GOVERNMENT OF RAJASTHAN
Rajasthan Urban Sector Development Program

BIDDING DOCUMENT
for the work of

Construction, Commissioning and Operation of Fecal Sludge Treatment Plant of capacity 10 m³/day at Khandela town (Rajasthan)

Part 1– Drawings –Volume 2

Issued on: 6th August, 2018

Invitation for Bids No.: RUSDP/BMGF/04

Package No.: RUSDP/ BMGF/Khandela/01

Employer: Local Self Government Department (LSGD), Government of Rajasthan
Represented by Rajasthan Urban Infrastructure Development Project (RUIDP)

Country: India
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DRAWING TITLE:
Faecal Sludge Treatment Plant, Khandela, Rajasthan

PROJECT:
Capacity Building Support for Innovative Sanitation Solution for Rajasthan

NOTE:
This drawing is indicative and for bidding purpose only.
**Integrated Settler and Anaerobic Filters**

- 1410
- 525
- 265

**Planted Drying Bed**

- FLOOR LVL:+92.065
- 1000
- 200
- 300
- 100
- 250
- 800
- 150
- 375
- 450

**Planted Gravel Filter**

- 100mm Thk P.C.C in M5(1:4:8)
- 75 mm Thk R.C.C
- 200 mmThk R.C.C wall

**Plan of Polishing Pond**

- PP inlet
- lvl +92.565 m
- PP outlet
- lvl +92.51 m

- EGL + 94.00 m
- Filter materials
  - 75 mm thk precast perforated slab
  - 100mm
  - In hole in 160mm
  - PVC desludging pipe
  - 4" Ø PVC vertical baffle pipe
- 4'' dia PVC pipe

- 4'' dia gas vent pipe
- Precast manhole
- cover slab
- ABR Inlet
- lvl + 93.14  m
- AF Inlet
- lvl + 93.55 m
- AF Inlet
- lvl + 93.24 m

- 150 mm thck RCC top slab
- 500mm wide outlet distribution channel
- 4'' dia PVC pipe with vertical Tee
- Distribution chamber
- outlet lvl +93.43 m
- AF outlet
- lvl + 93.45 m

- Filter materials
  - size 16 - 20 mm
  - size 90 - 120 mm

- Settler Inlet
- lvl   +93.75m

- 1:4:8 PCC bed
- lvl  +91.33 m

- 200mm thk RCC wall of Grade M25

- 40mm down size soling
- 100mm thk RCC wall of Grade M25 (Cinder Material)

- 20mm thk plastering
- CM 1:5

- 6'' Ventilation in Baffle wall

- 20mm thk aggregate/pebbles
- 130mm height at side
- &200mm height at  centre

- Smooth plastered 1:3:6 PCC
- filling of 75mm thk at the centre and 200mm thk on the sides

- 75 mm thick cover slabs
- 6'' dia UPVC Inlet pipe

- 230 mm thick BBM wall

- Screen chamber Inlet
- lvl + 96.525 m

- 12-16mm stone aggregate/pebbles 150mm tk
- 1:3:6 PCC bed 100 tk
- lvl +  92.725m

- 6'' dia PVC perforated pipe
- lvl + 94.00 m

- 1-2mm course sand
- for 300mm thk
- 40 mm down size Soling 400 tk
- lvl + 93.50 m

- 6-8 mm stone aggregates
- for 100mm thk
- 1:3:6  PCC bed 100mm tk
- lvl + 93.90 m

- Screen Chamber Outlet
- lvl + 95.976 m

- Road lvl + 95.876 m
- EGL + 94.00 m

- 6'' dia PVC perforated
- lvl + 94.083 m

- 4'' dia Vent Pipe

- Man hole cover of size
- 1640 x 1120 x 50 mm

- PDB Inlet
- lvl + 95.876 m

- BBM wall
- 300mm thk

- Screen chamber outlet
- lvl + 95.976 m

- M20 grade RCC base slab

- HPGF DC inlet
- lvl +93.38 m
Cross Section of A-A

To PDB

Screen Chamber Outlet
lvl + 95.976 m

Screen Chamber Inlet
lvl + 95.525 m

ROSS LVL:+95.876

20 mm hole on iron plate
for collection of solid waste

45°

20 mm bar spacing with bar thickness of 5 mm

150mm Thk R.C.C Bend

Screen chamber Inlet
lvl + 96.525 m

20mm thk plastering
CM 1:5

F.G. LVL:+95.351

BBM Wall in M1(1:5) Cement Mortar

Screen Bar Details

20 mm hole on iron plate
for collection of solid waste

20 mm bar spacing with bar thickness of 5 mm

300mm Thk RCC Slab

Screen cross section A-A

Cross Section of B-B

Screen Chamber Outlet
lvl + 95.976 m

Screen Chamber Inlet
lvl + 96.525 m

ROSS LVL:+95.876

20 mm hole on iron plate
for collection of solid waste

45°

20 mm bar spacing with bar thickness of 5 mm

150mm Thk R.C.C Bend

Screen chamber Inlet
lvl + 95.525 m

20mm thk plastering
CM 1:5

F.G. LVL:+95.351

BBM Wall in M1(1:5) Cement Mortar

300mm Thk RCC Slab

Screen Bar Details

20 mm hole on iron plate
for collection of solid waste

20 mm bar spacing with bar thickness of 5 mm

360 mm thk PDB wall

Plan of Screen Chamber
Plan of Planted Drying Bed

Cross Section of C-C

Note: This drawing is indicative and for bidding purposes only.
Cross Section of A-A

Cross Section of B-B

NOTE: This drawing is indicative and for bidding purpose only.
Plan of Integrated Settler and Anaerobic Filters

Cross section @ A-A
Plan of Manhole

Details of Perforated slab

Cross section @ B-B

Precast manhole cover slab

Top Slab lvl + 94.22 m

150 mm thick RCC top slab

Precast manhole cover slab

4" dia PVC pipe with vertical Tee

20mm thick plastering CM 1:3

Filter materials

40mm down size soiling

150mm thick

200mm thick RCC base slab

225mm thick RCC wall of Grade M25

Base Slab +91.305 m

100mm thick 1:4:8 PCC bed

75 mm thick precast perforated slab

NOTE: This drawing is indicative and for bidding purpose only.
PLANTED GRAVEL FILTER

Plan of Planted Gravel Filter

Section @ A-A

Section @ B-B
Plan of Polishing Pond

- **PP inlet**: lvl +92.565 m
- **PP outlet**: lvl +92.51 m
- **RCC wall**: 200mm thick
- **12mm thick plastering CM 1:5**
- **SUMP of size 0.5x0.5x0.2 m**
- **150mm Thk RCC Bed Typ**
- **500 SUMP of size 0.5x0.5x0.2 m**

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**PROJECT:**
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OPERATOR ROOM

D- Door - 1200 X 2100
D1- Bathroom door - 800 X 1900
W- Window - 900 X 1200
V- Ventilator- 600 X 400
(500 mm below bottom of the roof)
GUARD ROOM

Plan

Front Elevation

Section A-A

D- Door - 1200 X 2100
D1- Bathroom door - 800 X 1900
W- Window - 900 X 1200
ROAD SECTION

TYPICAL CROSS SECTION OF BLACKTOP ROAD

SDBC :- Semi Dense Bituminous Concrete
BM :- Bituminous Macadam
WMM :- Wet Mix Macadam
GSB :- Granular sub-base
RAMP SECTION

ENTRY Road (RAMP 1)

FGL + 93.475m

Road lvl + 95.876 m

EGL + 93.475m

Slope (1:1.6)

Compacted Soil

EXIT Road (RAMP 2)

FGL + 93.475m

Road lvl + 94.00 m

EGL + 93.475m

Slope (1:1.6)

Compacted Soil

INTERIOR Road (RAMP 3)

FGL + 93.51 m

Road lvl + 95.876 m

EGL + 93.475m

Compacted Soil

NOTE:
This drawing is indicative and for bidding purpose only.
Storm water drain

U-shaped drain

Section 1
- 100mm Thk P.C.C in M5(1:4:8)
- 100thk Brick wall
- Road lvl + 95.892 m
- Bottom lvl + 95.222 m

Section 2
- 100mm Thk P.C.C in M5(1:4:8)
- 100thk Brick wall
- Road lvl + 95.768 m
- Bottom lvl + 95.168 m

Section 3
- 100mm Thk P.C.C in M5(1:4:8)
- 100thk Brick wall
- Road lvl + 95.768 m
- Bottom lvl + 94.948 m

Section 4
- 100mm Thk P.C.C in M5(1:4:8)
- 100thk Brick wall
- Road lvl + 93.892 m
- Bottom lvl + 93.222 m

Section 5
- 100mm Thk P.C.C in M5(1:4:8)
- 100thk Brick wall
- Road lvl + 93.892 m
- Bottom lvl + 93.032 m

Section 6
- 100mm Thk P.C.C in M5(1:4:8)
- 100thk Brick wall
- Road lvl + 93.892 m
- Bottom lvl + 93.032 m

NOTE: This drawing is indicative and for bidding purpose only
RETAINING WALL

230mm Thk Free Standing BBM Wall in CM M1(1:5) up to 1.8m Height Max Depending upon Site Condition

230mm Thk R.C.C Cantilevered Retaining Wall

F.G. LVL:+93.475

ROAD LVL:+95.876

230mm Thk P.C.C in M5(1:4:8)

100mm Thk Free Standing BBM Wall in CM M1(1:5) up to 1.8m Height Max Depending upon Site Condition

100mm Thk P.C.C in M5(1:4:8)

Natural Soil/Rocky

EARTHERN SIDE

Section of Retaining Wall
REGISTER

Plan of ISAF and PGF inlet Register

Section A-A for ISAF and PGF inlet Register

Clients: Rajasthan Urban Infrastructure Development Project

Sub Consultant: CDD Society

Faecal Sludge Treatment Plant, Khandela, Rajasthan
SITE CONTOUR MAP

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