

## HYDERABAD METROPOLITAN WATER SUPPLY & SEWERAGE BOARD

**Expression of Interest (EOI) for engaging Service/solution provider for conducting Detailed Study on Sewer Manholes in the existing sewer network in HMWSSB service area including designing, developing, testing of application with tool for manholes geo-tagging along with supply of necessary infrastructure .**

**EOI No.347/CGM(E)/O&MC-III/Manholes-Geotagging/Exp.Int./2016-17,dt: 24-10-2016**

HMWSSB desires to Geo tag sewerage lines and manholes for effectively attending frequent sewerage overflows repair and replacement of manhole covers etc. including preventive maintenance and to maintain the assets tracking on GIS flat form. A Comprehensive Solution should be proposed by the Vendor for survey of sewerage line and manholes duly proposing the tools for the survey including Supply of infrastructure such hardware, software licensing for Maps, GIS application, software for integrating with HMWSSB Existing Applications such as stores, grievance modules for updating of the sewerage asserts during regular business process.

In view of the above, the Hyderabad Metropolitan Water Supply and Sewerage Board (HMWSSB), proposes to engage Service/solution provider for conducting Detailed Study on Sewer Manholes in the existing sewer network in HMWSSB service area including designing, developing, testing of application with tool for manholes geo-tagging along with supply of necessary infrastructure”.

The Expressions of Interest (EOI) is hereby invited from the Service/solution providers having experience in similar nature of assignments. They are required to furnish their credential indicating that they are qualified to perform the said services with client certificates on similar assignments, organization details with their technical expertise of personnel, projects etc capable to undertake such assignments. The detailed scope of work is available at HMWSSB website ([www.hyderabadwater.gov.in](http://www.hyderabadwater.gov.in)).For further details contact GM(IT) ,khairatabad Hyd.

The interested consultants may submit their Expression of interest with the above details to the Chief General Manager (E), O&M Circle-III, HMWSSB, Goshamahal, Hyderabad-500 012 on or before **09.11.2016**

Sd/-  
Chief General Manager (Engg.),  
O&M Circle-III, HMWS&SB.

### **Scope of Work for Geo tagging of sewerage manholes:**

HMWSSB desires to Geo tag sewerage lines and manholes for effectively attending frequent sewerage overflows repair and replacement of manhole covers etc. including preventive maintenance and to maintain the assets tracking on GIS flat form. A Comprehensive Solution should be proposed by the Vendor for survey of sewerage line and manholes duly proposing the tools for the survey including Supply of infrastructure such hardware, software licensing for Maps, GIS application, software for integrating with HMWSSB Existing Applications such as stores, grievance modules for updating of the sewerage asserts during regular business process.

#### **A) Survey:**

1. HMWSSB has estimated 3,116 Km Length of sewerage lines and around 2.35 Lakh manholes in core city for geo tagging. Division wise break up of sewerage man holes identified by HMWSSB staff is as mentioned below.

<b>SI No</b>	<b>Division</b>	<b>Total No. of Sewer Manholes</b>	<b>Total No. of Deep Manholes</b>
1	O&M Dn.I	43810	575
2	O&M Dn.II	50784	1451
3	O&M Dn.III	28656	196
4	O&M Dn.IV	19761	816
5	O&M Dn.V	31900	138
6	O&M Dn.VI	31720	818
7	O&M Dn.VII	27272	1314
8	O&M Dn.X	819	70
	<b>TOTAL</b>	<b>234722</b>	<b>5378</b>

2. The Geo-tagging of Sewer lines ID and Manholes ID has to be created and each sewer line will be assigned to a specific sewerage staff for effective monitoring, maintaining and easy identification of the manholes.
3. Service provider has to collect Manholes & Sewerage Staff information from the respective section office. Sewerage Employee information consists of Employee Type, Job Type, Operating Hours and Contact details.
4. Probable Sewer Manhole Survey parameters

S.NO	Para meter	Sub parameter
1	Diameter of the Sewer Line(mm)	150/200/250/300/400/450/500/600/700/800/900/1000/1200/1400/1800/2000 / > 2000
2	Manhole Depth(in meter)	–
3	Type of Sewer PIPE	(RCC/SWG /other)
4	MH Cover	Y/N
5	MH Cover Type	CI/FRC/HD-20/EHD 35
6	Diameter of the MH (in meters)	0.9/1.2/1.5/1.8/ >1.8
7	Shape of MH	Circular/rectangular
8	Condition of MH	Good/Bad/Worst
9	Manhole Status	Below road level/Above road level/buried under road/road line
10	Other utilities crossing through the manholes	WS lines / Cables / House Service Connections.
11	Diameter of line	In meters
12	Width of Road	less than 10 feet, up to 11 to 21 feet, up to 21 to 30 feet, upto 31 to 40 feet and more than 30 feet
13	Name of the main	--
14	Landmark image	with LAT LONG
15	Nearest consumer name	—
16	Nearest CAN	9 digit
17	Mobile number	10 digit
18	Image of manhole	With LAT LONG

5. **Deployment of Manpower for Survey of Manholes, Capture of Manhole Details with Solution Developed by the Agency :**

- Identifying the Manhole types & Location of Manhole. Capturing the details of the Manhole such as landmark, nearest Door No etc as provided in the solution. GPS

location of Manhole and Capture Image of Manhole indicating the directional landmark. Mapping Manhole to Sewer Line.

- Service provider Should provide man power deployment details
- Service provider should provide time lines for the Completion of survey
- Resources provided should have necessary infrastructure ie Mobiles/Laptops ,Data Sims etc should be borne by the vendor .
- Service provider has to collect information of Manholes by visiting field physically, at their scheduled time for monitoring of Manholes along the sewerage line

**B) Tools for survey:** The agency has to propose and supply the survey tool he is going to use and get the survey done in line with the following:

- Analyze the data collected and creation of Line information as per field reality/ Sewerage Staff wise to be done by the service provider.
- Solution to be developed to capture Manhole attribute information listed below like Manhole type, Manhole size, Manhole landmark registration, Landmark identification using GPS, Manhole images, etc. based on information of Sewerage Staff by service provider.
- Solution must be able to work Online and Offline in absence of GPRS.
- Solution must be able to Edit/Update Line& Manhole information.
- Solution must capture the exact geo location of the line and Manhole for which geo specific logic shall be put in place when identifies the Manhole.
- Detailed information must be submitted to HMWSSB on daily basis.
- Sewerage Staff ID to be generated shall be unique and correlation between IDs & Sections /Areas to be developed when it comes to Manholes.
- Line ID to be generated and to be tagged to the Sewerage Staff based on area of the Section or process described and finalized by HMWSSB .
- Capture GPS location of Manhole.
- Capture Image of Manhole indicating the directional landmark.
- Have to provide resource person to solve issues identified during the field survey.
- GIS reports of Manholes registered such as Manhole, area wise to be generated as per the requirements of HMWSSB.
- Continuous technical support personnel to be provided in the field during the entire process of Manhole s registration.
- Service provider has to provide provision for updating of new Manholes to existing registered lines.
- During verification of Lines & Manholes if information registered is found to be invalid such data need to be corrected through a provision given in the mobile app/solutions supported with assistance of Maps for improved data validation.
- Proposed tool should be operated by the Department Staff after completion of Survey for Updating data in real-time in future i.e. if any new manholes are added ,lines added to be network after completion of Survey to be able added to data base so that real time operations can happen.

**C) Hardware and software:**

The service provider has to propose and supply the hardware and software required for deployment of survey data on the GIS platform along with licensing.

- Server specifications
- Store specifications
- Software required GIS, OS, Maps etc
- Database

**D) Integration of Survey details with HMWSSBB Existing applications ,support and reporting.**

- Development of the Application and integration with other applications of HMWSSB.
- Application to be hosted in HMWSSB local network for ease of access to the officers of Board
- The proposed application should be interacted with the other module of HMWSSB such as inventory module of HMWSSB for updating inventory with Geo-tagged Tagged Id of Manhole
- The proposed solution should be integrated with grievances module for updating of the grievance along with the geo tagged Id and Maps views
- Providing GIS Maps i.e., section wise maps, Sewer Line Wise.
- Necessary server side reports
- Adding of sections wise data at server side
- Integration of Dash board for viewing the data
- User /admin authentications permission grant /revoke