years).

10. Training: Provision of training (*at least 5 days duration*) by certified/qualified staff members/trainers of highest standards is one of the primary requirements in this work. Please mention number of persons who will conduct the training. One hard copy of handout and one softcopy of all training manuals should be provided, covering installation, operation, maintenance and calibration of the system, usage and the system application software at IIT Kanpur. The vendor should provide all operation, service and maintenance manuals (in English) along with necessary circuit diagrams.

Minimum Specifications:
LEAST COUNT: Standard mode -Distance 2 mm or better

ACCURACY: ANGLE 5" or better
COMPENSATOR: Dual Axis

COMPENSATOR RANGE: Should be 5' or better

DISTANCE MEASUREMENTS

Accuracy with or without reflector in standard mode:

In prism mode   *2 mm + 2 ppm*

In DR mode   *2 mm + 2 ppm*

Using 1 prism: Up to 5 km or more

DR mode on White Card (90% reflective): Up to 2 km or more

Robotic Range to passive prisms: 600m or more

Operating Temperature: –20 ºC to +50 ºC

Dust and water proofing Rating: IP55

Operating time on 1 internal battery: At least 6 hrs

ROTATION DRIVE: Should be frictionless drive

ROTATION SPEED: More than 100degrees/sec

CLAMPS: Should be endless frictionless

PLUMET: Should be optical plummet

MAGNIFICATION: 30x or better

FIELD OF VIEW: 2.6m at 100mtr or better.

Memory: 128 MB SDRAM, 1 GB internal non-volatile storage memory and support for USB memory.

DISPLAY: Color, TFT, daylight readable screen with touch screen.

Keyboard: Alpha-numeric keys hard keys

COMMUNICATION: USB, Serial, Bluetooth

Controller On-Board Software

The Onboard software for Total Station should have following features:

a. Electronic Level
b. Atmospheric Corrections
c. Functionality to search target automatically
d. Feature codes
e. COGO functionalities
f. Stake out
g. Site Calibration
h. Background Maps
i. Link Files
j. Should support direct DXF output on-board.
k. Graphical Display of surveyed points Lines & Areas with Codes & Symbols
l. Should support various coordinate systems

The total station should have detachable control unit, Optical Plummet, Should have Laser Class 2 Pointer, and should be able to apply atmospheric corrections.

The quotation with all technical details should arrive the undersigned by 8th October, 2011.

Rajiv Sinha
Professor
Department of Civil Engineering
Indian Institute of Technology Kanpur
Kanpur 208016 (UP)
INDIA