CONSTRUCTION OF LIKONI – MBUTA MOSQUE PIPELINE (LINE SC24)

TENDER No. [TO BE INSERTED]

BIDDING DOCUMENT

VOLUME II

CONTENTS

ENGINEERING DRAWINGS

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Employer’s Representative:
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MAY 2019
<table>
<thead>
<tr>
<th>DRG NO.</th>
<th>DESCRIPTION</th>
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<tr>
<td>M410/MO/SM/LP/01</td>
<td>LOCATION AND LAYOUT PLAN OF PROPOSED LIKONI - MBUTA MOSQUE PIPELINE (LINE SC24)</td>
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<tr>
<td>M410/MO/SM/SC24/01</td>
<td>LIKONI - MBUTA MOSQUE PIPELINE (LINE SC24) SHEET 1 OF 4</td>
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<td>M410/MO/SM/SC24/02</td>
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1. Contour levels are in meters at one meter intervals.
2. Grid values are in meters at 100-meter intervals.
3. Geological conditions indicated on drawing are for general guidance only.
4. Minimum pipeline slopes to be 1:500.
5. Drawing to be read in conjunction with standard drawings.
6. All pipeline fittings to be confirmed on site during setting out.

Legend:
- DAV
- GV
- TP10

NOTES:
- Plan & Longitudinal Section

Project:
- Likoni - Mbuta Mosque Pipeline (Line SC24)

Design:
- Mangat I.B Patel (MIBP) Limited

Contact:
- MIBP

Date:
- May 2019

Scale:
- Plan & Longitudinal Section: 1:4000, 1:400

Drawing No.:
- M410/MO/SM/SC24/01

CONSTRUCTION OF LIKONI - MBUTA MOSQUE PIPELINE (LINE SC24)

Coast Water Services Board

The Chief Executive Officer

P.O. Box 90417 - 80100
Mombasa, Kenya

E-mail: mibp.nairobi@mibpp.com
Tel: +254-2-2710500
1. Contour levels are in meters at one-meter intervals.
2. Grid values are in meters at 100-meter intervals.
3. Geological conditions indicated on the drawing are for general guidance only.
4. Minimum pipeline slopes to be 1:500.
5. Drawing to be read in conjunction with standard drawings.
6. All pipe fittings to be confirmed on site during setting out.

**PLAN**

**LONGITUDINAL SECTION**

Type and size of pipe:
- DN 700 Ferrous pipe to PN 16
- DN 800 Ferrous pipe to PN 16

Geological conditions:
- Loam soil underlain with mixed coral and murrum

NOTES:
- REV. 0
- Drawn by: [Signature]
- Date: MAY 2019
- Approved by: [Signature]
- Checked by: [Signature]
- Scale: H- 1:4000, V- 1:400

Contractor:
- MANGAT I.B PATEL (MIBP) LIMITED
- P.O. BOX 48674, 00100-GPO, NAIROBI, KENYA
- E-MAIL: mibp.nairobi@mibpp.com
- TEL: +254-2-2710500

Coastal Water Services Board
The Chief Executive Officer
Construction of Likoni - Mbuta Mosque Pipeline (SC24)

Dwg No. W4115MO/MISO/SC2402

Sheet 2 of 4
1. Contour levels are in meters at one meter intervals.
2. Grid values are in meters at 100 meter intervals.
3. Geological conditions indicated on drawing are for general guidance only.
4. Minimum pipeline slopes to be 1:500.
5. Drawing to be read in conjunction with standard drawings.
6. All pipe fittings to be confirmed on site during setting out.
7. The survey was based on the datum BM197 with the following coordinates and elevation.

**TP10**

- DAV-01
- GV

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<tr>
<th>EASTING</th>
<th>NORTHING</th>
<th>ELEVATION</th>
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**LONGITUDINAL SECTION**

**NOTES:**

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<th>Coordinate System</th>
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<th>Datum</th>
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**DRG No.** M410/MO/SM/SC24/03

**CONSTRUCTION OF LIKONI - MBUTA MOSQUE PIPELINE (SC24)**

**THE CHIEF EXECUTIVE OFFICER**

**COAST WATER SERVICES BOARD**

**MANGAT I.B. PATEL (MIBP) LIMITED**

**P.O. BOX 48674, 00100-GPO, NAIROBI, KENYA**

**E-MAIL: mibp.nairobi@mibpp.com**

**TEL: +254-2-2710500**

**PLAN & LONGITUDINAL SECTION**

**LIKONI - MBUTA MOSQUE PIPELINE (LINE SC24)**

**SHEET 3 OF 4**
CONTOUR LEVELS ARE IN METERS AT ONE METER INTERVALS

GRID VALUES ARE IN METERS AT 100 METER INTERVALS

GEOLOGICAL CONDITIONS INDICATED ON DRAWING ARE FOR GENERAL GUIDANCE ONLY

MINIMUM PIPELINE SLOPES TO BE 1:500

DRAWING TO BE READ IN CONJUNCTION WITH STANDARD DRAWINGS

ALL PIPE FITTINGS TO BE CONFIRMED ON SITE DURING SETTING OUT

V.J.
WO-01
DAV-01
WM
GV
FH

LINE SC24 - 30° & 11.25° BEND

CH. 0+019.59
CH. 0+980.00
LINE SC24 - TEE & GV (WO-01)

CH. 3+060.00
LINE SC24 - TEE & DAV-02

CH. 0+260.00
LINE SC24 - TEE & DAV-01

CH. 1+002.48, 1+097.13, 1+149.71 & 1+436.71
LINE SC24 - 11.25° H.BEND

CH. 1+809.33, 1+871.76, 2+064.34, 2+361.18, 2+624.05 & 2+843.14
LINE SC24 - 11.25° H.BEND

LINE SC24 - 22.5° & 11.25° BEND

CH. 1+024.04 & 1+336.62

LINE SC24 - 22.5° BEND
CH. 1+046.08

LINE SC24 - REDUCER
CH. 1+680.00
LINE SC24 - 22.5° BEND

CH. 2+884.60 & 2+956.10

LINE SC24 - 22.5° & 11.25° BEND

CH. 3+173.77

CH. 3+188.49
LINE SC24 - GV & BF
STANDARD DRAWINGS
NOTES
300 TO 400 MM HAVING SCHEDULE 40 STEEL SAVES; ORHINO; LOSABA AND DLL OF A PERMANENT PIPE TRENCH SHOWN HOT TO EXCEED 1200MM.
BACKFILL WITH MATERIALS NOT EXCEEDING 300 MM UPTO FINISHED GROUND LEVEL, EACH LAYER MUST BE COMPACTED TO LIST VESSELS.
MECHANICAL COMPACTION EQUIPMENT MAY BE USED IF APPROVED BY ENGINEER.
BACKFILL WITH SOIL APPROVED BY THE ENGINEER 1:100. SOIL THOROUGHLY COMPACTED BY HAND TO GIVE A UNIFORM INVERT LEVEL.
BACKFILL WITH SOIL APPROVED BY THE ENGINEER, IN LAYERS NOT EXCEEDING 300MM UPTO FINISHED GROUND LEVEL, EACH LAYER BEING WELL COMPACTED TO LIMIT VOIDS.
THOROUGHLY COMPACT SOIL, TAMPING EQUALLY ON EITHER SIDE AND ALONG (OVER TOP) OF PIPE ONE HAND TAMPING TO BE USED.
WHERE SHARP PROJECTIONS, TREE ROOTS OR OTHER UNDESIRABLE HAZARDS ARE ENCOUNTERED AT TRENCH JUNCTION LEVEL, A FURTHER 100mm DEPTH OF SOIL MIGHT BE REQUIRED.
BACKFILL WITH SOIL APPROVED BY THE ENGINEER OPT TRENCH/channel, TAMPING EQUALLY ON EITHER SIDE AND ALONG (OVER TOP) OF PIPE. ONE HAND TAMPING TO BE USED.
SULLY REQUIRED TO ZONE 2 EXCEPT NO EXCESS TAMPING IS PERMITTED OVER PIPE.

TYPICAL TRENCH DETAIL FOR RETICULATION PIPES
(UPVC OR C.L. FERROUS PIPES)

TYPICAL ROAD PIPE CROSSING DETAIL FOR ROAD PIPES

TYPICAL DETAIL OF PIPE CROSSING SEASONAL STREAM/DRAINAGE DITCH

PIPE DIAMETER SCHEDULES

DETAILS OF FILTER MEDIA IN RAPID SAND FILTERS

NOTE
THE ABOVE PIPE SIZES ARE BASED ON THE CURRENT REQUIREMENTS
OF NETWORK CWC AND ARE FOR THE READER'S INFORMATION.
STANDARD DRAWINGS ARE DRAWN TO SCALE 1:50. ALL LAYERS EXCEPT 12mm, ARE TO BE DRAWN TO SCALE 1:20.
CLASS 15/20 BED AND SURROUND WITH 150mm THICK CONCRETE
CONCRETE OGEE PIPE SLEEVE

OTHERWISE STATED
STANDARD DRAWINGS
TYPICAL TRENCH AND PIPE CROSSING FOR WATER PIPES

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CLASS 15/20 BED AND SURROUND WITH 150mm THICK CONCRETE
CONCRETE OGEE PIPE SLEEVE

ABBREVIATIONS
B.S. - British Standard
uPVC - Unplasticised Polyvinyl Chloride
C.L. - Cast Iron
C.S. - Concrete
KS - Kenya Standard
R.S.R - R.S.R
P.G.M - P.G.M

ARTICLES AND DRAWINGS ARE BASED ON THE CURRENT REQUIREMENTS
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CLASS 15/20 BED AND SURROUND WITH 150mm THICK CONCRETE

THE CHIEF EXECUTIVE OFFICER
COAST WATER SERVICES BOARD
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NAIROBI, KENYA
TEL: +254-2-2710500

Drawn by:
R.S.R
P.G.M

REV. 0

STANDARD DRAWINGS
TYPICAL TRENCH AND PIPE CROSSING FOR WATER PIPES

NOTE
THE ABOVE PIPE SIZES ARE BASED ON THE CURRENT REQUIREMENTS
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