

**Further clarification to Queries in Tender no. 02/STS/MDN/UHF/2015-16,  
Dated: 13.05.2015**

This has reference to the pre-bid meeting held in the conference Hall of the office of the ADGP, CL&M on 26.05.2015 and clarification issued to the queries on for Supply, Installation and Maintenance of Digital UHF Wireless Equipments vide Tender notification no. 02/STS/MDN/UHF/2015-16, Dated 26.05.2015

**I) M/s. Arya Communications & Electronics Services (P) Ltd. requested further clarifications as under:**

1. *As per the tender clause page no 7 point no (i) Payment terms is on supply 70% and 30% after completion of the entire Project.*

*We request department to consider payment terms as 80% on supply and 20% after completion of the entire project.*

**Clarification:** is clarified that, as per the rules the suggestion cannot be accepted. Payment terms remain 70% on supply & 30% on completion of project.

*We request you to calculate L1 Prices based on the tender particulars only. Optional Items quoted prices may not be considered during L1 Calculation. Please Confirm*

**Clarification:** It is clarified that L1 will be considered only on the basis of the tender particulars only as per Bill of Material page no.32 of tender document, optional items will not be considered for L1 bid.

2. *As per the tender clause page no 7 point no ( j) INTEGRATION:- It will be the responsibility of the vendor to integrate the equipment with software.*

*We request department to provide the total system architecture of the entire project.*

**Clarification:** As per discussion held with the all the vendors participated in the pre-bid meeting on 28.05.2015. The Network system architecture of the entire project and design of Network Management System (NMS) is finalized and the same is enclosed for reference.

3. *As per the tender clause against that our query and pre-bid clarification is attached.*

*We request you to kindly provide line wise clarification and confirmation which will help us to design better communication network for Karnataka Police department.*

## **II. Technical Queries on Tender specifications by M/s. Arya communications.**

**1)** *Page No.1 Point No.1&Page no 18 point no 3(i) & 3(ii) Digital UHF Static sets with display without GPS, 40bits and above Inbuilt Encryption, IP Site connect capability, DTMF Key pad and other accessories with 30 meter RF cable RG-217 with 6 db Fiber Glass Omni directional antenna.*

*30 meter RF cable RG-217 is asked in the tender, as base station*

*Power out put is 25 watts. If base station is programmed for minimum wattage that is 10watts also due to natural height of the antenna mast with RG 213 cable 30 Meters connected to the base station receive and transmit the good quality of UHF signal.*

*Hence we recommend 30 meters RF cable RG-213 with suitable connector for base radio.*

*6 db Fiber Glass Omni directional antenna is asked in the tender, repeaters are closer in all the places will be covered by Walkie talkie signal itself and natural height of the base station antenna receive and transmit the good quality of UHF signal.*

*Hence we recommends 0 dB UHF antenna for base station .*

**Clarification:** *It is clarified 30 meters RF Cable RG 217 should be quoted and as regard 0 db Omni directional antenna, it may be quoted as optional item.*

**2)** *Page No.1 Point No.2.&Page no 18 point no 3(i) & 3(ii) Digital UHF Mobile sets with display, GPS, 40bits and above Inbuilt encryption, IP Site connect capability with DTMF Key pad and other accessories with 0db mobile whip antenna. 0dB mobile is asked in the tender, Mobile Radios will be roaming in the city so 3 dB antenna is required instead of 0 dB antenna to get the better mobile coverage.*

*Since UHF antenna height is smaller, we recommend 3 dB antenna for Mobile station*

**Clarification:** *Mobile whip antenna required is 0dB antenna as per tender document.*

**3)** *Page No.1 Point No.5 .&Page no 24 point no G 2.*

*Digital UHF Repeater 40w and above with inbuilt / external IP Site connect & 6db gain Fiber Glass Omni directional antenna with 45 meter RF cable RG-218.*

*As discussed in the Pre bid meeting, 45 meter RF cable RG-218 is asked in the tender. Instead of RG-218 , LMR 400 low loss cable may be used to get less*

*attenuation and more velocity factor of the UHF signal travel. (cable loss chart attached for ready reference)*

*Hence we recommend LMR 400 Cable for repeater station .*

**Clarification:** It is clarified that, the suggestion given by M/s Arya communications is accepted by all the vendor. Hence LMR 400 cable is considered for L1 bid.

**4)** *Page No.1 Point No.9 GPS/AVLS Messaging Dispatch console with software and GIS map of Bangaluru city (Scale:1:5000). GIS map of Bangaluru city (Scale:1:5000). is asked in the tender..,*

*1. The proposed map is used for indentifying the hand held and Mobile location on real time tracking . Please confirm.*

*2. We understand pre-bid meeting Police department is already having Vector map for Bangalore city and presently used for Dial-100 Project. To make this project more cost effective, we suggest to make the same available for tracking of Mobile and Portables. Please confirm.*

*3. As we understand dispatcher connectivity is through the repeater.*

☐ *How many dispatchers required in a mode of (1server+1 dispatcher) in decentralization. please specify and confirm.*

☐ *How many subscribers are required in each dispatcher please specify and confirm.*

☐ *Total how many subscribers are required for total number of dispatcher please specify and confirm..*

☐ *Is the PC/ server for dispatcher under scope of the vendor please confirm.*

☐ *Request for clear Bill of Material for dispatcher.*

*NMS network Management Server.*

☐ *How many NMS is required in the mode of (1 server + 1 dispatcher) Decentralization, please specify and confirm.*

☐ *How many repeaters want to add in each NMS mode of (1 server + 1 dispatcher) please specify and confirm?*

☐ *Is the PC/ server for NMS under scope of the vendor please confirm.*

☐ *What are the features are required in the NMS.*

**Clarification:** it is already clarified that GIS map of Bangalore 1:5000 scale with 43 layers is available with Bangalore City Police and same will be utilized for this GPS / AVLS messaging dispatch console.

The GPS/ AVLS application software have to be provided and integrated for this tender should be quoted as compulsory item leaving the GIS map of Bangalore city.

How ever the vendors may quote GIS map of scale 1:5000 1:3500 1:7000 and 1:10000 as optional which will not be considered for L1 bid.

As regards to feature of the GPS / AVLS messaging software the detailed featured list is enclosed and must be complied with.

Further GPS/ AVLS dispatch console with software- 3 nos. to be quoted having client server architecture including Network Management System (NMS) features inbuilt and call dispatch console should cater 5000 subscribers / radios each.

**5)** *Page No.1 Point No.11 b Technical Repairing (Service) Manual with complete block diagram with circuit layout, etc., should be provided both in soft and hard copies 2 sets each for Static/Mobile Radio, Handheld Radio, Repeater, GPS / AVLS Messaging System and Microwave Radio link As discussed in the Pre bid meeting , two no's of hard & soft copies of service Manual for portable, mobile and repeater to be supplied by the vendor as 1 LOT .Please confirm.*

**Clarification:** It is clarified that, the service manual (Repair) both in hard & soft copies 2 sets each for Static/Mobile Radio, Handheld Radio, Repeater, GPS / AVLS Messaging System and Microwave Radio link all should be provided as 1 Lot.

**6)** *Page No.10 Point No. B Data Services i.e Short Messaging should be possible with this system with Mobile, Static and Portables to have seamless SMS, E-mail, and Voice from one control room to another across the State. Email from one control room to another across the state is possible only through the dispatcher. Kindly confirm.*

**Clarification:** The suggestion is agreed e-mail only through dispatch console from one control room to another control room.

**7)** *Page No10, Point No.E Each Radio should work both on Analog/ Digital mode operation as per the type of signal received. Over the IP only digital mode of operation is possible. Kindly Confirm.*

**Clarification:** It is clarified that, they have to integrate the existing analog with the proposed digital system through digital to analog gateways and should be quoted as optional item for seamless connectivity. However the analog radio ID is not required.

**8)** Page No.12 Point No.11 Reverse Polarity Protection

*Batteries are having fixed polarities there is no chance for reverse polarity in handsets. Kindly Confirm.*

**Clarification:** It is clarified that, all the vendors agreed to this suggestion of M/s. Arya communication and the testing of this parameter is not required.

**9) a.** Page No.10 Point No-E Each Radio should work both on Analog/ Digital mode operation simultaneously. As per our understand Non-IP Mode of Operations for Analog Mode Please clarify on this.

**Clarification:** It is clarified that each radio should work both in analog/ digital mode depending upon the type of signal received and should have city wide connectivity through **Analog / Digital gateways**. Analog / Digital gateways should be quoted as optional item.

**9) b.** Page No.15 Point No.16 Networking Should IP based (optional as per user requirement.) As discussed in the Pre bid meeting, this parameter is not optional. Kindly Confirm.

**Clarification:** As all the vendors participated accepted this proposal. It is clarified that, the optional as per user requirement is deleted.

**10)** Page No.26 Point No.F : Interfaces: Remote monitoring and status check  
*Remote monitoring is possible through NMS only. Kindly Confirm.*

**Clarification:** It is clarified that remote monitoring should be possible through GPS/ AVLS Message dispatch console having client server architecture (inbuilt NMS feature in the GPS/ AVLS Message dispatch console ).

**11)** Page No.28 Point No.7 Location Tracking *Location tracking is only for mobile and portable. Kindly Confirm.*

**Clarification:** It is clarified that location only for mobile and portable radios as per GPS / AVLS dispatch console features.

**12)** *Page No.31 Point No.D1: One No of desktop/ Laptop per repeater location should be quoted & provisioned for configuration & monitoring of MW radios In Page No.32 Point No.9 It has been asked for 3 laptops for complete Project. Kindly clarify the make, configuration and confirm the quantity.*

**Clarification:** It is clarified that as suggested for the page no.29 D- IT&NW Hardware - One No of desktop/ Laptop per repeater location should be quoted & provisioned for configuration & monitoring of MW radios is deleted.

However for page no. 30 Point no. 9 Bill of material for microwave Link, 6 Nos. of Laptops of high end latest configuration of Dell make or its equivalent shall be provided in addition one iPad of high end latest configuration or its equivalent also be provided and included in the BoM.

**13)** *Page No.43, Point Annexure-I : As discussed in the pre bid meeting ,Being a compressive project for supply, installation, commissioning and maintenance of various components tender specific authorization letter from the Manufacturer of Digital DMR equipment including Microwave radios will only be considered. Kindly Confirm.*

**Clarification:** It is clarified that the specific authorization letter from the OEM for the digital DMR equipments and Microwave links only.

**III. M/s. R.K. Enterprises, Bangalore . requested clarifications as under:**

1) *In page No.4(f) V) b) the tenderer should furnish the test certificates of any Govt. accredited lab or national accredited lab or national accreditation board for testing and calibration laborites (NABL) approved laboratory or international corporation approved laboratory for the DMR equipment offered in the tender.*

2) *In page No.4 (f) V) c) The tenderer should also produce OEM test certificate for the offered DMR radios.*

*Further to the above mentioned points we like to clarify that the MHA specification says for MIL TD but not certificate from any Govt. accredited lab or national accredited are national accreditation board for testing and calibration laboratories (NABL) approved laboratory or international corporation approved laboratory.*

*We can give the OEM MIL STD Certificates as per the send point kindly consider our request and delete the point In page No.4(f) V) b) and also change the at bidder complains sheet.*

**Clarification:** It is clarified that the vendor should produce OEM test certificate for the offered DMR radio for all the parameter including MIL standard and also

should produce test certificate from Govt. accredited lab or National Accreditation Board for Testing and Calibration Laboratories (NABL) approved laboratory or International Laboratory Accreditation Corporation (ILAC) approved laboratory. As per the MHA Revised Trial Directive Digital hand held VHF Transceiver set Digital VHF Base/Mobile Transceiver set and Digital VHF Repeater sets published on 02-10-2014 in the official MHA website.

**IV) M/s. Surya Telecom Pvt. Ltd. requested clarifications as under:**

**1)** *As per Tender Clause (Page No.46 Point No.10 given under Annexure-L) we request to delete Ex-clusive authorization certificate from OEM with respect to the tender reference dur to the following reasons.*

- i) *Now, most of the state police organization are asking for general authorization letter instead of tender specific one to encourage completion to get price benefit to the department. In the recent Andhra Pradesh and Telangana State tender (Ref:960-II/PCO/B4(AP)/PUSHKARAM/2014-15 due on 21<sup>st</sup> May 2015) wherein they have allowed al the partners of OEM's to bid in recent DMR radio tenders and they have re-confirmed that they do not require any exclusive tender reference vide clause i.e., **“Proof of Authorisation and also proof of the original manufacturer (OEM) in the case of authorized dealers. (I t need not be specific for this tender)”** against pre-bid queries of some bidders.*
- ii) *This also prevents price monopoly and not quote higher prices in case of single brand/ OEM dealer have qualified for price bid opening.*

**Clarification:** It is clarified that Tender specific authorization from the OEM must be produced as per rules and generic authorization is not acceptable

**V) M/s. 3G Communication Pvt. Ltd. requested clarifications as under:**

**1)** *Kindly refer to Page2, Eligibility Criteria, sub clause (ii) referring to Annual turnover we request you to consider Annual turnover as minimum of rs.5 Crores to allow aggressive competition to provide better quality product*

**Clarification:** It is clarified that Annual turnover specified in the Tender document is Rs. 10.00 Crores as per rules and it cannot be reduced.

**2)** *Kindly refer to Page4, sub clause (f) where tender asked for demonstration of proposed system with 03 Repeater, 03 Mobile & 03 Portable, we request you to*

*limit this activity to one site only, for the following reasons and also allow more time for arranging the demo equipments*

- a) All demo equipments are subject to WPC import license and custom depended, however, demo of such large requirement is not possible in quick time, you can verify the same from WPC DOT.*

**Clarification:** Vendor/ bidders must produce 3 repeaters, 3 mobiles & 3 portables for complete demonstration. Hence your request is not acceptable.

**3)** *Kindly refer to Page No. 7, Point No.5, sub clause (i) Payment: As discussed during meeting, we expect that this should change to 90% on supply and 10% on successful completion.*

**Clarification:** Payment terms 70% on supply and 30% on completion of project as per rule and your suggestion to change 90% on supply and 10% on completion of project is not acceptable.

**4)** *We also request you to change the specification according to UHF requirement as some of the clauses are pertaining to VHF requirement,*

**Clarification:** It is clarified that the frequency mentioned is 136 – 174 MHz in the Trail/ test procedure column due to oversight. It may please be read as 403 MHz to 470 MHz.

As per pre-bid meeting clarification and further clarification to additional queries a meeting of all the vendors were arranged on 28.05.2015 at 15.30 hrs M/s. Arya Communications and M/s. Rolta India Pvt. Ltd., attended the meeting and other two vendors i.e., M/s. R.P Enterprises and M/s. 3G Wireless communication did not participate.

In the meeting it was discussed that;

- 1) Typical communication network architecture design.
- 2) Network Management System design.
- 3) GPS/ AVLS messaging dispatch console with software and its features.
- 4) Bangalore City map (Digital Map) scale 1:5000 with layers

As per discussion it was agreed that the Typical Network design should be as per the block diagram enclosed

Also the Network Management system (NMS) design should be inbuilt in the GPS/ AVLS messaging dispatch console having client server architecture and should have the capability (capacity for future requirement i.e., up to 15000 subscriber / users).

The GPS / AVLS dispatch console should have dual monitors. One for Automatic Vehicle Location function and another one for Despatch / NMS functions.



The block diagram of the dispatch console with Network Management system (NMS) feature is enclosed for reference.

As regards to Bangalore City Map, Commissioner of Police Bangalore City have acquired a vector Map (digital Map) scale 1:5000 with 43 layers having 1700 Sq. Kms. Area and the same being utilized for this project. The vendor should quote only for AVLS / GPS application software with integration to have AVLS features.

Further to this discussion the following items required as compulsory items which will be considered for L1 bid and some of the items which may be quoted as optional items which will not be considered for L1 bid. But the user department may procure these items on a later stage.

### **Compulsory Items (L 1 Bid Items)**

#### **Bill of Material (to be quoted)**

<b>Sl. No.</b>	<b>Particulars</b>	<b>Quantity</b>
1.	LMR 400 RF Cable (Replacement for RG218 RF Cable)	30 Nos.
2.	As per Page No.1, Item no.9 and BoM page no.32 GPS / AVLS Dispatcher with software must be dual monitor (one for viewing vehicle location and another one for Dispatch & NMS Functions)	3 Nos.
3.	GPS & AVLS Application software (Integrated) to access the existing Digital Map of Bangalore City (provided by Illrd party)	3 Nos. (for 3 consoles)
4.	Dell make (or its equivalent) High end latest Laptop	6 Nos.
	IPad (or its equivalent)	1 No.

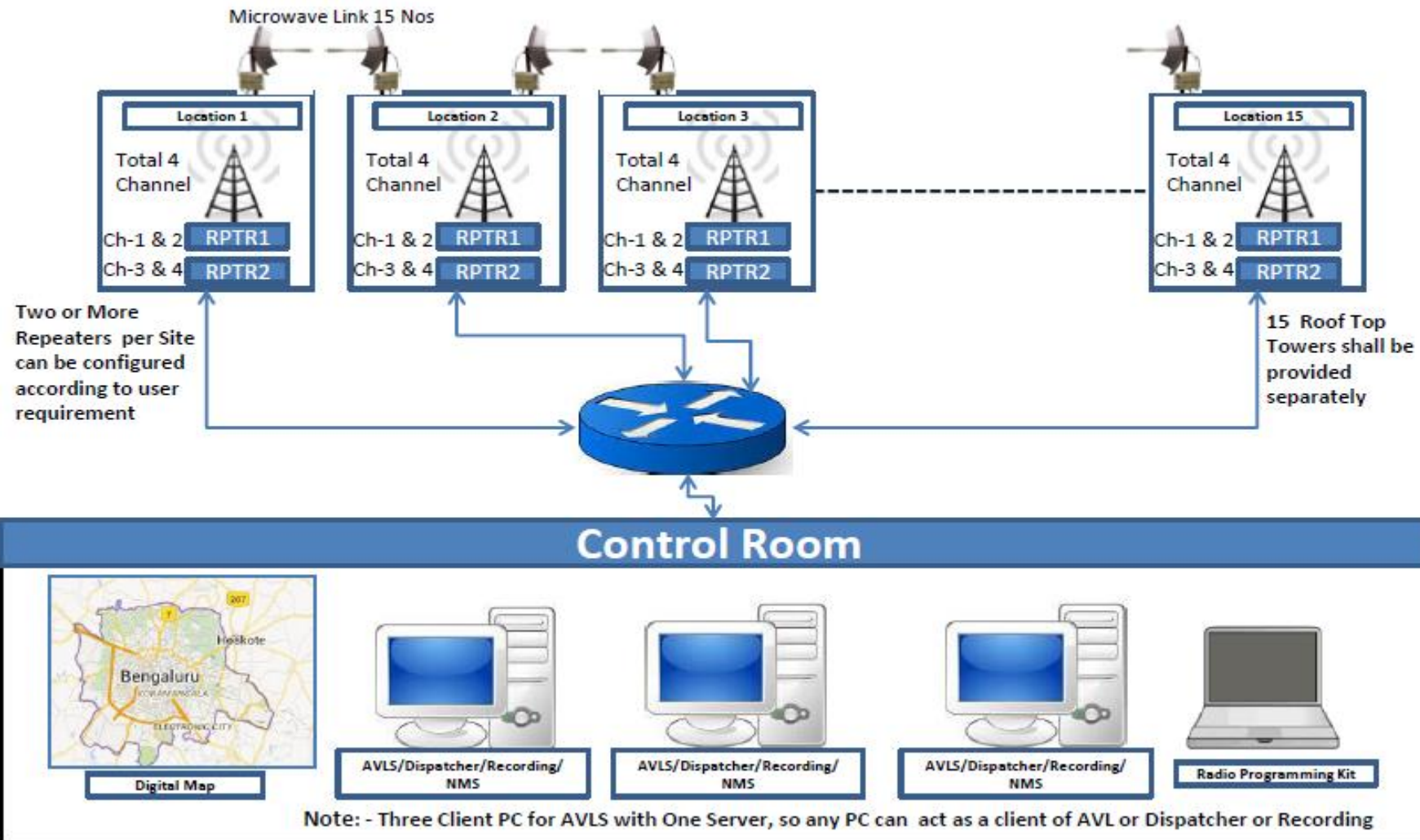
### **Optional Items**

<b>Sl. No.</b>	<b>Particulars</b>	<b>Quantity</b>
1.	Bangalore City Digital Map Scale: 1:3500, 1:5000, 1:7000 & 1:10000 with 43 layers	1 no. (each)
2.	Analog to Digital Gateways (Radios)	20 Nos.
3.	0 dB GP Antenna for Static Stations	200 Nos.
4.	Digital encryption 128 bit and 256 bit per module/ software	1 No.

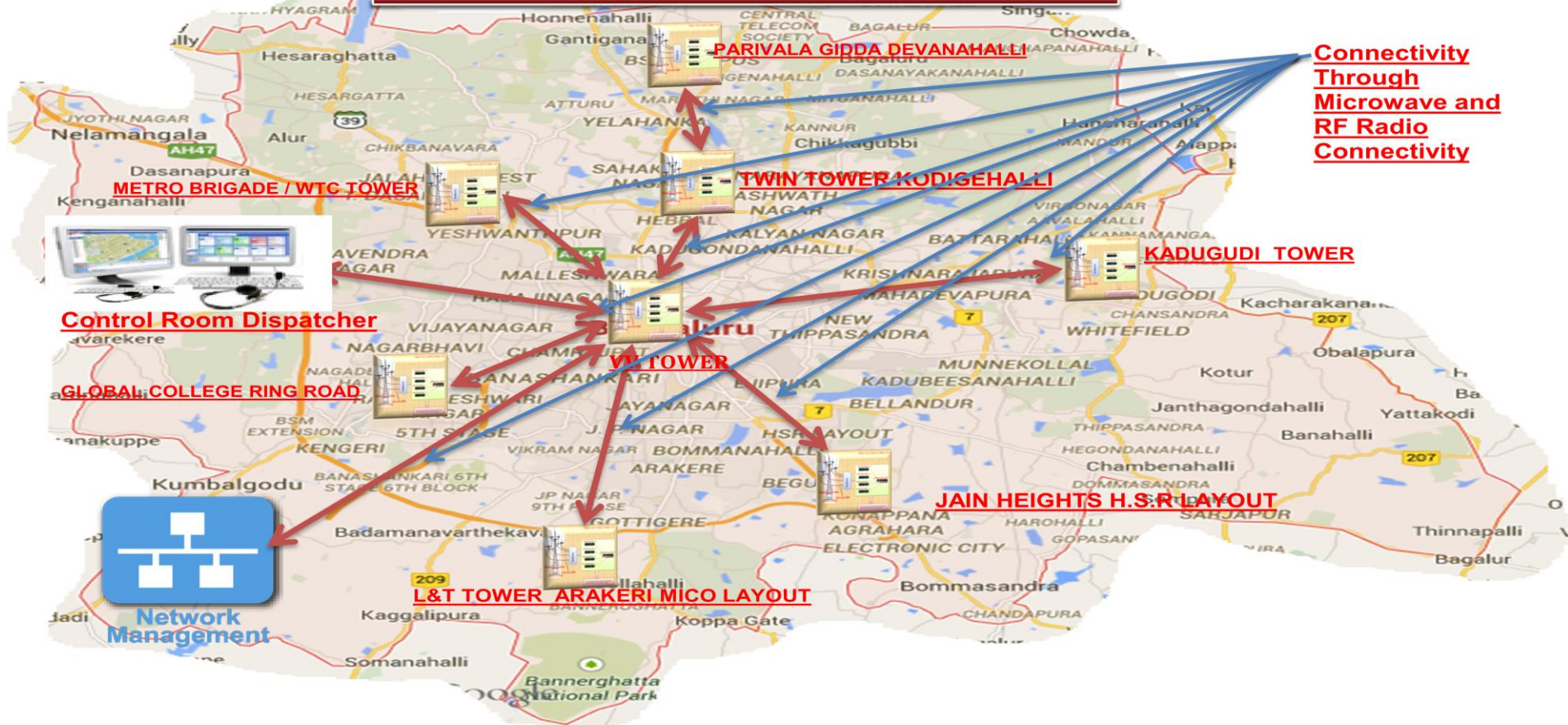
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Additional Director General of Police,  
Communication, Logistics & Modernisation,  
Bangalore

# Block Schematic



# MULTI-SITE CONNECTIVITY



## Note:

- 1.Area Coverage depends on LOS it may Increase / Decrease and final sites will decided after field trail only
2. No. of NMS Decided by customer Only

## **GPS/ AVLS DISPATCH CONSOLE FEATURES**

### **DISPATCHER:**

- **Online / Offline Presence of Radios**
- **Call control**
- **Messaging**
- **Report Enquiry**
- **Disable / Enable**
- **Emergency Alarm**
- **Split Display**
- **Authority Management**
- **Hierarchical Dispatch**
- **Remote Monitor**
- **Call Alert**
- **Data Backup and Recovery**
- **Automatic Messaging (Time Scheduled)**

### **AVLS:**

- **Support Digital Maps – Co-ordinate system WGS-84**
- **GPS Positioning**
- **Real-time Track / History Track**
- **Geo fencing Alarm**
- **Automatic Vehicle Location**

### **RECORDING:**

- **Min. 30 days Recording**
- **Play, Pause Options**
- **Recording Analysis**
- **Can be played with any media**

