1.0 Site conditions:

1.1 Location: BHEL factory
RC Puram, Hyderabad

1.2 Max. Ambient Temperature: 50 deg C

1.3 Max. Relative Humidity: 74 %

1.4 HT Power supply: 11/6.6 KV +/- 6%, 50 Hz +3%/-5%,
40KA for 1 Sec.

1.5 LT Power supply: 415 V +/- 10%, 50Hz +3%/-5%,
50KA for 1 Sec

1.6 Control supply: 240 V AC, 1Ph, 50Hz
220/110 V DC

1.7 Altitude above MSL: 1000 m

Note: Max. Ambient temperature and relative Humidity do not occur simultaneously.
SECTION – II

APPLICABLE STANDARDS

The cable trays shall be designed, manufactured and tested in accordance with the following standards.

1. IS: 4759-1996 (Reaffirmed-2001) HOT–DIP ZINC COATING ON STRUCTURAL STEEL AND OTHER ALLIED PRODUCTIVITY.

2. IS: 2629-1985 (Reaffirmed-2001) RECOMMENDED PRACTICE FOR HOT–DIP GALVANIZING OF IRON AND STEEL.

3. IS: 2633-1986 (Reaffirmed-2001) METHODS FOR TESTING UNIFORMITY OF COATING OF ZINC COATED ARTICLES.


5. IS: 1387 – 1993 (Reaffirmed-2001) GENERAL REQUIREMENTS FOR THE SUPPLY OF METTALLURGICAL MATERIALS.

6. INDIAN ELECTRICITY RULES 1956.
SECTION III

SCOPE OF SUPPLY

3.1 Cable Trays
3.1.1 Ladder/Perforated type fully fabricated from Rolled Mild Steel min. 2mm thick 2.5 meter long cable trays.

- 450mm W x 100mm H x 20mm C - 500m
- 600mm W x 100mm H x 20mm C - 1000m

Runner: 100 x 20 x 2; Rung: 40 x 20 x 2;
Distance between rungs: 250mm

Perforated cable tray of size 300mm W x 100mm H x 15mm C - 1000m

3.2 Coupler Plates
Coupler plates shall have 8 holes (4holes & 4slots) suitable with tray dimensions.

a) Side coupler plates (Ladder/Perforated) (3mm thickness) ------- 2000 nos.
   (400nos for 450mm width tray, 800nos for 600mm width trays & 800nos for 300mm width trays)

3.3 Hardware
M8 x 25mm long GI bolt & nut with two plain washers and one spring washer suitable for coupler plates. --- 16000 sets
SECTION – IV

DETAILED TECHNICAL SPECIFICATIONS

4.1 CABLE TRAYS

4.1.1 LADDER/PERFORATED TYPE TRAY:

The ladder/perforated type cable tray shall be made out of min. 2mm thick Rolled Sheet Steel as per drg. The tray shall be shop fabricated & the fabrication process shall include pressing, punching, slotting, drilling, welding etc. It shall be free from burr & sharp edges. After fabrication, the trays shall be Hot Dip Galvanized as per IS 2629 – 1989 and coverage as per IS 4759 – 1984. Min 610 gms/Sq.M for trays minimum thickness of zinc deposits on all points shall be 75 microns.

Ladder Tray dimensions : 450mm x 100mm x 20mm, 2500mm length
600mm x 100mm x 20mm, 2500mm length
Perforated tray dimensions: 300mm x 100mm x 15mm 2500mm length.

4.1.2 COUPLER PLATES

Coupler plates shall be made out of 3mm thick steel sheet and dimensions as per drg. Coupler plates shall be hot dip galvanized conforming to IS 4759 – 1984, IS 2629 – 1985 and IS 2633 – 1986.

The drawing enclosed is for reference. The actual supply drawing shall be submitted along with the offer.
**PERFORATED CABLE TRAY**

**SECTION A-A**

**NOTES:**
1. **ALL DIMENSIONS ARE IN mm.**
2. **IN-SIDE W (WIDTH):** 150, 300 & 600 mm.
3. **MATERIAL:** 2mm. M.S. SHEET MIN.

**SIDE COUPLER PLATE**

**NOTES:**
1. **MATERIAL:** M.S SHEET MIN. 2MM THK
2. **FINISH:** HOT DIP GALVANISED
3. **COUPLER PLATE:** MIN. 3MM THK M.S. HOT DIP GALVANISED.

**BHEL R.C PURAM HYDERABAD.**

**REF:** DRG. NO: IS-4-577-600-001.