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PRASAR BHARTI (BCI)
DIRECTORATE GENERAL: DOORDARSHAN
DOORDARSHAN BHAVAN, COPERNICUS MARG,
NEW DELHI – 110 001.

F.No. 1(3)2010-11/ EI (P) TV.

Dt.:12.08.2010

To

M/s

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Subject: Amendments /Clarifications in Tender No. 1(3)2010-11/ EI (P)TV dated 7.06.2010

Ref: Prebid Conference held on 15.07.2010 for SITC of D.T.T (DVB-T2) Antenna System, Standby Antenna System, RF Feeder cable, Dehydrator, Strengthening of existing TV Towers.

Dear Sir,

Please find enclosed herewith the following in reference to queries raised in prebid conference held on 15.07.2010.

2. **Amendments dated 30.07.2010 in Specification No:DG:DD/TxD/SDTV/ANT/E- V/2010, dated 21.06.2010(Annexure-1)**
3. **Clarifications on queries raised in prebid meeting held on 15.07.2010(Annexure-2)**
4. All the aforesaid clarifications /amendments are hereby authorized.
5. All bidders may read these clarifications /amendments in the specification carefully.

All other terms & conditions of the tender will remain unchanged.



(T.P. Dimri)

(Assistant Engineer)

For Director General

Tele/ Fax +91- 11- 23387620

E-mail:- ddpurchase401@yahoo.co.in

Tender No. 1(3)10-11/EI(P) TV

Amendments Dated: 30.07.2010 in Specification No: DG:DD/TxD/SDTV/ANT/E-V/2010, Dated 21.06.2010

DD specs Para No.	Original Para	Amended DD specs Para
3.2.3	The R.F. cables and Antenna System at each location shall be duly pressurized by using the Dehydrator of suitable capacity (Also refer Para 3.4).	The R.F. cables and Antenna System supplied at each location shall be duly pressurized by using the Dehydrator of suitable capacity (Also refer Para 3.4).
3.5.2	The bidder alongwith his tower erection expert must physically inspect the existing sites and towers, for any other additional information desired for analysis of tower strength, before submitting their offer for tower strengthening works.	The bidder alongwith his tower erection expert may physically inspect the existing sites and towers, for any other additional information desired for analysis of tower strength, before submitting their offer for tower strengthening works.
3.6.1 b)	The OEM of antenna system must have minimum 10 years of experience in the production of TV antennae.	The OEM of antenna system must have minimum 10 years of experience in the production of TV antennae. Documentary evidences to support this must be provided with the offer.
3.6.1 a)	The bidder/OEM must have the experience of supplying/installing similar Broadband UHF top mounted Panel type antenna system at least at two locations. The documentary evidence of executing such work must be attached with the offer. The copy of completion certificates from the clients, their addresses, telephone nos. and email addresses must be provided.	The bidder must have the experience of supplying/installing Broadband UHF top mounted Panel type antenna system at least at two locations. The documentary evidence of executing such work must be attached with the offer. The copy of documentary evidences/ completion certificates from the clients, their addresses, telephone nos. and email addresses must be provided.
3.6.1 c)	The bidder shall have enough manpower as well as machinery and equipment capability of carrying out the work of tower strengthening and other related works of SITC simultaneously at 15 locations since these projects are time bound. The bidder must submit records of SITC type of works related with structural engineering carried out in past.	The bidder shall have enough manpower as well as machinery and equipment capability of carrying out the work of tower strengthening and other related works on SITC basis simultaneously in four zones, namely North Zone, West Zone, South Zone and East Zone since these projects are time bound. The bidder or the firm engaged by the bidder for tower strengthening work must submit

2010
अर्चना गुप्ता
उप निदेशक (अभि)



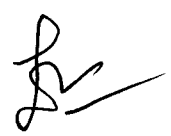
		records/documentary evidences of design, supply and erection works of minimum two towers of height not less than 100M carried out during last five years.
3.6.1.d.1	The schedule of execution of works so as to ensure that the SITC work is completed within 8 months .	The schedule of execution of works so as to ensure that the SITC work is completed within 12 months . Zone wise timeline in the form of PERT Chart giving details for each location must be provided with the offer.
3.6.1.d.2	Details of deployment of teams at 15 locations for tower strengthening work.	Details of deployment of teams in four zones for tower strengthening work must be provided with the offer.
3.6.3	The total period for completion of the turn key project, i.e., SITC of Antenna, RF cable, Combiner, Dehydrator and strengthening of existing TV Towers at all the 15 locations would be eight months from the date of Acceptance of Tender.	The total period for completion of the turn key project, i.e., SITC of Antenna, RF cable, Combiner (supply only, at Delhi site), Dehydrator and strengthening of existing TV Towers at all the 15 locations would be twelve months from the date of Acceptance of Tender.
3.6.6	Added new Para	The Antenna Manufacturer must have his own test bench including test field, rotating tower, suitable receiving equipment for measuring various parameters and their analysis. Necessary supporting documents along with the details, drawings, photographs etc. of the above test bench facility must be provided with the offer.
3.6.7	Added new Para	The bidder must submit the compliance of Para 3.5 (3.5.1 to 3.5.9 and all their sub-paras) on the letter head of the firm engaged by the bidder for tower strengthening work duly signed by the authorized representative of the firm. Para 3.6.17 may be referred for the format of Compliance statement.
Annexure II, 1.30	The 4 ½” flange end GAS STOP connector must be fitted with Schrader valve to connect each cable with De-hydrator. The antenna end of the RF feeder cable must be connected with the 4 ½” flange end GAS through connector.	The 4 ½” flange end GAS STOP connector must be fitted with Schrader valve to connect each cable with De-hydrator. The antenna end of the RF feeder cable must be connected with the 4 ½” flange end GAS through connector. In the present tender, the work being SITC, the bidder has to

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		ensure that Schrader valve is fitted between RF feeder cable and dehydrator tubing so that air does not flow in backward direction towards the dehydrator.
Annexure V	Addresses of locations.	Addresses of Superintending/Station Engineers have been added, included in revised Annexure V. Revised Annexure V may be referred.
Annexure VI(A to O)	Information regarding existing Towers at 15 locations	Additional information has been included in revised Annexure VI (A to O). Revised Annexure VI (A to O) may be referred.

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अध्याय सुपरी.
उप निदेशक (अभि)



Name of Station - Lucknow


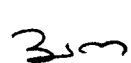
Name of Item	REMARKS
A-Tower	
1. Type of Tower whether all steel or RCC-cum Steel;	All Steel , Year of erection -1975
2. Copy of all available installation/technical drawing of tower.	NAV
3. Longitude and latitude at the base of tower	long. 80.91 deg. E. Lat.26.81 Deg. N
4. Height of tower excluding top mount antenna if any	175 m
5. Base dimension of tower in mm.	35000mm x 35000mm
6. Details of Occupied aperture of tower with present antennae.	
6.1 Band 1	Used for DD1
6.2 Band 2	Used for Pvt Fm antenna
6.3 Band 3	Used for DD2
6.4 Band 4&5	Nil
7. Details of Spare aperture	Top Unutilized
8. Position of vertical cable rack and climbing ladder whether it is centre position, corner position or at face of the tower.	Inside. A climbing ladder in the centre position
9. Whether space is available to accommodate 5" dia RF feeder cable on existing horizontal and vertical RF cable racks.(Min.space required is 7" to 8")	Not Available
10. Cross section details (in mm) of tower top.	12000mm x 12000mm
11. Distance of Tower (in meter) from existing DD1 Transmitter hall/Building.	18.3 m
B-Antenna system	
1. Details of antenna for DD National	BEL, make
1.1 Power handling capacity	24 Panel
1.2 Dead weight of antenna	NAV (not available)
1.3 Wind Load	NAV
2. Details of antenna installed For DD2	Dielectric make, TSP - 0 - 10 -2
2.1 Power handling capacity	NAV
2.2 Dead weight of antenna	2000 Kg
2.3 Wind Load	NAV
3. Details of antenna installed for regional channel	NIL

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3.1 Power handling capacity	Not Applicable	
3.2 Dead weight of antenna	Not Applicable	
3.3 Wind Load	Not Applicable	
5. Details of antenna installed for AIR FM channel	Not installed	
5.1 Power handling capacity	Not Applicable	
5.2 Dead weight of antenna	Not Applicable	
5.3 Wind Load	Not Applicable	
6. Details of antenna installed for PVT FM channel	FMP 20 / 4-4-4-4 Panel Antenna	
6.1 Power handling capacity	60 kW	
6.2 Dead weight of antenna	2910 Kg	
6.3 Wind Load	4481Kg	
7. Details of antenna installed for telecommunication	Not installed	
7.1 Power handling capacity	Not Applicable	
7.2 Dead weight of antenna	Not Applicable	
7.3 Wind Load	Not Applicable	
8. Details installed antenna which are not covered in above types	Not Applicable	
9. Detailed drawing showing tower apertures with all installed antenna at their exact locations.	Not Applicable	
C-Feeder cables installed on the Tower including AIR FM Cable/Pvt . FM cable		
1. Details of RF feeder cables (TV)	DD1(Andrew)	DD News(Andrew)
1.1 Number of cables	2	2
1.2 Size(diameter)	3 1/8"	3 1/8"
1.3 Length in meter	200	210
1.4 Wt of cable per meter	NAV	
2. Details of RF feeder cables (AIR & Pvt FM)	Pvt. Fm Cable (Andrew Make HJ8-50B)	
2.1 Number of cables	2	
2.2 Size(diameter)	3"	
2.3 Length in meter	190 m	
2.4 Wt of cable per meter	2.6 Kg	
3. Size of horizontal and vertical cable tray.	NAV	
D- Drawing of Tower showing location of various antennae with details of height from ground.	NAV	

Name of Station - Jallandhar

Name of Item	REMARKS
A-Tower	
1. Type of Tower whether all steel or RCC-cum Steel	RCC(127m)+steel(85m) , Year of erection - 1979
2. Copy of all available installation/technical drawing of tower.	NAV
3. Longitude and latitude at the base of tower	Long. 75.33 deg. E. Lat.31.17 Deg. N
4. Height of tower excluding top mount antenna if any	212 m
5. Base dimension of tower in mm.	Diameter 19740 mm
6. Details of Occupied aperture of tower with present antennae.	
6.1 Band 1	Not used
6.2 Band 2	FM Antenna (Air + Pvt FM)
6.3 Band 3	DD1
6.4 Band 4&5	DD News
7. Details of Spare aperture	Band 1
8. Position of vertical cable rack and climbing ladder whether it is centre position, corner position or at face of the tower.	Centre Position but above 195 m new ladder is required.
9. Whether space is available to accommodate 5" dia RF feeder cable on existing horizontal and vertical RF cable racks.(Min.space required is 7" to 8")	Not available
10. Cross section details (in mm) of tower top.	Modified tower interface
11. Distance of Tower (in meter) from existing DD1 Transmitter hall/Building.	10 m
B-Antenna system	
1. Details of antenna for DD National	BEL make
1.1 Power handling capacity	20 kW
1.2 Dead weight of antenna	NAV
1.3 Wind Load	NAV
2. Details of antenna installed For DD2	Dielectric make(TLP-16HPA)
2.1 Power handling capacity	16 kW
2.2 Dead weight of antenna	NAV
2.3 Wind Load	NAV
3. Details of antenna installed for regional channel	NIL


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3.1 Power handling capacity	Not Applicable
3.2 Dead weight of antenna	Not Applicable
3.3 Wind Load	Not Applicable
5. Details of antenna installed for AIR FM channel	Common antenna for AIR & Pvt. FM
5.1 Power handling capacity	As given below
5.2 Dead weight of antenna	As given below
5.3 Wind Load	As given below
6. Details of antenna installed for PVT FM channel	RFS Make, model 904CPX-16D
6.1 Power handling capacity	60 kW
6.2 Dead weight of antenna	2680 Kg
6.3 Wind Load	46KN@50m/sec
7. Details of antenna installed for telecommunication	Not installed
7.1 Power handling capacity	Not Applicable
7.2 Dead weight of antenna	Not Applicable
7.3 Wind Load	Not Applicable
8. Details installed antenna which are not covered in above types	Not installed
9. Detailed drawing showing tower apertures with all installed antenna at their exact locations.	NAV
C-Feeder cables installed on the Tower including AIR FM Cable/Pvt FM cable	
1. Details of RF feeder cables (TV)	DD1 (Andrew Make) DD News (Andrew)
1.1 Number of cables	2 1
1.2 Size(diameter)	3 1/8" 3 1/8"
1.3 Length in meter	230 230
1.4 Wt of cable per meter	
2. Details of RF feeder cables (AIR & Pvt FM)	RFS make, HCA318-50
2.1 Number of cables	2
2.2 Size(diameter)	3-1/8"
2.3 Length in meter	220m
2.4 Wt of cable per meter	3.3 Kg
3. Size of horizontal and vertical cable tray.	NAV
D- Drawing of Tower showing location of various antennae with details of height from ground.	NAV

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Name of Station - Srinagar

Name of Item	REMARKS
A-Tower	
1. Type of Tower whether all steel or RCC-cum Steel	All steel , Year of erection -1973
2. Copy of all available installation/technical drawing of tower.	NAV
3. Longitude and latitude at the base of tower	long. 75 ⁰ ,50',30". E. Lat .34 ⁰ , 04' 44". N
4. Height of tower excluding top mount antenna if any	122 m (22 M was modified for installing new antenna)
5. Base dimension of tower in mm.	23500mmX23500mm
6. Details of Occupied aperture of tower with present antennae.	
6.1 Band 1	NAV
6.2 Band 2	Pvt FM
6.3 Band 3	DDI/DD news
6.4 Band 4&5	Vacant
7. Details of Spare aperture	Top of the tower
8. Position of vertical cable rack and climbing ladder whether it is centre position, corner position or at face of the tower.	Corner Position
9. Whether space is available to accommodate 5" dia RF feeder cable on existing horizontal and vertical RF cable racks.(Min.space required is 7" to 8")	Not Available
10. Cross section details (in mm) of tower top.	1200 mm x 1200 mm
11. Distance of Tower (in meter) from existing DD1 Transmitter hall/Building.	30 m
B-Antenna system	
1. Details of antenna for DD National	Katherin (75911881)
1.1 Power handling capacity	2X40 kW
1.2 Dead weight of antenna	NAV
1.3 Wind Load	NAV
2. Details of antenna installed For DD2	Same antenna for DD1 and DD news
2.1 Power handling capacity	2X40 kW
2.2 Dead weight of antenna	NAV
2.3 Wind Load	NAV
3. Details of antenna installed for regional channel	Same antenna for DD1, DD news & DD Kashir

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3.1 Power handling capacity	2X40 kW
3.2 Dead weight of antenna	NAV
3.3 Wind Load	NAV
5. Details of antenna installed for AIR FM channel	Not installed
5.1 Power handling capacity	Not Applicable
5.2 Dead weight of antenna	Not Applicable
5.3 Wind Load	Not Applicable
6. Details of antenna installed for PVT FM channel	Not installed
6.1 Power handling capacity	Not Applicable
6.2 Dead weight of antenna	Not Applicable
6.3 Wind Load	Not Applicable
7. Details of antenna installed for telecommunication	Not installed
7.1 Power handling capacity	Not Applicable
7.2 Dead weight of antenna	Not Applicable
7.3 Wind Load	Not Applicable
8. Details installed antenna which are not covered in above types	Not Applicable
9. Detailed drawing showing tower apertures with all installed antenna at their exact locations.	Not Applicable
C-Feeder cables installed on the Tower including AIR FM Cable/Pvt FM cable	
1. Details of RF feeder cables (TV)	DD (Dielectric Make)
1.1 Number of cables	2
1.2 Size(diameter)	5"
1.3 Length in meter	155
1.4 Wt of cable per meter	NAV
2. Details of RF feeder cables (AIR & Pvt FM)	Not applicable
2.1 Number of cables	Not applicable
2.2 Size(diameter)	Not applicable
2.3 Length in meter	Not applicable
2.4 Wt of cable per meter	Not applicable
3. Size of horizontal and vertical cable tray.	
D- Drawing of Tower showing location of various antennae with details of height from ground.	

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Revised Annexure- VI(D)

Name of Station -

Ahmedabad

Name of Item	REMARKS
A-Tower	
1. Type of Tower whether all steel or RCC-cum Steel	150 mtrs RCC cum steel , Year of erection - 1985
2. Copy of all available installation/technical drawing of tower.	NAV
3. Longitude and latitude at the base of tower	long. 72° ,52',29" . E. Lat .23° , 02' 50" N
4. Height of tower excluding top mount antenna if any	150 m(104M RCC+ 46M STEEL)
5. Base dimension of tower in mm.	11450 mm DIA
6. Details of Occupied aperture of tower with present antennae.	
6.1 Band 1	NAV
6.2 Band 2	Pvt FM
6.3 Band 3	VHF TV ANT
6.4 Band 4&5	--
7. Details of Spare aperture	Top of the tower
8. Position of vertical cable rack and climbing ladder whether it is centre position, corner position or at face of the tower.	Centre position for DD Inside tower North face-FM
9. Whether space is available to accommodate 5" dia RF feeder cable on existing horizontal and vertical RF cable racks.(Min.space required is 7" to 8")	Not available
10. Cross section details (in mm) of tower top.	900mm X 900mm
11. Distance of Tower (in meter) from existing DD1 Transmitter hall/Building.	6.70 m
B-Antenna system	
1. Details of antenna for DD National	Katherin
1.1 Power handling capacity	20 kW
1.2 Dead weight of antenna	1650 kg
1.3 Wind Load	29 KN at 160 KMPH
2. Details of antenna installed For DD2	Same DD 1 antenna is used for DD2
2.1 Power handling capacity	20 kW
2.2 Dead weight of antenna	1650 kg
2.3 Wind Load	29 KN at 160 KMPH
3. Details of antenna installed for regional channel	NIL

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3.1 Power handling capacity	Not Applicable
3.2 Dead weight of antenna	Not Applicable
3.3 Wind Load	Not Applicable
5. Details of antenna installed for AIR FM channel	Common antenna for AIR & Pvt. FM
5.1 Power handling capacity	As given below
5.2 Dead weight of antenna	As given below
5.3 Wind Load	As given below
6. Details of antenna installed for PVT FM channel	SWR model FMP 20 / 4-4-4-4 Panel Antenna
6.1 Power handling capacity	180 kW
6.2 Dead weight of antenna	2910 Kg
6.3 Wind Load	4481Kg
7. Details of antenna installed for telecommunication	Not installed
7.1 Power handling capacity	Not Applicable
7.2 Dead weight of antenna	Not Applicable
7.3 Wind Load	Not Applicable
8. Details installed antenna which are not covered in above types	NIL
9. Detailed drawing showing tower apertures with all installed antenna at their exact locations.	NAV
C-Feeder cables installed on the Tower including AIR FM Cable/Pvt FM cable	
1. Details of RF feeder cables (TV)	DD1/DD News
1.1 Number of cables	2
1.2 Size(diameter)	3 1/8"
1.3 Length in meter	180 m
1.4 Wt of cable per meter	
2. Details of RF feeder cables (AIR & Pvt FM)	Not installed
2.1 Number of cables	Not Applicable
2.2 Size(diameter)	Not Applicable
2.3 Length in meter	Not Applicable
2.4 Wt of cable per meter	Not installed
3. Size of horizontal and vertical cable tray.	Hor. cable tray -600mm, Ver. cable tray -900mm
D- Drawing of Tower showing location of various antennae with details of height from ground.	

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Name of Station - Bhopal

Name of Item	REMARKS
A-Tower	
1. Type of Tower whether all steel or RCC-cum Steel	All steel , Year of erection -1984
2. Copy of all available installation/technical drawing of tower.	NAV
3. Longitude and latitude at the base of tower	long. 77°23, 20". E. Lat .23°, 14' 25". N
4. Height of tower excluding top mount antenna if any	110 m
5. Base dimension of tower in mm.	14630 mm x 14630 mm
6. Details of Occupied aperture of tower with present antennae.	
6.1 Band 1	NAV
6.2 Band 2	AIR FM +Pvt FM
6.3 Band 3	VHF TV ANT
6.4 Band 4&5	Not available
7. Details of Spare aperture	Top of the tower
8. Position of vertical cable rack and climbing ladder whether it is centre position, corner position or at face of the tower.	Face of the tower
9. Whether space is available to accommodate 5" dia RF feeder cable on existing horizontal and vertical RF cable racks.(Min.space required is 7" to 8")	No
10. Cross section details (in mm) of tower top.	1200mmx1200mm
11. Distance of Tower (in meter) from existing DD1 Transmitter hall/Building.	12 M
B-Antenna system	
1. Details of antenna for DD National	JAMPRO(JHD-HV4)-6/4(24)
1.1 Power handling capacity	2x20kW
1.2 Dead weight of antenna	1512 kg
1.3 Wind Load	Less than 3000 kg
2. Details of antenna installed For DD2	Same antenna used for DD 1
2.1 Power handling capacity	2x20kW
2.2 Dead weight of antenna	1512 kg
2.3 Wind Load	Less than 3000 kg
3. Details of antenna installed for regional channel	NIL
3.1 Power handling capacity	

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3.2 Dead weight of antenna	
3.3 Wind Load	
5. Details of antenna installed for AIR FM channel	Common antenna for AIR & Pvt. FM
5.1 Power handling capacity	As given below
5.2 Dead weight of antenna	As given below
5.3 Wind Load	As given below
6. Details of antenna installed for PVT FM channel	FMP 20 / 4-4-4-4 Panel Antenna
6.1 Power handling capacity	120 kW
6.2 Dead weight of antenna	2910 Kg
6.3 Wind Load	4481Kg
7. Details of antenna installed for telecommunication	AIR STL on 2 nd platform
7.1 Power handling capacity	NAV
7.2 Dead weight of antenna	NAV
7.3 Wind Load	NAV
8. Details installed antenna which are not covered in above types	BSNL GSM Antenna at 30m.
9. Detailed drawing showing tower apertures with all installed antenna at their exact locations.	NAV
C-Feeder cables installed on the Tower including AIR FM Cable/Pvt FM cable	
1. Details of RF feeder cables (TV)	DD1/DD News (RFS Make Heliflex HCA 318-50)
1.1 Number of cables	2
1.2 Size(diameter)	3 1/8"
1.3 Length in meter	150
1.4 Wt of cable per meter	
2. Details of RF feeder cables (AIR & Pvt FM)	Andrew make, HJ9-50
2.1 Number of cables	2
2.2 Size(diameter)	5"
2.3 Length in meter	130 m
2.4 Wt of cable per meter	4.9 Kg
3. Size of horizontal and vertical cable tray.	Vertical Width 1.5 m ,Horizontal Rack width 0.75 m
D- Drawing of Tower showing location of various antennae with details of height from ground.	Enclosed

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Revised Annexure-VI(F)

Name of Station - Raipur

Name of Item	REMARKS
A-Tower	
1. Type of Tower whether all steel or RCC-cum Steel	RCC cum steel , Year of erection -1990
2. Copy of all available installation/technical drawing of tower.	NAV
3. Longitude and latitude at the base of tower	long. 81.67 deg. E. Lat. 21.25 Deg. N
4. Height of tower excluding top mount antenna if any	150 m(105M RCC+ 45M STEEL)
5. Base dimension of tower in mm.	12500mm DIA
6. Details of Occupied aperture of tower with present antennae.	
6.1 Band 1	Not Available
6.2 Band 2	VHF TV ANT for DD1 and DD news
6.3 Band 3	Pvt FM
6.4 Band 4&5	Top is free
7. Details of Spare aperture	Top is free
8. Position of vertical cable rack and climbing ladder whether it is centre position, corner position or at face of the tower.	Centre position for DD Centre position for -FM
9. Whether space is available to accommodate 5" dia RF feeder cable on existing horizontal and vertical RF cable racks.(Min.space required is 7" to 8")	Not Available
10. Cross section details (in mm) of tower top.	1000mmX1000mm
11. Distance of Tower (in meter) from existing DD1 Transmitter hall/Building.	30 M
B-Antenna system	
1. Details of antenna for DD National	Jampro antenna Inc.JHD-HV4-6/4(24)
1.1 Power handling capacity	40 kW
1.2 Dead weight of antenna	1402Kg
1.3 Wind Load	2986Kg
2. Details of antenna installed For DD2	Same DD1 antenna is used for DD2
2.1 Power handling capacity	40 kW
2.2 Dead weight of antenna	1402Kg
2.3 Wind Load	2986Kg
3. Details of antenna installed for regional channel	NIL

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3.1 Power handling capacity	Not Applicable
3.2 Dead weight of antenna	Not Applicable
3.3 Wind Load	Not Applicable
5. Details of antenna installed for AIR FM channel	Not installed
5.1 Power handling capacity	Not Applicable
5.2 Dead weight of antenna	Not Applicable
5.3 Wind Load	Not Applicable
6. Details of antenna installed for PVT FM channel	Make Model -Jampro JADP-4/4(16)
6.1 Power handling capacity	60kW
6.2 Dead weight of antenna	1785Kg
6.3 Wind Load	2765Kg
7. Details of antenna installed for telecommunication	NIL
7.1 Power handling capacity	Not Applicable
7.2 Dead weight of antenna	Not Applicable
7.3 Wind Load	Not Applicable
8. Details installed antenna which are not covered in above types	4 No. STL antennae for CTI Pvt FM at RCC Platform
9. Detailed drawing showing tower apertures with all installed antenna at their exact locations.	NAV
C-Feeder cables installed on the Tower including AIR FM Cable/Pvt FM cable	
1. Details of RF feeder cables (TV)	DDI(Andrew hellix) RG322/UHJ8-50B
1.1 Number of cables	2 +1
1.2 Size(diameter)	3-1/8"
1.3 Length in meter	185
1.4 Wt of cable per meter	1.5Kg
2. Details of RF feeder cables (AIR & Pvt FM)	Andrew make, HJ8-50B
2.1 Number of cables	2
2.2 Size (diameter)	3"
2.3 Length in meter	165
2.4 Wt of cable per meter	2.6 Kg
3. Size of horizontal and vertical cable tray	
D- Drawing of Tower showing location of various antennae with details of height from ground.	NAV

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Name of Station - Indore

Name of Item	REMARKS
A-Tower	
1. Type of Tower whether all steel or RCC-cum Steel	All steel, 150 m, Year of erection -1985
2. Copy of all available installation/technical drawing of tower.	NAV
3. Longitude and latitude at the base of tower	Long. 75°52',48". E. Lat .22°, 42' 02" N
4. Height of tower excluding top mount antenna if any	150 m
5. Base dimension of tower in mm.	27100mm x 27100mm
6. Details of Occupied aperture of tower with present antennae.	
6.1 Band 1	NAV
6.2 Band 2	Pvt FM RFS MAKE VHF Antenna
6.3 Band 3	VHF TV ANT for DD1 and DD news
6.4 Band 4&5	Top unused
7. Details of Spare aperture	Top is available
8. Position of vertical cable rack and climbing ladder whether it is centre position, corner position or at face of the tower.	At face of Tower
9. Whether space is available to accommodate 5" dia RF feeder cable on existing horizontal and vertical RF cable racks.(Min.space required is 7" to 8")	Not available
10. Cross section details (in mm) of tower top.	1200mm x 1200mm
11. Distance of Tower (in meter) from existing DD1 Transmitter hall/Building.	45M
B-Antenna system	
1. Details of antenna for DD National	JAMPRO Make Model JHD-HV4-6/4(24)
1.1 Power handling capacity	2x20 kW
1.2 Dead weight of antenna	3336lbs/1512 kg
1.3 Wind Load	Less than 3000Kg at 160 Kmph
2. Details of antenna installed For DD2	Same DD1 antenna is used for DD2
2.1 Power handling capacity	2x20 kW
2.2 Dead weight of antenna	3336lbs/1512 kg
2.3 Wind Load	Less than 3000Kg at 160 Kmph
3. Details of antenna installed for regional channel	NIL

अर्चना गुप्ता

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3.1 Power handling capacity	
3.2 Dead weight of antenna	
3.3 Wind Load	
5. Details of antenna installed for AIR FM channel	Common antenna for AIR & Pvt. FM
5.1 Power handling capacity	As given below
5.2 Dead weight of antenna	As given below
5.3 Wind Load	As given below
6. Details of antenna installed for PVT FM channel	RFS make, 904CPX-16D
6.1 Power handling capacity	80 kW
6.2 Dead weight of antenna	2810 Kg
6.3 Wind Load	46KN@50m/sec
7. Details of antenna installed for telecommunication	STL AIR Link-Receive-M/W Dish -1No RT 43-Yagi Uda Antenna-1 No
7.1 Power handling capacity	NAV
7.2 Dead weight of antenna	NAV
7.3 Wind Load	NAV
8. Details installed antenna which are not covered in above types	NIL
9. Detailed drawing showing tower apertures with all installed antenna at their exact locations.	NAV
C-Feeder cables installed on the Tower including AIR FM Cable/Pvt FM cable	
1. Details of RF feeder cables (TV)	DD1/News (Andrew)
1.1 Number of cables	2
1.2 Size(diameter)	3-1/8"
1.3 Length in meter	200
1.4 Wt of cable per meter	
2. Details of RF feeder cables (AIR & Pvt FM)	RFS make, HCA318-50
2.1 Number of cables	2 Nos
2.2 Size(diameter)	3-1/8"
2.3 Length in meter	150
2.4 Wt of cable per meter	3.3 Kg
3. Size of horizontal and vertical cable tray.	Vertical width-1.4 m,Hori. width-1.25m
D- Drawing of Tower showing location of various antennae with details of height from ground.	NAV

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5. (10/10/10)

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Name of Station - Aurangabad

Name of Item	REMARKS
A-Tower	
1. Type of Tower whether all steel or RCC-cum Steel	RCC Cum Steel, Year of erection -1991
2. Copy of all available installation/technical drawing of tower.	NA
3. Longitude and latitude at the base of tower	long. 75°, 11', 8.44". E. Lat .20°, 05' 30.16". N
4. Height of tower excluding top mount antenna if any	150 m (106.5 m RCC+43.5m steel)
5. Base dimension of tower in mm.	40 m Circumference
6. Details of Occupied aperture of tower with present antennae.	
6.1 Band 1	No Band 1 aperture
6.2 Band 2	Band 2 is free
6.3 Band 3	VHF TV ANT for DD1 and DD news
6.4 Band 4&5	Top is free
7. Details of Spare aperture	
8. Position of vertical cable rack and climbing ladder whether it is centre position, corner position or at face of the tower.	At Centre of Tower
9. Whether space is available to accommodate 5" Dia RF feeder cable on existing horizontal and vertical RF cable racks.(Min.space required is 7" to 8")	Not available
10. Cross section details (in mm) of tower top.	1200mm x 1200mm
11. Distance of Tower (in meter) from existing DD1 Transmitter hall/Building.	17m
B-Antenna system	
1. Details of antenna for DD National	Kathrein.type 75910020
1.1 Power handling capacity	2x20 kW
1.2 Dead weight of antenna	1650 kg without mounting steel work
1.3 Wind Load	29 KN at 160 km/h wind velocity
2. Details of antenna installed For DD2	Same DD1 antenna is used for DD2 too.
2.1 Power handling capacity	2x20 kW on entire antenna
2.2 Dead weight of antenna	1650 kg without mounting steel work
2.3 Wind Load	29 KN at 160 km/h wind velocity
3. Details of antenna installed for regional channel	NIL
3.1 Power handling capacity	Not Applicable

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3.2 Dead weight of antenna	Not Applicable
3.3 Wind Load	Not Applicable
5. Details of antenna installed for AIR FM channel	Not installed
5.1 Power handling capacity	Not Applicable
5.2 Dead weight of antenna	Not Applicable
5.3 Wind Load	Not Applicable
6. Details of antenna installed for PVT FM channel	Not installed
6.1 Power handling capacity	Not Applicable
6.2 Dead weight of antenna	Not Applicable
6.3 Wind Load	Not Applicable
7. Details of antenna installed for telecommunication	Not installed
7.1 Power handling capacity	Not Applicable
7.2 Dead weight of antenna	Not Applicable
7.3 Wind Load	Not Applicable
8. Details installed antenna which are not covered in above types	NIL
9. Detailed drawing showing tower apertures with all installed antenna at their exact locations.	NAV
C-Feeder cables installed on the Tower including AIR FM Cable/Pvt FM cable	
1. Details of RF feeder cables (TV)	DD National and DD News
1.1 Number of cables	2
1.2 Size(diameter)	3 1/8" Andrew
1.3 Length in meter	185 m each
1.4 Wt of cable per meter	
2. Details of RF feeder cables (AIR & Pvt FM)	Not applicable
2.1 Number of cables	Not applicable
2.2 Size(diameter)	Not applicable
2.3 Length in meter	Not applicable
2.4 Wt of cable per meter	Not applicable
3. Size of horizontal and vertical cable tray.	Horizontal rack 24", Vertical rack-40"
D- Drawing of Tower showing location of various antennae with details of height from ground.	NAV

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50 (10/10/10)

Name of Station - Patna

Name of Item	REMARKS
A-Tower	
1. Type of Tower whether all steel or RCC-cum Steel	All Steel , Year of erection -1985
2. Copy of all available installation/technical drawing of tower.	NA
3. Longitude and latitude at the base of tower	long. 85.28 deg. E. Lat.25.40 Deg. N
4. Height of tower excluding top mount antenna if any	150 m
5. Base dimension of tower in mm.	
6. Details of Occupied aperture of tower with present antennae.	
6.1 Band 1	Private FM Antenna
6.2 Band 2	AIR FM Antenna
6.3 Band 3	DD I & DD II Broad Band Antenna
6.4 Band 4&5	Band -IV slot is available.
7. Details of Spare aperture	
8. Position of vertical cable rack and climbing ladder whether it is centre position, corner position or at face of the tower.	
9. Whether space is available to accommodate 5" dia RF feeder cable on existing horizontal and vertical RF cable racks.(Min.space required is 7" to 8")	Separate cable tray is necessary for accommodating new feeder cable
10. Cross section details (in mm) of tower top.	
11. Distance of Tower (in meter) from existing DD1 Transmitter hall/Building.	16 m
B-Antenna system	
1. Details of antenna for DD National	Dielectric THP 0-10-2 SP
1.1 Power handling capacity	2 x 10 kW
1.2 Dead weight of antenna	NA
1.3 Wind Load	NA
2. Details of antenna installed For DD2	Dielectric THP 0-10-2 SP
2.1 Power handling capacity	2 x 10 kW
2.2 Dead weight of antenna	NA
2.3 Wind Load	NA
3. Details of antenna installed for regional channel	

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3w

3.1 Power handling capacity	
3.2 Dead weight of antenna	
3.3 Wind Load	
5. Details of antenna installed for AIR FM channel	Common antenna for AIR & Pvt. FM
5.1 Power handling capacity	As given below
5.2 Dead weight of antenna	As given below
5.3 Wind Load	As given below
6. Details of antenna installed for PVT FM channel	RFS make,828HP-4 (4 Bay side mounted Antenna)
6.1 Power handling capacity	20 Kw
6.2 Dead weight of antenna	150 Kg
6.3 Wind Load	1.5 KN@50m/sec
7. Details of antenna installed for telecommunication	STL antenna for Pvt. FM
7.1 Power handling capacity	NAV
7.2 Dead weight of antenna	NAV
7.3 Wind Load	NAV
8. Details installed antenna which are not covered in above types	NIL
9. Detailed drawing showing tower apertures with all installed antenna at their exact locations.	NAV
C-Feeder cables installed on the Tower including AIR FM Cable/Pvt FM cable	
1. Details of RF feeder cables (TV)	For both Channels
1.1 Number of cables	2
1.2 Size(diameter)	3 1/8"
1.3 Length in meter	180 m
1.4 Wt of cable per meter	
2. Details of RF feeder cables (AIR & Pvt FM)	RFS HCA 158-50
2.1 Number of cables	1 no
2.2 Size(diameter)	1-5/8"
2.3 Length in meter	150 m
2.4 Wt of cable per meter	3.3 Kg
3. Size of horizontal and vertical cable tray.	
D- Drawing of Tower showing location of various antennae with details of height from ground.	

3w

6. 1.2.2010 (1570)

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Revised Annexure-VI(J)

Name of Station -	Ranchi
Name of Item	REMARKS
A-Tower	
1. Type of Tower whether all steel or RCC-cum Steel	All Steel , Year of erection -1984
2. Copy of all available installation/technical drawing of tower.	NA
3. Longitude and latitude at the base of tower	long. 85° 18' 36". E. Lat.23° 22' 59" N
4. Height of tower excluding top mount antenna if any	150 m
5. Base dimension of tower in mm.	32000mm x 32000mm
6. Details of Occupied aperture of tower with present antennae.	
6.1 Band 1	Unoccupied
6.2 Band 2	Occupied by AIR FM and pvt FM Antennae
6.3 Band 3	Occupied by DD national Antenna
6.4 Band 4&5	Occupied by DD News Antenna
7. Details of Spare aperture	Band I (Cross section 3800mmX3800mm)
8. Position of vertical cable rack and climbing ladder whether it is centre position, corner position or at face of the tower.	Both are at face of the tower
9. Whether space is available to accommodate 5" dia RF feeder cable on existing horizontal and vertical RF cable racks.(Min.space required is 7" to 8")	Space is available
10. Cross section details (in mm) of tower top.	1200mmX1200mm
11. Distance of Tower (in meter) from existing DD1 Transmitter hall/Building.	11 m
B-Antenna system	
1. Details of antenna for DD National	BEL omni directional
1.1 Power handling capacity	20 kW
1.2 Dead weight of antenna	NA
1.3 Wind Load	NA
2. Details of antenna installed For DD2	Band III , RFS omni directional on top
2.1 Power handling capacity	1 kW
2.2 Dead weight of antenna	
2.3 Wind Load	
3. Details of antenna installed for regional channel	
3.1 Power handling capacity	
3.2 Dead weight of antenna	

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अर्चना गुप्ता

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3.3 Wind Load	
5. Details of antenna installed for AIR FM channel	Common antenna for AIR & Pvt. FM
5.1 Power handling capacity	As given below
5.2 Dead weight of antenna	As given below
5.3 Wind Load	As given below
6. Details of antenna installed for PVT FM channel	RFS 904 CPX-16D
6.1 Power handling capacity	80kW
6.2 Dead weight of antenna	2810 Kg
6.3 Wind Load	46KN@50m/sec
7. Details of antenna installed for telecommunication	Not installed
7.1 Power handling capacity	Not Applicable
7.2 Dead weight of antenna	Not Applicable
7.3 Wind Load	Not Applicable
8. Details installed antenna which are not covered in above types	NIL
9. Detailed drawing showing tower apertures with all installed antenna at their exact locations.	NAV
C-Feeder cables installed on the Tower including AIR FM Cable/Pvt FM cable	
1. Details of RF feeder cables (TV)	DD 1 DD2
1.1 Number of cables	2 1
1.2 Size(diameter)	3" 1 5/8"
1.3 Length in meter	175 m 180m
1.4 Wt of cable per meter	
2. Details of RF feeder cables (AIR & Pvt FM)	RFS make, HCA318-50
2.1 Number of cables	2 Nos.
2.2 Size(diameter)	3-1/8"
2.3 Length in meter	170m
2.4 Wt of cable per meter	3.3 Kg
3. Size of horizontal and vertical cable tray.	
D- Drawing of Tower showing location of various antennae with details of height from ground.	

Name of Station - Guwahati

Name of Item	REMARKS
A-Tower	
1. Type of Tower whether all steel or RCC-cum Steel	RCC(105m)+Stee(45m), Year of erection -1985
2. Copy of all available installation/technical drawing of tower.	NA
3. Longitude and latitude at the base of tower	long. 91.45 deg. E. Lat.26.09 Deg. N
4. Height of tower excluding top mount antenna if any	150 m
5. Base dimension of tower in mm.	12m
6. Details of Occupied aperture of tower with present antennae.	
6.1 Band 1	
6.2 Band 2	
6.3 Band 3	DD I & DD II Broad Band Antenna
6.4 Band 4&5	
7. Details of Spare aperture	Band IV(Top)
8. Position of vertical cable rack and climbing ladder whether it is centre position, corner position or at face of the tower.	Centre position
9. Whether space is available to accommodate 5" dia RF feeder cable on existing horizontal and vertical RF cable racks.(Min.space required is 7" to 8")	Separate cable tray is necessary for accommodating new feeder cable
10. Cross section details (in mm) of tower top.	900mm x 900mm
11. Distance of Tower (in meter) from existing DD1 Transmitter hall/Building.	32 m
B-Antenna system	
1. Details of antenna for DD National	
1.1 Power handling capacity	Dielectric THP-0-10-2
1.2 Dead weight of antenna	2 x 10 kW
1.3 Wind Load	NA
2. Details of antenna installed For DD2	
2.1 Power handling capacity	Same antenna is used for DD1 and DD News
2.2 Dead weight of antenna	2 x 10 kW
2.3 Wind Load	NA
3. Details of antenna installed for regional channel	
3.1 Power handling capacity	
3.2 Dead weight of antenna	

3.3 Wind Load	
5. Details of antenna installed for AIR FM channel	
5.1 Power handling capacity	
5.2 Dead weight of antenna	
5.3 Wind Load	
6. Details of antenna installed for PVT FM channel	SWR make, FMP 20 / 4-4-4-4 Panel Antenna
6.1 Power handling capacity	100 Kw
6.2 Dead weight of antenna	2910 Kg
6.3 Wind Load	4481Kg
7. Details of antenna installed for telecommunication	
7.1 Power handling capacity	
7.2 Dead weight of antenna	
7.3 Wind Load	
8. Details installed antenna which are not covered in above types	
9. Detailed drawing showing tower apertures with all installed antenna at their exact locations.	
C-Feeder cables installed on the Tower including AIR FM Cable/Pvt FM cable	
1. Details of RF feeder cables (TV)	For both Ch Spare
1.1 Number of cables	2 1
1.2 Size(diameter)	3 1/8" 1 5/8"
1.3 Length in meter	155 155
1.4 Wt of cable per meter	
2. Details of RF feeder cables (AIR & Pvt FM)	AIR Pvt FM Andrews
2.1 Number of cables	1 2
2.2 Size(diameter)	1 5/8" 5"
2.3 Length in meter	155 155
2.4 Wt of cable per meter	
3. Size of horizontal and vertical cable tray.	NAV
D- Drawing of Tower showing location of various antennae with details of height from ground.	NAV

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अर्चना गुप्ता
एच निदेशक (अभि)

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Revised Annexure-VI(L)

Name of Station - Cuttack

Name of Item	REMARKS
A-Tower	
1. Type of Tower whether all steel or RCC-cum Steel	All Steel , Year of erection -1985
2. Copy of available installation/technical drawing of tower.	NA
3. Longitude and latitude at the base of tower	long. 85° 51' 07". E. Lat.20° 29' 06" N
4. Height of tower excluding top mount antenna if any	150 m
5. Base dimension of tower in mm.	30000mmX30000mm
6. Details of Occupied aperture of tower with present antennae	
6.1 Band 1	Unoccupied
6.2 Band 2	Occupied by AIR FM and pvt FM Antennae
6.3 Band 3	Occupied by DD national Antenna
6.4 Band 4&5	Vacant
7. Details of Spare aperture	Top(2300mmX2300mm)
8. Position of vertical cable rack and climbing ladder whether it is centre position, corner position or at face of the tower.	Both are at face of the tower
9. Whether space is available to accommodate 5" dia RF feeder cable on existing horizontal and vertical RF cable racks.(Min.space required is 7" to 8")	Space is available
10. Cross section details (in mm) of tower top.	Top(2300mmX2300mm)
11. Distance of Tower (in meter) from existing DD1 Transmitter hall/Building.	52m
B-Antenna system	
1. Details of antenna for DD National	Katherin 75910942
1.1 Power handling capacity	2 x 20 kW
1.2 Dead weight of antenna	NAV
1.3 Wind Load	NAV
2. Details of antenna installed For DD2	Same DD National antenna is used
2.1 Power handling capacity	
2.2 Dead weight of antenna	
2.3 Wind Load	
3. Details of antenna installed for regional channel	

35m

अर्चना गुप्ता
उच्च निदेशक (अभि)

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3.1 Power handling capacity	
3.2 Dead weight of antenna	
3.3 Wind Load	
5. Details of antenna installed for AIR FM channel	Common antenna for AIR & Pvt. FM
5.1 Power handling capacity	As given below
5.2 Dead weight of antenna	As given below
5.3 Wind Load	As given below
6. Details of antenna installed for PVT FM channel	RFS 904 CPX-16D
6.1 Power handling capacity	80kW
6.2 Dead weight of antenna	2810 Kg
6.3 Wind Load	46KN@50m/sec
7. Details of antenna installed for telecommunication	STL Antenna for FM
7.1 Power handling capacity	NAV
7.2 Dead weight of antenna	NAV
7.3 Wind Load	NAV
8. Details installed antenna which are not covered in above types	
9. Detailed drawing showing tower apertures with all installed antenna at their exact locations.	
C-Feeder cables installed on the Tower including AIR FM Cable/Pvt FM cable	
1. Details of RF feeder cables (TV)	DD 1/DD News
1.1 Number of cables	2
1.2 Size(diameter)	3 1/8"
1.3 Length in meter	185 m each
1.4 Wt of cable per meter	
2. Details of RF feeder cables (AIR & Pvt FM)	RFS make, HCA318-50
2.1 Number of cables	2 Nos.
2.2 Size(diameter)	3-1/8"
2.3 Length in meter	170m
2.4 Wt of cable per meter	3.3 Kg
3. Size of horizontal and vertical cable tray.	NAV
D- Drawing of Tower showing location of various antennae with details of height from ground.	NAV
ANY OTHER RELEVANT INFORMATION	



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अर्चना गुप्ता
इय निदेशक (आमि)

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Name of Station - Bangalore

Name of Item	REMARKS
A-Tower	
1. Type of Tower whether all steel or RCC-cum Steel	RCC 100m+ Steel 50m, Year of erection -1985
2. Copy of available installation/technical drawing of tower.	NA
3. Longitude and latitude at the base of tower	long. 77 ⁰ ,35',35". E. Lat .13 ⁰ , 00' 30". N
4. Height of tower excluding top mount antenna if any	150 m
5. Base dimension of tower in mm.	10000mmX10000mm
6. Details of Occupied aperture of tower with present antennae	
6.1 Band 1	Not available
6.2 Band 2	FM CTI Antenna
6.3 Band 3	DD I Broad Band Antenna
6.4 Band 4&5	DD News at top
7. Details of Spare aperture	
8. Position of vertical cable rack and climbing ladder whether it is centre position, corner position or at face of the tower.	Centre position
9. Whether space is available to accommodate 5" dia RF feeder cable on existing horizontal and vertical RF cable racks.(Min.space required is 7" to 8")	Some modification is necessary for accommodating new feeder cable
10. Cross section details (in mm) of tower top.	1200X1200
11. Distance of Tower (in meter) from existing DD1 Transmitter hall/Building.	7.2 m
B-Antenna system	
1. Details of antenna for DD National	BEL TR 24 C3(4X24)
1.1 Power handling capacity	20 kW
1.2 Dead weight of antenna	320 Kg without supporting hardware
1.3 Wind Load	
2. Details of antenna installed For DD2	Webel V type (Top Mounted)
2.1 Power handling capacity	1 kW
2.2 Dead weight of antenna	135 Kg
2.3 Wind Load	
3. Details of antenna installed for regional channel	NIL

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3000 g/cm
3000 (100)

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3.1 Power handling capacity	
3.2 Dead weight of antenna	
3.3 Wind Load	
5. Details of antenna installed for AIR FM channel	Not installed
5.1 Power handling capacity	Not Applicable
5.2 Dead weight of antenna	Not Applicable
5.3 Wind Load	Not Applicable
6. Details of antenna installed for PVT FM channel	Kathrein make, 24 (6 Bay x 4 sides) FM Panel K 53 32 187
6.1 Power handling capacity	180- Kw
6.2 Dead weight of antenna	2300kg
6.3 Wind Load	41.3KN@50m/sec
7. Details of antenna installed for telecommunication	STL Antenna for FM
7.1 Power handling capacity	NAV
7.2 Dead weight of antenna	NAV
7.3 Wind Load	NAV
8. Details installed antenna which are not covered in above types	
9. Detailed drawing showing tower apertures with all installed antenna at their exact locations.	
C-Feeder cables installed on the Tower including AIR FM Cable/Pvt FM cable	
1. Details of RF feeder cables (TV)	DD 1 DD News
1.1 Number of cables	2 2
1.2 Size(diameter)	3 1/8" 15/8"
1.3 Length in meter	135 150
1.4 Wt of cable per meter	
2. Details of RF feeder cables (AIR & Pvt FM)	AIR RFS- HCA 500-50 J
2.1 Number of cables	1 2 Nos.
2.2 Size(diameter)	7/8" 5"
2.3 Length in meter	80m 160 m
2.4 Wt of cable per meter	8.65 Kg
3. Size of horizontal and vertical cable tray.	
D- Drawing of Tower showing location of various antennae with details of height from ground.	
ANY OTHER RELEVANT INFORMATION	

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Name of Station - Hyderabad

Name of Item	REMARKS
A-Tower	
1. Type of Tower whether all steel or RCC-cum Steel	All steel self supported, Year of erection -1977
2. Copy of available installation/technical drawing of tower.	NA
3. Longitude and latitude at the base of tower	long. 78.33 deg. E. Lat.17.50 Deg. N
4. Height of tower excluding top mount antenna if any	115 mts
5. Base dimension of tower in mm.	31mX31m
6. Details of Occupied aperture of tower with present antennae	
6.1 Band 1	Between 95 m and 113 m
6.2 Band 2	
6.3 Band 3	DD I Broad Band Antenna,
6.4 Band 4&5	DD News at top
7. Details of Spare aperture	No
8. Position of vertical cable rack and climbing ladder whether it is centre position, corner position or at face of the tower.	Centre position
9. Whether space is available to accommodate 5" dia RF feeder cable on existing horizontal and vertical RF cable racks.(Min.space required is 7" to 8")	Yes
10. Cross section details (in mm) of tower top.	4600 x 4600
11. Distance of Tower (in meter) from existing DD1 Transmitter hall/Building.	30 m
B-Antenna system	
1. Details of antenna for DD National	BELTR801
1.1 Power handling capacity	10 kW
1.2 Dead weight of antenna	400 Kg
1.3 Wind Load	60 m/sec
2. Details of antenna installed For DD2	RFS
2.1 Power handling capacity	1 kW
2.2 Dead weight of antenna	
2.3 Wind Load	
3. Details of antenna installed for regional channel	

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 30 डिसेंबर (2010)

3.1 Power handling capacity	
3.2 Dead weight of antenna	
3.3 Wind Load	
5. Details of antenna installed for AIR FM channel	Not installed
5.1 Power handling capacity	Not Applicable
5.2 Dead weight of antenna	Not Applicable
5.3 Wind Load	Not Applicable
6. Details of antenna installed for PVT FM channel	Not installed
6.1 Power handling capacity	Not Applicable
6.2 Dead weight of antenna	Not Applicable
6.3 Wind Load	Not Applicable
7. Details of antenna installed for telecommunication	STL antennae for FM
7.1 Power handling capacity	NAV
7.2 Dead weight of antenna	NAV
7.3 Wind Load	NAV
8. Details installed antenna which are not covered in above types	NIL
9. Detailed drawing showing tower apertures with all installed antenna at their exact locations.	
C-Feeder cables installed on the Tower including AIR FM Cable/Pvt FM cable	
1. Details of RF feeder cables (TV)	DD 1 DD News
1.1 Number of cables	2 1
1.2 Size(diameter)	3 1/8" 1 5/8"
1.3 Length in meter	150 m 200m
1.4 Wt of cable per meter	
2. Details of RF feeder cables (AIR & Pvt FM)	Not applicable. Antenna installed on New Tower of Min. of I &B
2.1 Number of cables	Not applicable
2.2 Size(diameter)	Not applicable
2.3 Length in meter	Not applicable
2.4 Wt of cable per meter	Not applicable
3. Size of horizontal and vertical cable tray.	
D- Drawing of Tower showing location of various antennae with details of height from ground.	
ANY OTHER RELEVANT INFORMATION	

3m
 3: 12:30 (10/10)

Name of Station - Trivandrum

Name of Item	REMARKS
A-Tower	
1. Type of Tower whether all steel or RCC-cum Steel	RCC(86m)+Steel(40m), Year of erection -1985
2. Copy of available installation/technical drawing of tower.	NA
3. Longitude and latitude at the base of tower	long. 76 ⁰ ,57',55". E. Lat .08 ⁰ , 33' 16". N
4. Height of tower excluding top mount antenna if any	126 m
5. Base dimension of tower in mm.	11500mm
6. Details of Occupied aperture of tower with present antennae	
6.1 Band 1 -- Shown as DE in Ann-V E	
6.2 Band 2 -- Shown as CD in Ann-V E	FM Antenna
6.3 Band 3 -- Shown as BC in Ann-V E	DD I /DD News Broad Band Antenna
6.4 Band 4&5 -- Shown as AB in Ann-V E	Spare LPT antenna at top
7. Details of Spare aperture	
8. Position of vertical cable rack and climbing ladder whether it is centre position, corner position or at face of the tower.	Centre position
9. Whether space is available to accommodate 5" dia RF feeder cable on existing horizontal and vertical RF cable racks.(Min. space required is 7" to 8")	Available
10. Cross section details (in mm) of tower top.	1200mmX1200mm
11. Distance of Tower (in meter) from existing DDI Transmitter hall/Building.	35m
B-Antenna system	
1. Details of antenna for DD National	DDI & DD2 common antenna Make – Dielectric; Type – THP-C2-9-2 Special ; Channel 174 – 230 MHzS
1.1 Power handling capacity	2X10 kW
1.2 Dead weight of antenna	1551.28 Kg (3420 lbs)
1.3 Wind Load	
2. Details of antenna installed For DD2	Same antenna for DD 1
2.1 Power handling capacity	
2.2 Dead weight of antenna	
2.3 Wind Load	

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3. Details of antenna installed for regional channel	Spare Antenna at the top	
3.1 Power handling capacity	100 W	
3.2 Dead weight of antenna	50 Kg	
3.3 Wind Load		
5. Details of antenna installed for AIR FM channel	Common antenna for AIR & Pvt. FM	
5.1 Power handling capacity	As given below	
5.2 Dead weight of antenna	As given below	
5.3 Wind Load	As given below	
6. Details of antenna installed for PVT FM channel	RFS make, 904CPX-16D	
6.1 Power handling capacity	80 kW	
6.2 Dead weight of antenna	2810 Kg	
6.3 Wind Load	46KN@50m/sec46KN@50m/sec	
7. Details of antenna installed for telecommunication	STL antennae For AIR And Pvt FM(2 No.) at 80m	
7.1 Power handling capacity		
7.2 Dead weight of antenna		
7.3 Wind Load		
8. Details installed antenna which are not covered in above types	Micro wave dish at 40 and 80 m respectively	
9. Detailed drawing showing tower apertures with all installed antenna at their exact locations.		
C-Feeder cables installed on the Tower including AIR FM Cable/Pvt FM cable		
1. Details of RF feeder cables (TV)	DD 1 + DD News	For LPT
1.1 Number of cables	2	1
1.2 Size(diameter)	3 1/8"	1 5/8"
1.3 Length in meter	170	180
1.4 Wt of cable per meter		
2. Details of RF feeder cables (AIR & Pvt FM)	AIR	Pvt FM- RFS- HCA 418-50 J
2.1 Number of cables	2	2
2.2 Size(diameter)	7/8" , 1 5/8"	4 1/8"
2.3 Length in meter	150 Each	140 each
2.4 Wt of cable per meter	5.4 Kg	
3. Size of horizontal and vertical cable tray.	NAV	
D- Drawing of Tower showing location of various antennae with details of height from ground.	NAV	
ANY OTHER RELEVANT INFORMATION		

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List of 15 Locations

S. No.	Location	Office of Superintending Engineer/Station Engineer	Address of HPT Location
1.	Lucknow	Superintending Engineer, DDK, 24 Ashoka Road, Lucknow, UP 226001	HPT Doordarshan, Hardoi Road, Near Dubagga Chauki, Lucknow (U.P.)
2.	Jalandhar	Superintending Engineer, DDK, Bhagawan Mahavir Marg, Jalandhar (Punjab), 144001	HPT Doordarshan, Khurla, Nakodar Road, Jalandhar (Punjab)
3.	Srinagar	Superintending Engineer, DDK, Srinagar-J&K 190001	HPT Doordarshan, Shankaracharya Hills, Srinagar, J & K
4.	Ahmedabad	Superintending Engineer, DDK, Drive-in-Road, Thaltej, Ahmedabad, Gujrat 380054	HPT Doordarshan, Thaltej, Ahmedabad (Gujrat)
5.	Bhopal	Superintending Engineer, DDK, Shyamla Hills, Bhopal-462013 MP	Doordarshan Kendra, Shyamla Hills, Bhopal (M.P.)
6.	Raipur	Station Engineer, Doordarshan Kendra, Shankar Nagar, Raipur (C.G.) 492007	Doordarshan Kendra, Shankar Nagar, Raipur (C.G.)
7.	Indore	Station Engineer, DDK, A.B. Road, Indore, MP, 452001	Doordarshan Kendra, Nawlakha, A.B. Road, Indore (M.P.)
8.	Aurangabad	Station Engineer, HPT Doordarshan, N-12, Manju Hills, TV Centre, Hudco, Aurangabad (Maharashtra) 431003	HPT Doordarshan, N-12, Manju Hills, TV Centre, Hudco, Aurangabad (Maharashtra)
9.	Patna	Superintending Engineer, DDK, Chhaubagh, Fraser Road, Patna-Bihar 800001	Doordarshan Kendra, Chhaubagh, Fraser Road, Patna (Bihar)
10.	Ranchi	Superintending Engineer, Doordarshan Kendra, Ratu Road, Ranchi (Jharkhand) 834001	Doordarshan Kendra, Ratu Road, Ranchi (Jharkhand), 834001
11.	Guwahati	Superintending Engineer, Doordarshan Kendra, R.G. Baruah Road, Guwahati (Assam)-781024	HPT Doordarshan, Narakasur Hills, Phangarh, Guwahati (Assam)
12.	Cuttack	Station Engineer, HPT Doordarshan, Tulsipur, Cuttack (Orissa) 753008	HPT Doordarshan, Tulsipur, Cuttack (Orissa)

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13.	Bangalore	Superintending Engineer, Doordarshan Kendra, , J.C.Nagar, Bangalore (Karnataka)560006	HPT Doordarshan, All India Radio (SPT), New Town, Yelhanka, Bangalore (Karnataka)
14.	Hyderabad	Superintending Engineer, Doordarshan Kendra, Ramnathpur, Hyderabad (A.P.),500013	HPT Doordarshan, Ramnathpur, Hyderabad (A.P.)
15.	Trivandrum	Superintending Engineer, Doordarshan Kendra, Kudappanakkunnu Thiruvananthapuram-695043 (Kerala.)	HPT Doordarshan, Doordarshan Kendra, Kudappanakkunnu Thiruvananthapuram-695043 (Kerala.)
16.	Delhi*	Superintending Engineer, HPT Doordarshan, TV Tower, Pitampura, New Delhi	HPT Doordarshan, TV Tower, Pitampura, New Delhi

* Note: At Delhi only combiner is to be supplied.



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اسماء احمد
(2010)

Subject: Clarification on queries raised in pre-bid meeting held on 15.7.2010.

Ref: Tender No. 1(3)10-11/EI(P)TV for SITC of D.T.T. (DVB-T2) Antenna system, RF feeder cable, Combiner, Dehydrator and strengthening of existing TV Towers

S.No.	DD Spec Para No.	DD Specification Existing Text	Query raised by the Firm	Amendments/Clarifications	Remarks
1.	3.6.1b)	Past Experience...	As a public broadcaster DDK has to accomplish the broadcasting objective as set by Govt. of India. As public money is involved thus in a way to facilitate this we want to make a request that the competition should be restricted between quality suppliers only. This can be achieved through conditions wherein tenderer has to provide a list of the supplies or successful installations for at least for ten years in the globe.	Amendment: 3.6.1b) The OEM of antenna system must have minimum 10 years of experience in the production of TV antennae. Documentary evidences to support this must be provided with the offer.	Amended DD specs Para is to be followed.
2.	3.6.1 c, d and 3.6.3	Past Experience...	Execution within the set dead lines is not possible in practical terms. Also to mobilize 15 teams at each of locations simultaneously is another thing which is difficult to achieve. This is due to the nature of broadcast business and scarcity of requisite expertise in this field. If DDK specify this condition then each of the bidders is going to comply with it. But there will be problems during final implementation due to nature of this job and limited shutdown time. From out perspective DDK can prioritize and fix the schedule accordingly and keep some flexibility in the schedule due to criticality of the job. From out	Amendment: c) The bidder shall have enough manpower as well as machinery and equipment capability of carrying out the work of tower strengthening and other related works on SITC basis simultaneously in four zones, namely North Zone, West Zone, South Zone and East Zone since these projects are time bound. The bidder or the firm engaged by the bidder for tower strengthening work must submit records/documentary evidences of design, supply and erection works of minimum two towers of height not less than 100M carried out during last five years.	Amended DD specs Paras are to be followed.

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			<p>perspective DDK can prioritize and fix the schedule accordingly and keep some flexibility in the schedule due to criticality of the job.</p>	<p>Amendment: 3.6.1.d.1 The schedule of execution of works so as to ensure that the SITC work is completed within 12 months. Zone wise timeline in the form of PERT Chart giving details for each location must be provided with the offer.</p> <p>Amendment: 3.6.1.d.2 Details of deployment of teams in four zones for tower strengthening work must be provided with the offer</p> <p>Amendment: 3.6.3 The total period for completion of the turn key project, i.e., SITC of Antenna, RF cable, Combiner (supply only, at Delhi site), Dehydrator and strengthening of existing TV Towers at all the 15 locations would be twelve months from the date of Acceptance of Tender.</p>	
3.	Annexure II, 1.30	Specifications of RF feeder cable	<p>There is a mention of Schrader Valve in the Dehydrator specs (page 21 of 57). We request you to please clarify this as we never came across any such term in Dehydrator specs.</p>	<p>Amendment: The 4 ½" flange end GAS STOP connector must be fitted with Schrader valve to connect each cable with De-hydrator. The antenna end of the RF feeder cable must be connected with the 4 ½" flange end GAS through connector. In the present tender, the work being SITC, the bidder has to ensure that Schrader valve is fitted between RF feeder cable and dehydrator tubing so that air does not flow in backward direction towards the dehydrator.</p>	Amended DD specs Para is to be followed.

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4.	Annexure VI(A to O)	Information of existing towers	Kindly indicate the Dead weight of each Antenna already mounted on the existing towers at all sites at various heights	Amendment: Additional information has been included in revised Annexure VI (A to O).	Revised Annexures VI (A) to (O) are to be followed.
5.	Annexure VI(A to O)	Information of existing towers	Kindly indicate the Wind Load of each Ant. System at wind speed of say 216 kmph. It may be submitted that ISI code has undergone changes from the time the towers were erected and Antenna hoisted.	Amendment: Additional information has been included in revised Annexure VI (A to O).	Revised Annexures VI (A) to (O) are to be followed.
6.	--	--	Kindly indicate the documents and calculations required to be submitted along with the Tender document at the time of bidding for strengthening of Towers.	Clarification: No change in DD specs.	DD specs Para 3.5, 3.6 and their sub-paras may be referred.
7.	--	--	Kindly ensure that as in the case of Supply it is insisted upon experience clause similarly for strengthening the certificate of designer's firm is attached along with the bid to ensure quality of work.	Amendment: 3.6.1b) The OEM of antenna system must have minimum 10 years of experience in the production of TV antennae. Documentary evidences to support this must be provided with the offer. Amendment: c) The bidder shall have enough manpower as well as machinery and equipment capability of carrying out the work of tower strengthening and other related works on SITC basis simultaneously in four zones, namely North Zone, West Zone, South Zone and East Zone since these projects are time bound. The bidder or the firm	Amended DD specs Paras are to be followed.

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				engaged by the bidder for tower strengthening work must submit records/documentary evidences of design, supply and erection works of minimum two towers of height not less than 100M carried out during last five years.	
8.	3.6.1(a)	Past experience...	We understand that "Bidder/OEM" the term means either of them. Please confirm.	Amendment: The bidder must have the experience of supplying/ installing Broadband UHF top mounted Panel type antenna system at least at two locations. The documentary evidence of executing such work must be attached with the offer. The copy of documentary evidences/ completion certificates from the clients, their addresses, telephone nos. and email addresses must be provided.	Amended DD specs Para is to be followed.
9.	3.6.1(c)	Past experience...	The condition requires that bidder should have manpower and machinery capability for simultaneously working on 15 sites. It was pointed out during pre bid meeting, that such huge capacity for seasonal work of this kind will not be available with a single bidder. We have manpower strength of more than 600 spread across various locations in India. We have executed/ are executing projects with up to 222 sites locations. Depending upon nature of work, timeline and other factors we arrange manpower and machinery. Proving or refuting one's capacity of Manpower and	Amendment: The bidder shall have enough manpower as well as machinery and equipment capability of carrying out the work of tower strengthening and other related works on SITC basis simultaneously in four zones, namely North Zone, West Zone, South Zone and East Zone since these projects are time bound. The bidder or the firm engaged by the bidder for tower strengthening work must submit records/documentary evidences of design, supply and erection works of minimum two towers of height not less than 100M carried out during last five years.	Amended DD specs Para is to be followed.

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Date: 13/10/2010
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			Machinery with accuracy is difficult. Leaving scope for discretion. We request you to change the criterion to simultaneous SITC work at more than 15 sites. Further value of the projects executed could also be keep as a criterion, equaling the present estimated value of the mentioned project.		
10.	3.6.1(c)	Past experience...	Requires bidder to submit records for SITC type of works related with structural engineering. Will Structural Engineering experience of Telecom Tower erection will be acceptable to Doordarshan?	Clarification: Same as above (S.No. 9)	Amended DD specs Para is to be followed.
11.	--	--	Will the strength of consortium partner be acceptable for satisfaction of eligibility criterion for the mentioned Project to Prasar Bharti?	Clarification: Same as above (S.No. 9)	Amended DD specs Paras are to be followed.
12.	3.6.1(d)	Past experience...	Does the requirement of work schedule and details of deployment of the teams means providing these details before bidding? Generally Prasar Bharati asks for the execution details after the award of contract. We request that these details be asked for after award of contract rather than as eligibility criterion.	Amendment: 3.6.1.d.1 The schedule of execution of works so as to ensure that the SITC work is completed within 12 months. Zone wise timeline in the form of PERT Chart giving details for each location must be provided with the offer. Amendment: 3.6.1.d.2 Details of deployment of teams in four zones for tower strengthening work must be provided with the offer.	Amended DD specs Para is to be followed.
13.	--	--	Please provide us the detail drawing of the Tower Structure, Make and Model of all Antennas and RF Cable installed	Amendment: Additional information has been included in revised Annexure VI (A to O).	Revised Annexures VI (A) to

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			at Tower any other load factor etc. to work upon for analysis.		(O) are to be followed.
14.	Annexure VI(A to O)	Information of existing towers	Please provide us the year of erection of the Tower.	Amendment: Additional information has been included in revised Annexure VI (A to O).	Revised Annexures VI (A) to (O) are to be followed.
15.	3.6.2	Delivery Period...	Requires the Delivery Period to be 8 months with nature and size of work as was discussed in pre bid meeting we request it to be extended to 12 months.	Amendment: The total period for completion of the turn key project, i.e., SITC of Antenna, RF cable, Combiner (supply only, at Delhi site), Dehydrator and strengthening of existing TV Towers at all the 15 locations would be twelve months from the date of Acceptance of Tender.	Amended DD specs Para is to be followed.
16.	Annexure VI(A to O)	Information of existing towers	Annexure IV(A) to IV(O) various columns had been left vacant please specify that these are not installed on the Tower or the details of these is not available with Doordarshan. Please provide the details if not filled.	Amendment: Additional information has been included in revised Annexure VI (A to O).	Revised Annexures VI (A) to (O) are to be followed.

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17.			Coverage from currency fluctuations in case of an Indian bidder is an issue which is a cause of concern for every bidder. Solution to this can be considering the exchange rate applicable on the tender opening which will remain applicable till the time of final payment to the executor or supplier	Clarification: As per the clause 6.8(PRICES: FOR DOMESTIC BIDDERS)	
18.			Kindly examine if the bids submitted by each bidder can be evaluated site wise thus economizing on the cost of machinery required at each centre and also ensuring speedy implementation of the project under taken.	Clarification: No change in existing terms & conditions	

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