

# PRE-BID REVIEW OF MEGA PWS SCHEME TO MAHANGA BLOCK OF CUTTACK DISTRICT IN THE STATE OF ODISHA.

PRE – BID ENGINEERING CONSULTING  
PHANS4 CONSULTING PVT. LTD.

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### PRE-BID REVIEW OF THE PROPOSED RWSS TENDER DOCUMENT OF MAHANGA BLOCK OF CUTTACK DISTRICT

S.No	ITEM	Description
1.	TITLE	Mega PWS scheme to Mahanga block of Cuttack District
2.	NAME OF THE WORK	“Execution of Rural Piped Water Supply Projects pertaining to Mahanga block of Cuttack District including five years Operation & Maintenance” under one Package.
3.	SCOPE OF WORK	<p>The scope of work of each PWS project will broadly include survey, investigation, cost estimate, intake arrangement, raw water, rising main, WTP, CWR, Storage reservoir, pumping station and distribution network, installing raw water pumps, clear water pumps &amp; motors, providing external power supply, internal electrification, installing flow meters, providing automation and SCADA system etc and Operation &amp; maintenance of the project during the defect liability period, which is expected to be 01 year.</p> <p>For majors structures the defect liability period shall be 05 years which shall be concurrent with O &amp; M period.</p> <p>(A)- Source &amp; Head Works:            (B)- Raw water Pumping Main:            (C)- Water Treatment plant&amp; pump house:            (D)- Clear water Pumping Main:            (E)- RCC Storage Reservoir            (F)- Distribution Net Work:            (G)- Mechanical &amp; Electrical Installations:            (H)- Instrumentation &amp; Automation:            (I)- House Connections:</p>
4.	PROJECT COST	207.36 Cr
5.	TIME OF COMPLETION	24 months (2 years)
6.	TYPE OF CONTRACT	Lump sum - EPC
7.	NO. OF COVERS	2
8.	EMD	2.07 Cr.
9.	BID VALIDITY	180 days
10.	PERFORMANCE SECURITY	For an amount equal to 10% (Ten percent) of the Contract Price. within 10 (ten) days of the date of signing of this Agreement, an irrevocable and unconditional guarantee from a Nationalized Bank
10	PRE-BID MEETING	EIC RWSS ODISHA BHUBANESWAR
11.	PRE-BID MEETING DATE	11-Dec-2019 11:00 AM
12.	MODE OF SUBMISSION	ONLINE
13.	IMPORTANT DATES	1. Published Date - 29-Nov-2019 02:00 PM 2. Clarification End Date - 09-Dec-2019 05:00 PM 3. Bid Submission End Date - 14-Jan-2020 05:00 PM 4. Bid Opening Date - 18-Jan-2020 11:00 AM
14.	POINT OF AUTHORITY	EIC RWSS ODISHA BHUBANESWAR

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15.	THE ELIGIBILITY CRITERIA	<p>(i) Design, execution and successful commissioning on an EPC /Turnkey basis of either of the following works as a prime contractor during last 7 years up to Bid submission deadline:</p> <p>a) One similar water supply work costing not less than the amount equal to <b>80%</b> of estimated cost (Or) b) Two similar water supply works each costing not less than the amount equal to <b>50%</b> of estimated cost (Or) c) Three similar water supply works each costing not less than the amount equal to <b>40%</b> of estimated cost</p>
16.	QUALIFICATION REQUIREMENT OF THE BIDDER	<p>1. Bidders who meet the minimum qualification criteria will be qualified only if their available BID capacity is more than the total BID value (value as per clause 1.1.1). The available BID capacity will be calculated as per following, based on information mentioned at Annexure-A of Appendix-I:</p> <p>2. Assessed Available BID capacity = (A*N*2 – B)</p> <p><b>(A) Technical Capacity:</b> For demonstrating technical capacity and experience (the "Technical Capacity"), the bidder shall, over the past 7 (seven) financial years preceding the Application Due Date have experience in the following and have received payments for construction of eligible projects (s) or has undertaken construction of eligible projects by itself in PPP mode, <b>such that the sum total thereof is more than Rs.518.4 crore (The "threshold technical capacity")</b> * This amount should be equivalent to two &amp; half times of the estimated cost of the project for which bids are being invited.</p> <p><b><u>Only experience of project executed in India will be considered for evaluation of technical capacity.</u></b></p>
17.	FINANCIAL CAPACITY	<p>1) The bidder shall have a minimum Net <b>Worth of [Rs. 20.736 crore]</b> at the close of the preceding financial year (* insert Rs as 10% of the estimated cost of the project for which bids are being invited).</p> <p>2) The bidder shall have a minimum average annual turnover (calculated as total certified payments received for contracts in progress and or completed, within the last 3 financial years divided by 3) <b>of Rs.62.208 crore</b> (insert Rs. i.e. 30% of the estimated cost of the project).</p>

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#### DESIGN CRITERIA

S.NO	ITEM	DESCIRPTION
1.	PROJECT BENEFICIARIES	All the villages and habitations and provision for bulk water supply points to en-route covered villages/habitations coming across in the pipeline network. The bidder has to access the list of en-routed villages during survey & site visit and the details along with population shall be submitted with the tender.
2.	Project Design Year	30 years taking base as 2022 year
3.	Project Clear water demand	(70 LPCD at consumer end excluding 15 LPCD to be considered as losses and institutional demand) The same has to assessed by the bidder.
4.	Source of water	Only surface water sources
5.	Intake Location	Bada Genguti River, Near Jeypur Market, Upstream of Bridge
6.	Reservoir levels	To be Assessed by the Bidder
7.	Source of raw water	River/Reservoir. All villages are to be supplied with PWS. The villages which are in the hilly area or at a high altitude & not feasible for boosting/pumping from rising main, alternate arrangement for supply of water is to be made by considering local sources of water. (to be assessed by the bidder)
8.	Pipe material for Raw water Rising main	DI of suitable Class confirming to IS: 8329 Hours of flow per day – 20 hours
9.	Pipe material for Clear water rising main	<b>Pipe material:</b> i) Ductile Iron (DI)-suitable class conforming to IS:8329 for all rising mains/transmission mains up to MBRs/Zonal balancing tanks.  ii)For in village/habitation distribution system HDPE pipes of required pressure rating to be used from ESR to in village/habitation distribution level. The dia of HDPE pipe shall be restricted within 160mm.  iii) For gravity pipelines from MBR/zonal balancing tanks to the ESR (if provided at villages) or to the beginning of the village boundary, HDPE pipes of required pressure rating shall be used except HDPE pipes up to 160mm.  Hours of flow per day: Minimum 8 hours/day (to be assessed by the bidder as per condition)
10.	WTP	Conventional Treatment Capacity – Ultimate design year demand

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		Operation time – 20 hours/day
11.	Supply point at each village / habitation	<ul style="list-style-type: none"><li>• Treated water shall be fed to proposed OHT.</li><li>• Then from ESR/OHT, water will be supplied to the habitation distribution system by gravity/ for elevated areas boosting, pumping stations with sump shall be provided.</li><li>• For newly constructed project, the distribution pipelines will be laid through the village&amp; all the habitation with house service connection and taping facility at public places.</li><li>• House service connection facilities shall be provided in all the consumers of the habitations so as to enable the consumers to collect water.</li><li>• The total volume of service storage to be provided shall be for 12 hours of the ultimate design flow per day.</li><li>• This is excluding the storage required for MBR and at WTP.</li><li>• Minimum ESR capacity shall be 50,000 ltrs (maximum capacity bidder assessment) &amp; shall be filled up twice a day.</li><li>• Only if the topography permits, the water supply system shall be design to ensure that at least 50% of flow from MBR/ zonal balancing tanks/ ESR shall be through gravity.</li><li>• There should be provision for one storage reservoir in each village.</li><li>• Tap point refers to Stand post. Provision for 2 stand post at each habitation shall be provided.</li></ul>
12.	Power Supply	The power supply shall be provided by local Electricity Board at each site via the provision of single dedicated feeder

### TOTAL POPULATION IN THE SCHEME

S.NO	Block	Population as per 2011
1.	PWS to Mahanga block of Cuttack District	215603

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#### PAYMENT SCHEDULE

S.NO	ACTIVITES	% of Payment against the Agreement Value
1.	Survey & Investigation	1 %
2.	Raw water headworks	5 %
3.	Supply of DI pipes and fittings	15 %
4.	WTP	15 %
5.	Supply of DI pipes and fittings	23 %
6.	Design, Construction, Testing & Commissioning of ESRs of different capacity at different zones.	10 %
7.	Supply of HDPE pipes and fittings	19.50 %
8.	Construction of Compound wall around ESR	0.50 %
9.	Supplying, fitting & fixing of flow meter of different size, PLC Scada and all other Instruments including testing etc. all complete	1.00 %
10.	On completion of the whole work Inspection, Testing, Trial Run, Guarantee Test, Training, Operation & Maintenance Manual, Completion Drawings & Acceptance	10 %
	<b>TOTAL</b>	<b>100 %</b>

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PVT. LTD.*

# WATER RESOURCE & IRRIGATION SECTOR BROCHURE



*WATER RESOURCE & IRRIGATION*

# AN OVERVIEW

## About us

Phans4 is engaged in global consulting solutions, where we combine classic management consulting with outstanding technological expertise. For more than 9 years, we have been supporting companies around, through various consulting services to improve the sustainability of their competitiveness and performance capabilities along the entire value chain with the aid of innovative technologies.

## Vision

Phans4 consulting private limited is a global diversified company with a network of workforce committed to the growth of your business through innovation which strikes for a sustainable development of your business.

## Areas We Do Consulting

Phans4 consulting services are carried out in areas like water resources, irrigation schemes, micro irrigation, rural water supply and sanitation, effluent treatment plants, sewage & sewerage treatment, storm water drainage system, lake development.



# OUR SERVICES

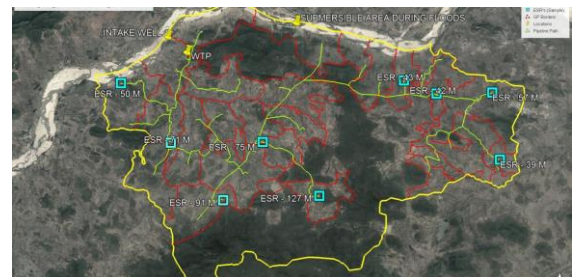
## 1. RURAL WATER SUPPLY SCHEMES (RWSS)

Population growth in India is putting tremendous pressure on existing water systems to supply water to both urban and rural area in terms of quality and quantity requirement.

**PHANS4 CONSULTING** has designed efficient rural piped water supply consulting solutions to meet the requirements of the country. Our experienced Engineers draws a lot of strategies and best technologies to the projects.

### OUR SERVICES INCLUDE

- ◆ Water demand studies,
- ◆ Site survey and investigations
- ◆ Reservoir studies,
- ◆ Raw water intake pump calculations,
- ◆ Master balancing reservoir (MBR),
- ◆ Water treatment plant design, Capacity calculations,
- ◆ Elevated service reservoirs,
- ◆ Distribution pipeline networks and hydraulics.
- ◆ Our expertise also includes smart water grid design with SCADA systems.

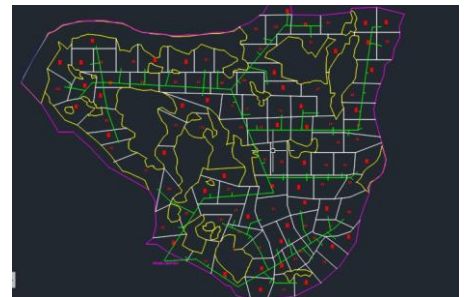
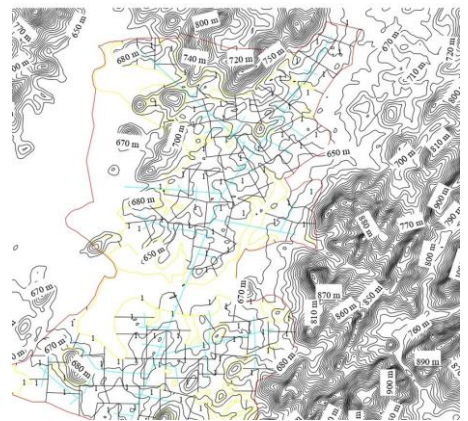


## 2. LIFT IRRIGATION SCHEME

Lift irrigation schemes are instrumental in stabilizing agricultural production in the years of drought and increase food production. For successful functioning the LIS requires appropriate techniques, planning, designing, execution under technical guidelines, understanding the importance **PHANS4 CONSULTING** has proven expertise in all types of lift irrigation consulting projects with integrated and customized service to clients in the field of irrigation.

### OUR SERVICES INCLUDE

- ◆ Tender Support (Pre-bid Review, Meetings, Queries, Bid submissions) GIS
- ◆ Mapping
- ◆ Survey and Investigations Intake systems,
- ◆ Pump House design and selection,
- ◆ Rising Mains/Pressure Mains (DI, MS Pipes)
- ◆ Gravity mains (DI, MS pipes, HDPE),
- ◆ Delivery Chamber/BPT
- ◆ Distribution network planning,
- ◆ Control and Instrumentation design of entire scheme,
- ◆ Major and Minor outlets with Locations,
- ◆ Bill of Quantities,
- ◆ Project management consulting.

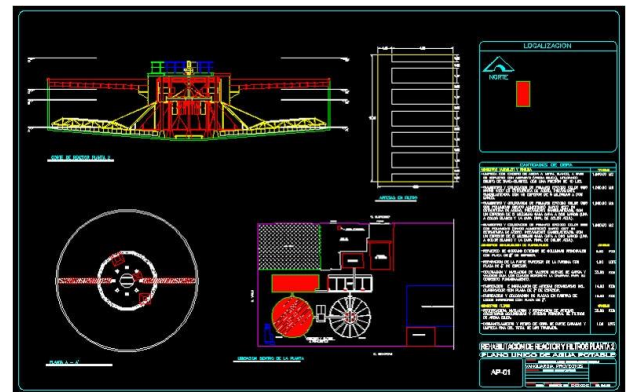


### 3. WATER AND EFFLUENT TREATMENT PLANT

PHANS4 CONSULTING engineers has proven experience and independent consultancy on water and waste water treatment in enhancing the efficiency of the plant while adding extra safety to the environment. **PHANS4 CONSULTING** has focused in improving operational flexibility and reliability mastered the design and development of efficient systems for industrial water treatment and effluent treatment plants.

#### OUR SERVICES INCLUDE

- Site Study & Design engineering,
- Technologies involved,
- Preparation of feasibility study (WTP, ETP),
- Detailed project reports (WTP, ETP),
- Transaction advisory services (WTP, ETP),
- Source,
- Water quality report (pH, TDS, TSS, Hardness, Cl, SO<sub>4</sub>, Turbidity, COD)
- Design and Supply and Erection and Commissioning
- Operations and Maintenance (WTP, ETP).

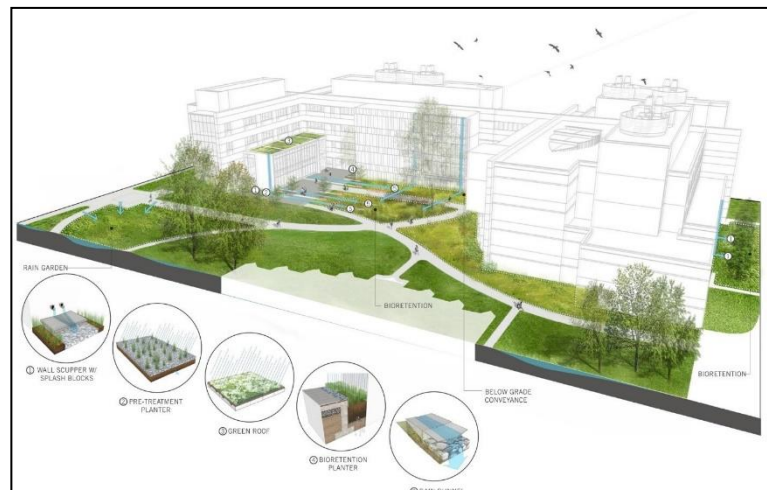
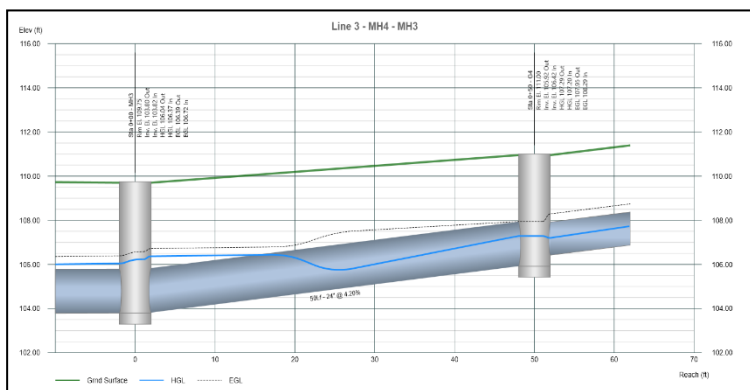


## 4. STORM WATER DRAINAGE SYSTEM

Storm water management is the effort to reduce the run off of rainwater and improvement of water quality. Together we provide a greater understanding of the characteristics of storm water run-off, sediment detention design, water quality impacts and management of non-storm water potential pollutant sources. Over the years **PHANS4 CONSULTING** has developed design models for efficient storm water drainage systems for various government bodies, SEZ's, Real-estate projects, ports across India.

### OUR SERVICES INCLUDES

- Identifying the urban flooded areas using latest technologies,
- Data collections,
- Conducting surveys and investigations.
- Preparation of storm water drainage network,
- Hydraulic designs of storm water drainage locations like inlet locations, Manholes,
- Pumping of storm runoffs,
- Outfall structures and natural streams
- Conducting rainfall analysis,
- Design of rain water harvesting systems.

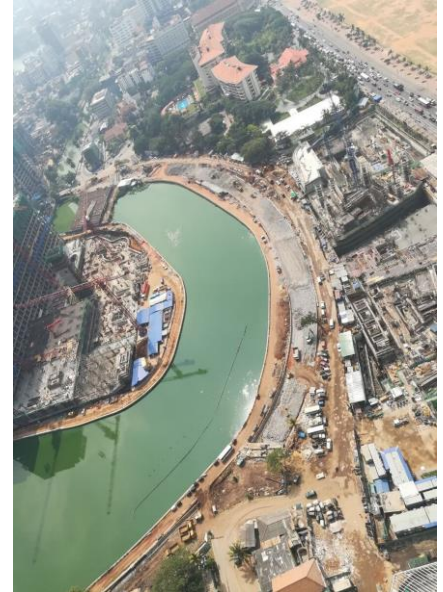


## 5. LAKE DEVELOPMENT

Lake development consulting is considered the one of the finest expertise for PHANS4 Consulting, as we have mastered the design, execution and operations and maintenance of lake development and lake rejuvenation.

### OUR SERVICES INCLUDE

- Detailed project report for Strengthening and Beautification of Micro Irrigation and ZP Tanks,
- Bund improvements & Pitching work,
- Gravity main pipeline network,
- Topographical survey maps of the area Village map, tank details,
- Rainfall details,
- Reconnaissance survey for tank silt,
- Bund details & Waste weir details,
- Preparation of preliminary designs,
- Drawings & detail estimates required for the desilting,
- Improvements of tank, waste weir, etc., and structures detail design,
- Estimates and drawings,
- Detailed alignment survey,
- Detailed Engineering,
- Drawings for Gravity main pipe including structures coming across,
- Pipe diameter,
- Structures including hydraulic particular.

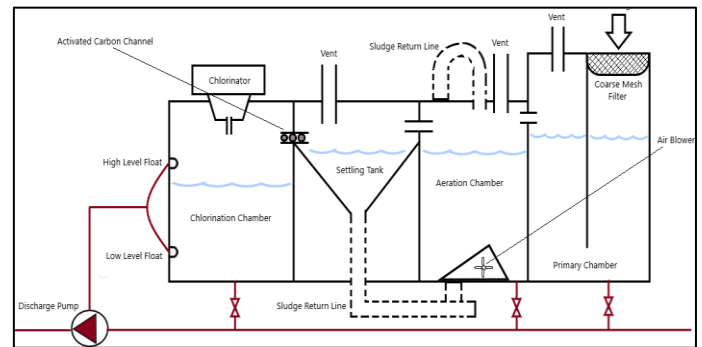


## 6. SEWAGE AND SEWERAGE TREATMENT

PHANS4 CONSULTING has immense experience in Sewage Treatment Plants consulting for cities and townships, municipal organizations and private sectors through the design, engineering, and commissioning of Sewage Treatment Plants. Our treatment plants are developed on the basis of our client's requirement as Phans4 consulting has mastered the engineering design for sewerage treatment systems over the years.


### OUR SERVICES INCULDE

- Develop forecasting models for estimation of sanitary sewage,
- Hydraulics of sewer,
- Design of sewer systems, Layouts,
- Components of the system, Sizing,
- Design and selection of sewer appurtenances,
- Suggesting the material for construction of sewers,
- Structural design of sewer.



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## END OF THE DOCUMENT



CONTACT: -  
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