

ケニア共和国
エネルギー省
ケニア配電公社

ケニア共和国
ナクル市及びその周辺並びにモンバサ市周辺
配電設備整備計画

先行公開版

協力準備調査報告書

平成 31 年 3 月
(2019 年)

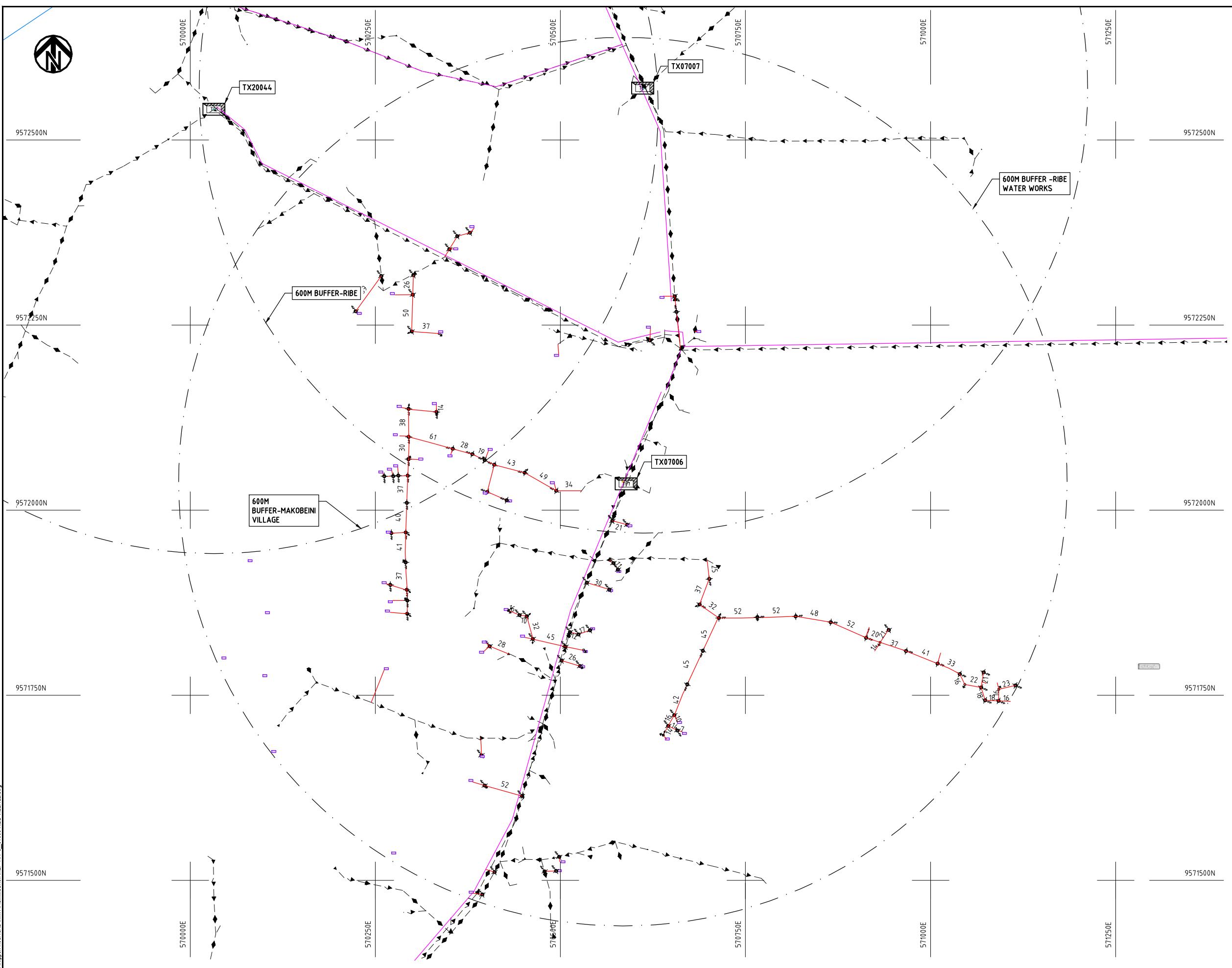
独立行政法人
国際協力機構（JICA）

日本工営株式会社

産業
JR (P)
19-005

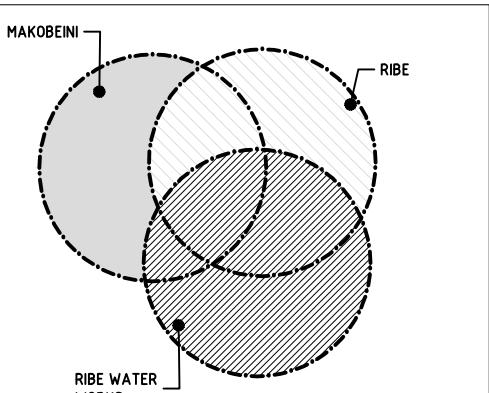
キリフィ郡

Maximization



NOTES:

1. EXACT LOCATIONS OF POWER POLES TO BE DETERMINED ON SITE BY THE ENGINEER.
 2. CONCRETE/ WOODEN POLES TO BE DETERMINED ON SITE BY THE ENGINEER.
 3. LENGTH OF POLES TO BE DETERMINED ON SITE BY THE ENGINEER.
 4. PME TO BE AFTER EVERY 200m INTERVAL OR AFTER 4 SPANS.
 5. POLES NOT SHOWN WHERE PME OR LV EARTH INTERSECT FOR CLARITY.



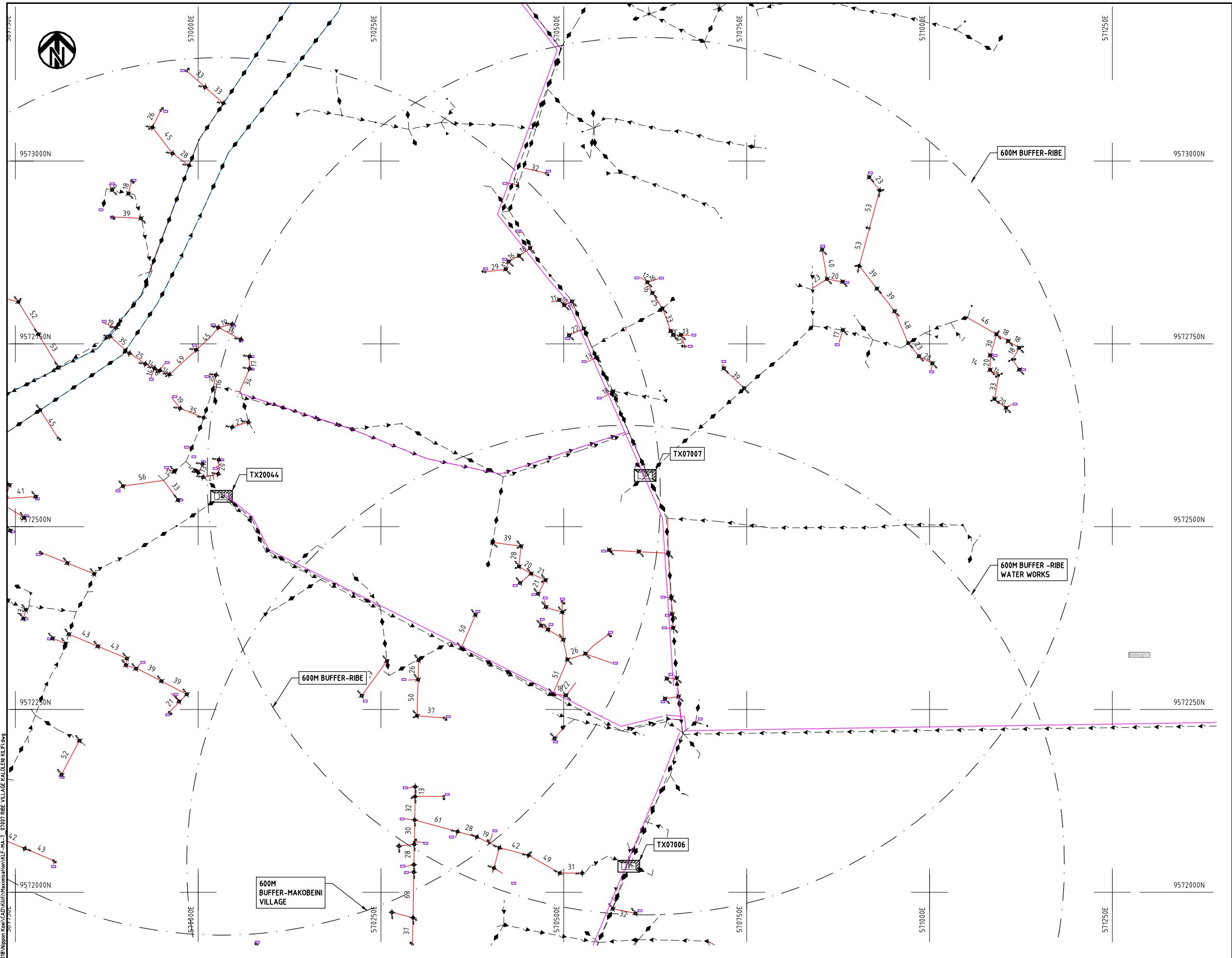
KEY PLAN

LEGEND

- | | |
|--|-----------------------------------|
| | HOUSEHOLDS/ BUILDINGS |
| | PROPOSED DISTRIBUTION LINE |
| | EXISTING 11kV LINE |
| | EXISTING 33kV LINE |
| | EXISTING DISTRIBUTION LINE |
| | MAXIMISATION TRANSFORMER |
| | EXTENSION TRANSFORMER |
| | OTHER EXISTING TRANSFORMER |
| | WOODEN ELECTRIC POLES |
| | CONCRETE ELECTRIC POLES |
| | LV-EARTH |
| | PME -PROTECTIVE MULTIPLE EARTHING |
| | STAY |

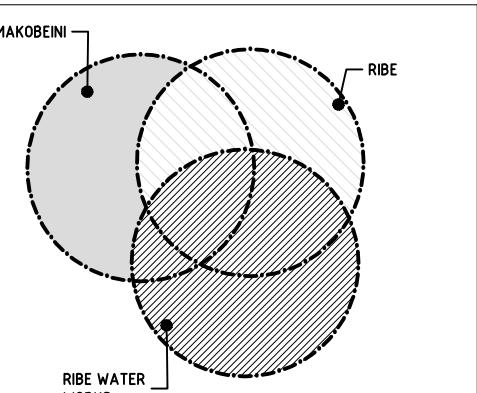
SCALE 1 : 5000 (A3)

PROJECT: THE PREPARATORY SURVEY ON THE PROJECT FOR IMPROVEMENT OF POWER DISTRIBUTION SYSTEM IN THE REPUBLIC OF KENYA	DRAWING TITLE	DRAW. NO.	PREPARED BY	A.AKBAR
	COUNTY: KILIFI	KLF-MA-6	CHECKED BY	S.MAETA
	SCHEME: MAXIMIZATION		APPROVED BY	Y.TANAKA
	PROJECT SITE: 07006-RIBE VILLAGE		DATE	10th SEP 2018



NOTES:

1. EXACT LOCATIONS OF POWER POLES TO BE DETERMINED ON SITE BY THE ENGINEER.
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KEY PLAN

LEGEND

 HOUSEHOLDS/ BUILDINGS
 PROPOSED DISTRIBUTION LINE
 EXISTING 11kV LINE
 EXISTING 33kV LINE
 EXISTING DISTRIBUTION LINE

 MAXIMISATION TRANSFORMER

 EXTENSION TRANSFORMER

 OTHER EXISTING TRANSFORMER

 WOODEN ELECTRIC POLES

 CONCRETE ELECTRIC POLES

 LV-EARTH

 PME -PROTECTIVE MULTIPLE EARTHING

 STAY

SCALE 1 : 5000 50 0 50 100 150 200 250m (A3)

1000

PROJECT:

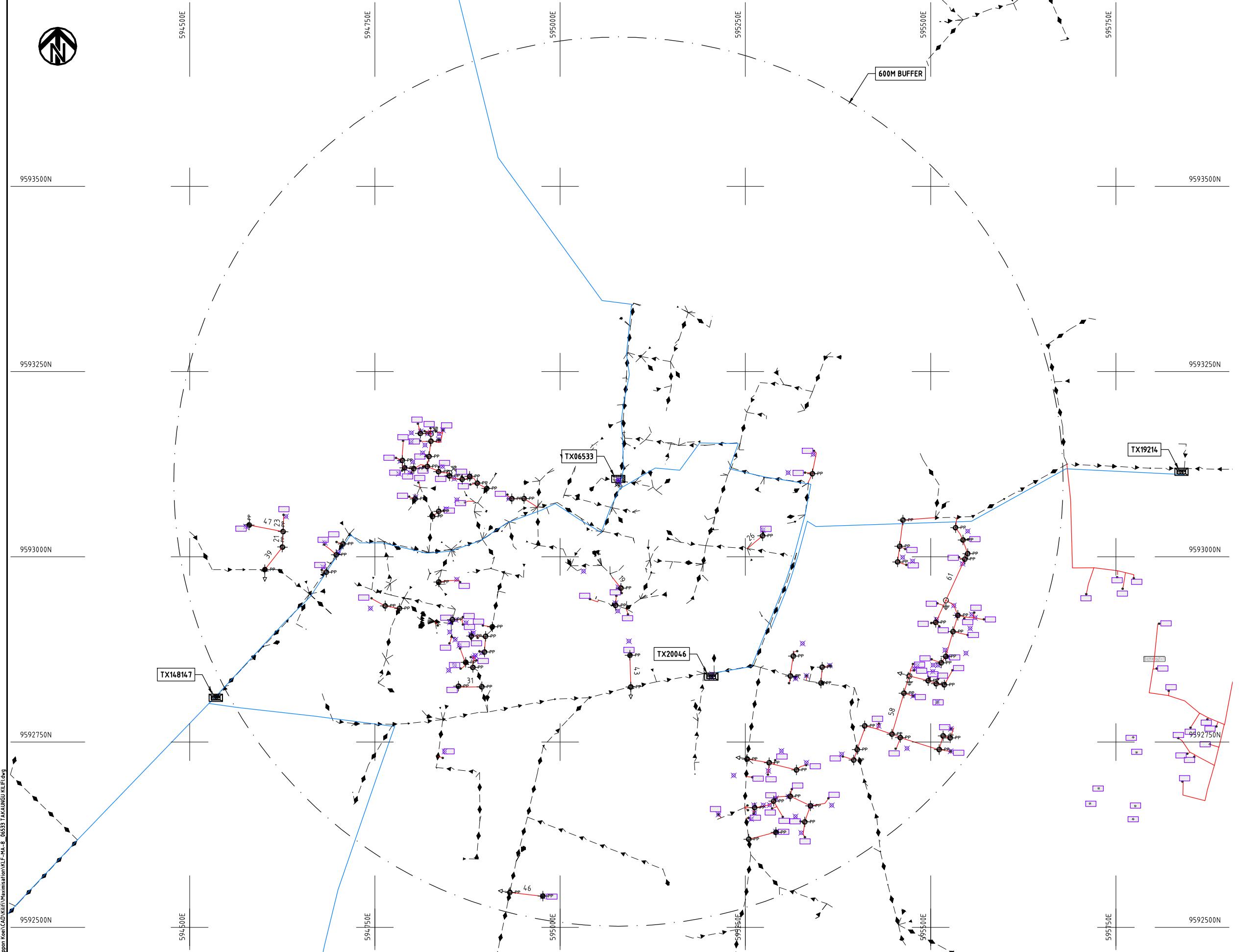
THE PREPARATORY SURVEY ON THE PROJECT FOR IMPROVEMENT OF POWER DISTRIBUTION SYSTEM IN THE REPUBLIC OF KENYA

DRAWING TITLE

DRAW.
KLF-MA-

PREPARED BY	A.AKBAR
CHECKED BY	S.MAETA
APPROVED BY	Y.TANAKA
DATE	10th SEP 2018

 NIPPON KOEI CO., LTD

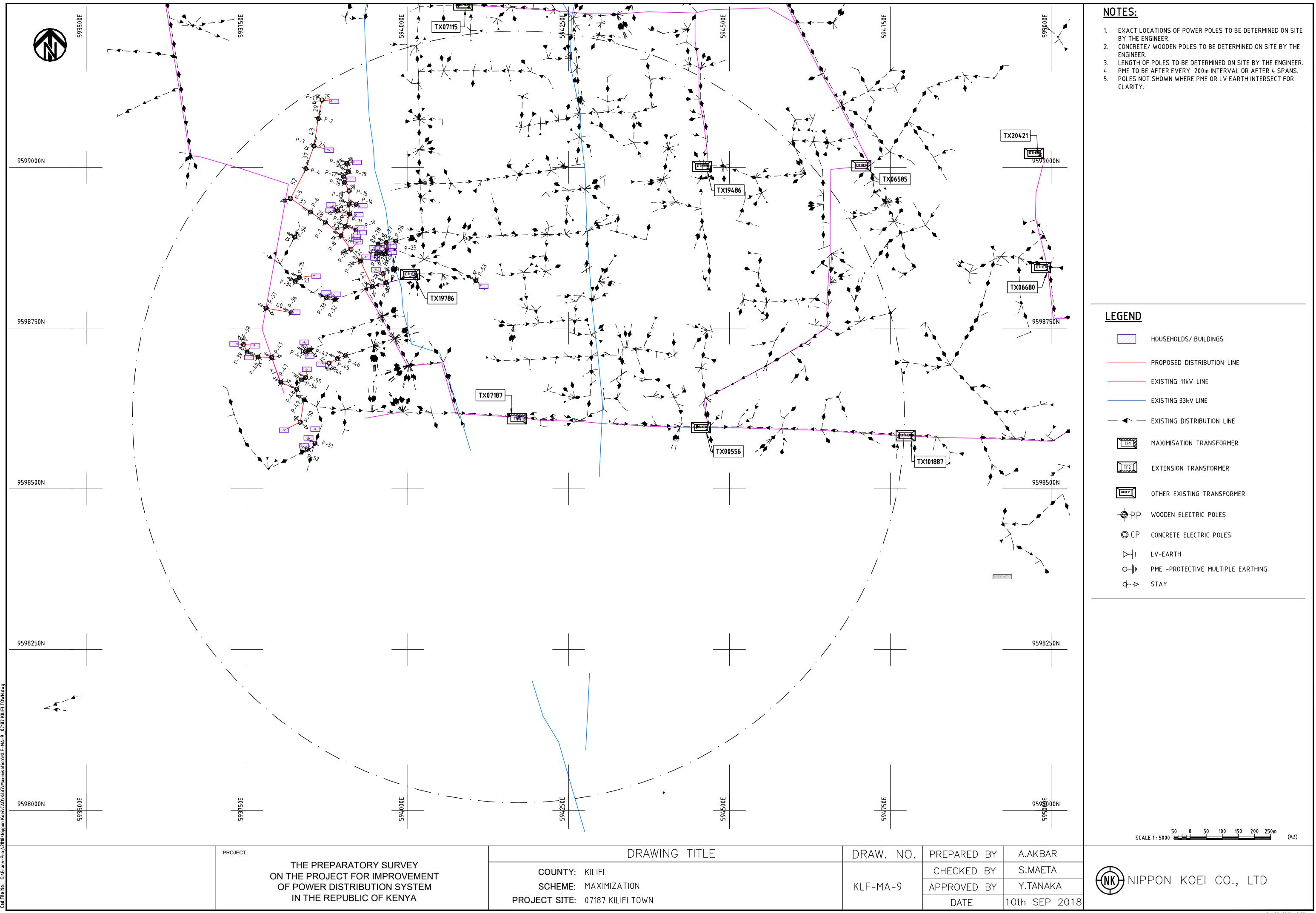
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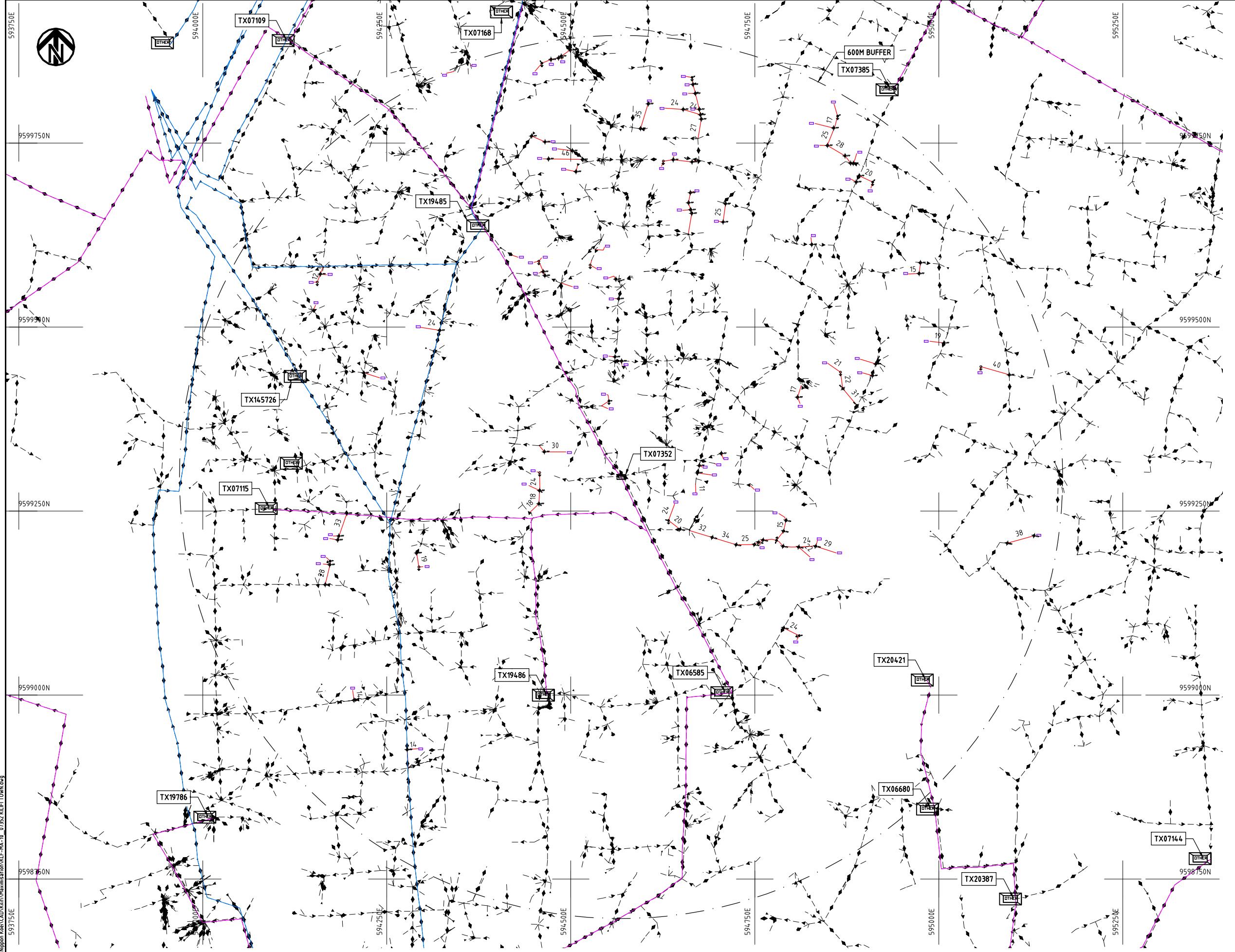
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LEGEND

- [Hatched Box] HOUSEHOLDS/ BUILDINGS
- [Red Line] PROPOSED DISTRIBUTION LINE
- [Pink Line] EXISTING 11kV LINE
- [Blue Line] EXISTING 33kV LINE
- [Dashed Line] EXISTING DISTRIBUTION LINE
- [Transformer Icon] MAXIMISATION TRANSFORMER
- [Transformer Icon] EXTENSION TRANSFORMER
- [Transformer Icon] OTHER EXISTING TRANSFORMER
- [Wooden Pole Icon] WOODEN ELECTRIC POLES
- [Concrete Pole Icon] CONCRETE ELECTRIC POLES
- [Earth Symbol] LV-EARTH
- [PME Symbol] PME -PROTECTIVE MULTIPLE EARTHING
- [Stay Symbol] STAY

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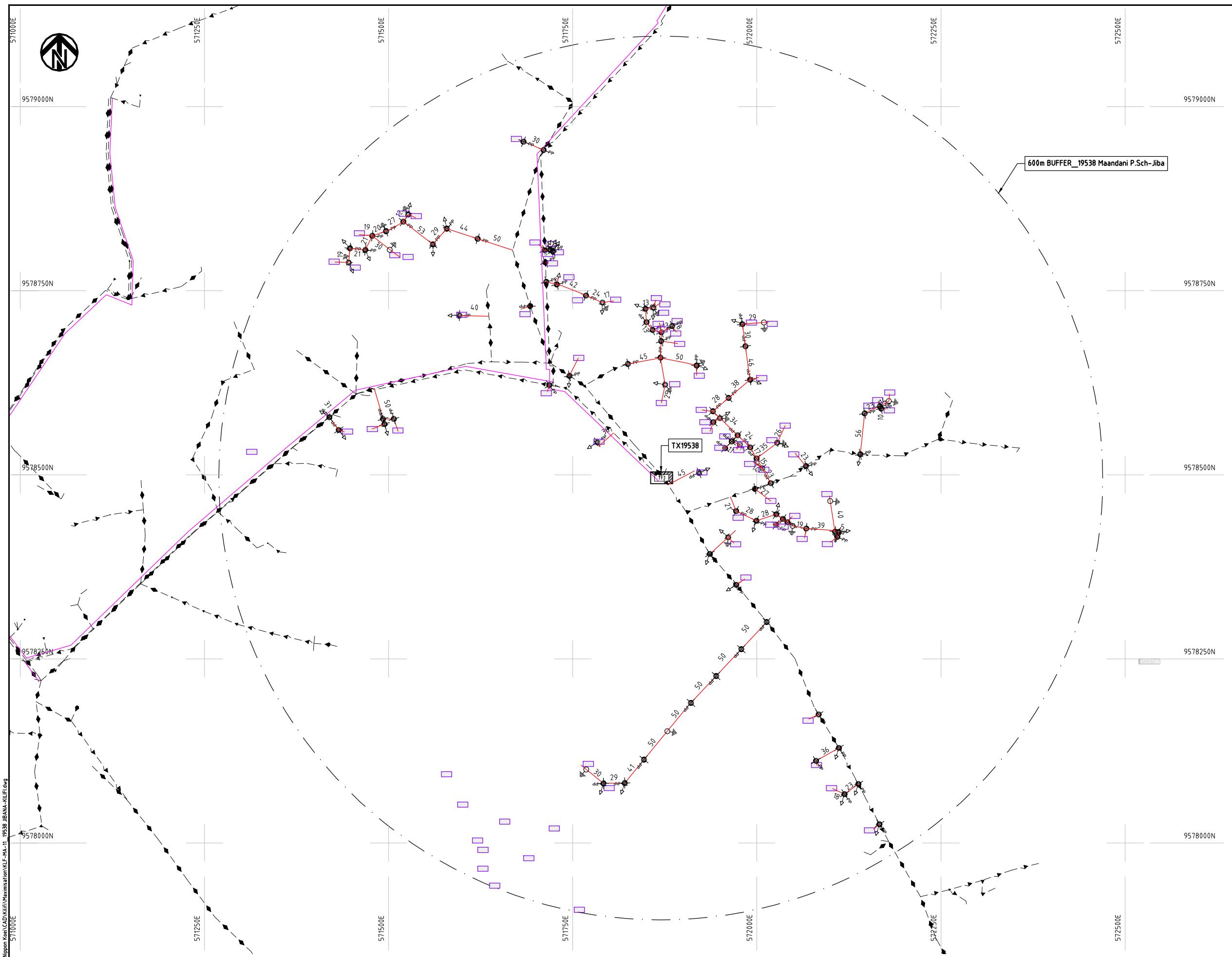
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LEGEND

- [Symbol: purple square] HOUSEHOLDS/ BUILDINGS
- [Symbol: red line] PROPOSED DISTRIBUTION LINE
- [Symbol: magenta line] EXISTING 11kV LINE
- [Symbol: blue line] EXISTING 33kV LINE
- [Symbol: dashed line] EXISTING DISTRIBUTION LINE
- [Symbol: TF1] MAXIMISATION TRANSFORMER
- [Symbol: TF2] EXTENSION TRANSFORMER
- [Symbol: OTHER] OTHER EXISTING TRANSFORMER
- [Symbol: PP] WOODEN ELECTRIC POLES
- [Symbol: CP] CONCRETE ELECTRIC POLES
- [Symbol: triangle] LV-EARTH
- [Symbol: circle with vertical line] PME -PROTECTIVE MULTIPLE EARTHING
- [Symbol: diamond with vertical line] STAY

SCALE 1:5000 50 0 50 100 150 200 250m (A3)



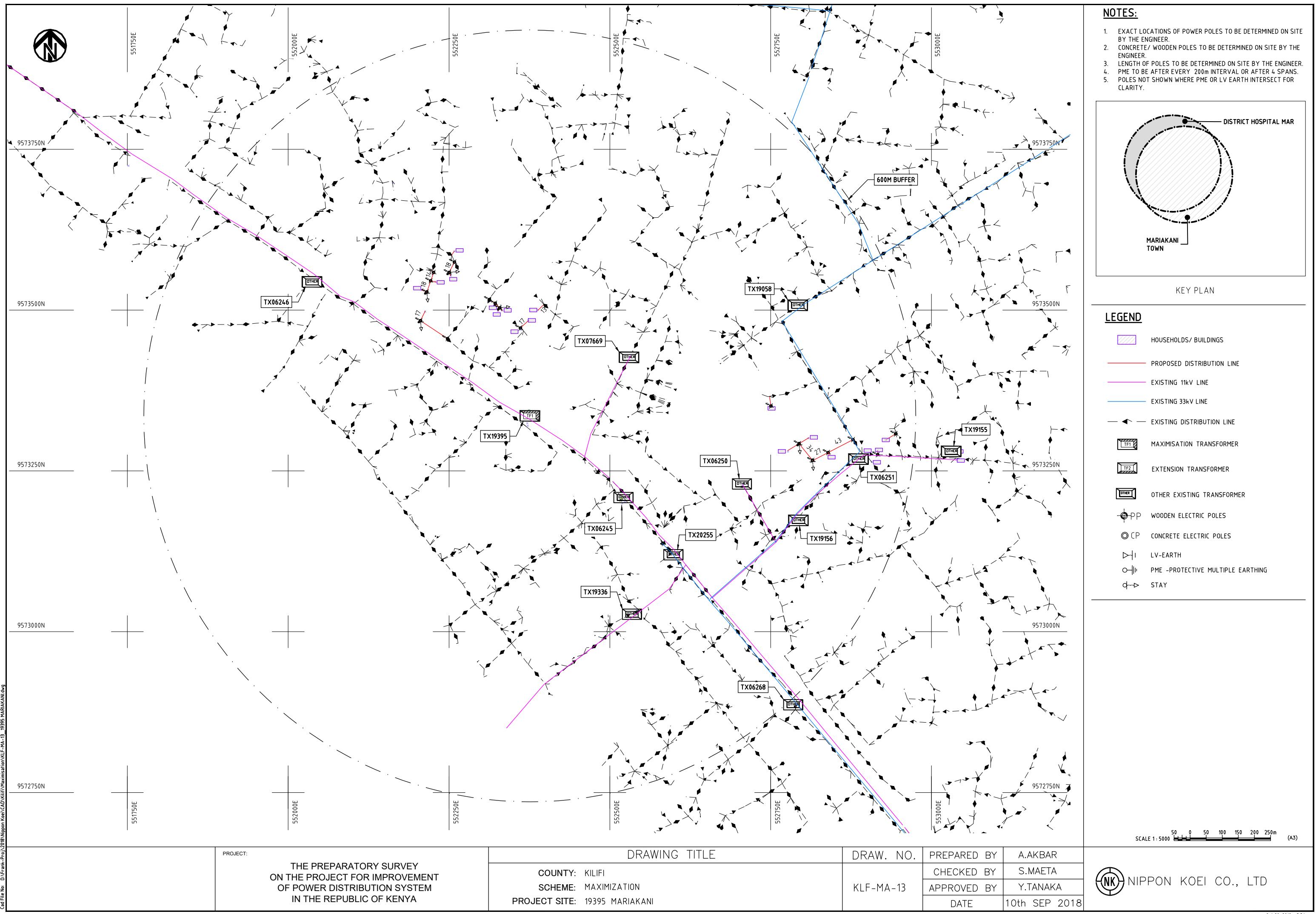
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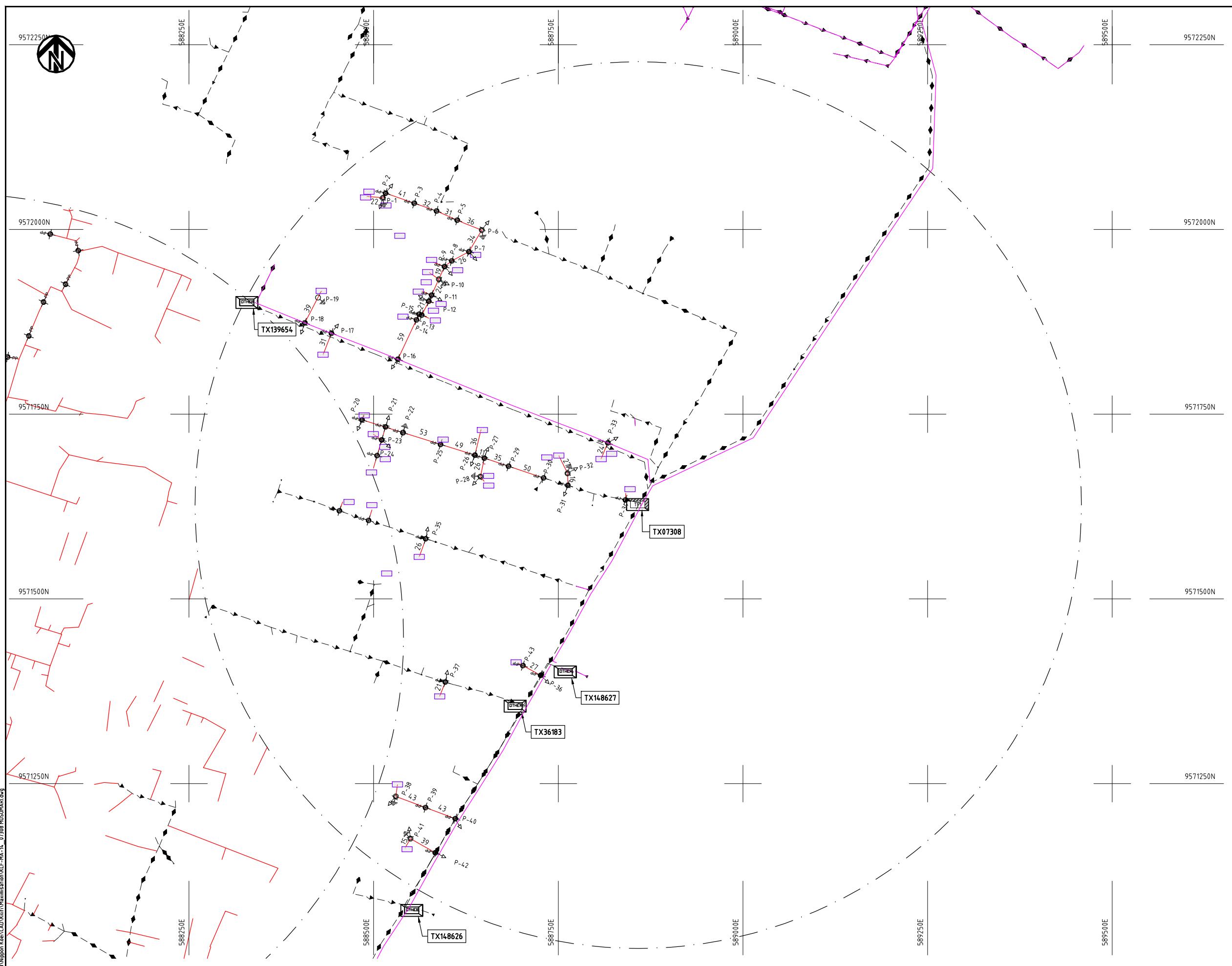
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LEGEND

- [Icon: Purple hatched square] HOUSEHOLDS/ BUILDINGS
- [Icon: Red line] PROPOSED DISTRIBUTION LINE
- [Icon: Magenta line] EXISTING 11kV LINE
- [Icon: Blue line] EXISTING 33kV LINE
- [Icon: Dashed black line] EXISTING DISTRIBUTION LINE
- [Icon: Transformer icon] MAXIMISATION TRANSFORMER
- [Icon: Transformer icon] EXTENSION TRANSFORMER
- [Icon: Other transformer icon] OTHER EXISTING TRANSFORMER
- [Icon: Pole with 'PP' symbol] WOODEN ELECTRIC POLES
- [Icon: Pole with 'CP' symbol] CONCRETE ELECTRIC POLES
- [Icon: LV-EARTH symbol] LV-EARTH
- [Icon: PME symbol] PME -PROTECTIVE MULTIPLE EARTHING
- [Icon: Stay symbol] STAY

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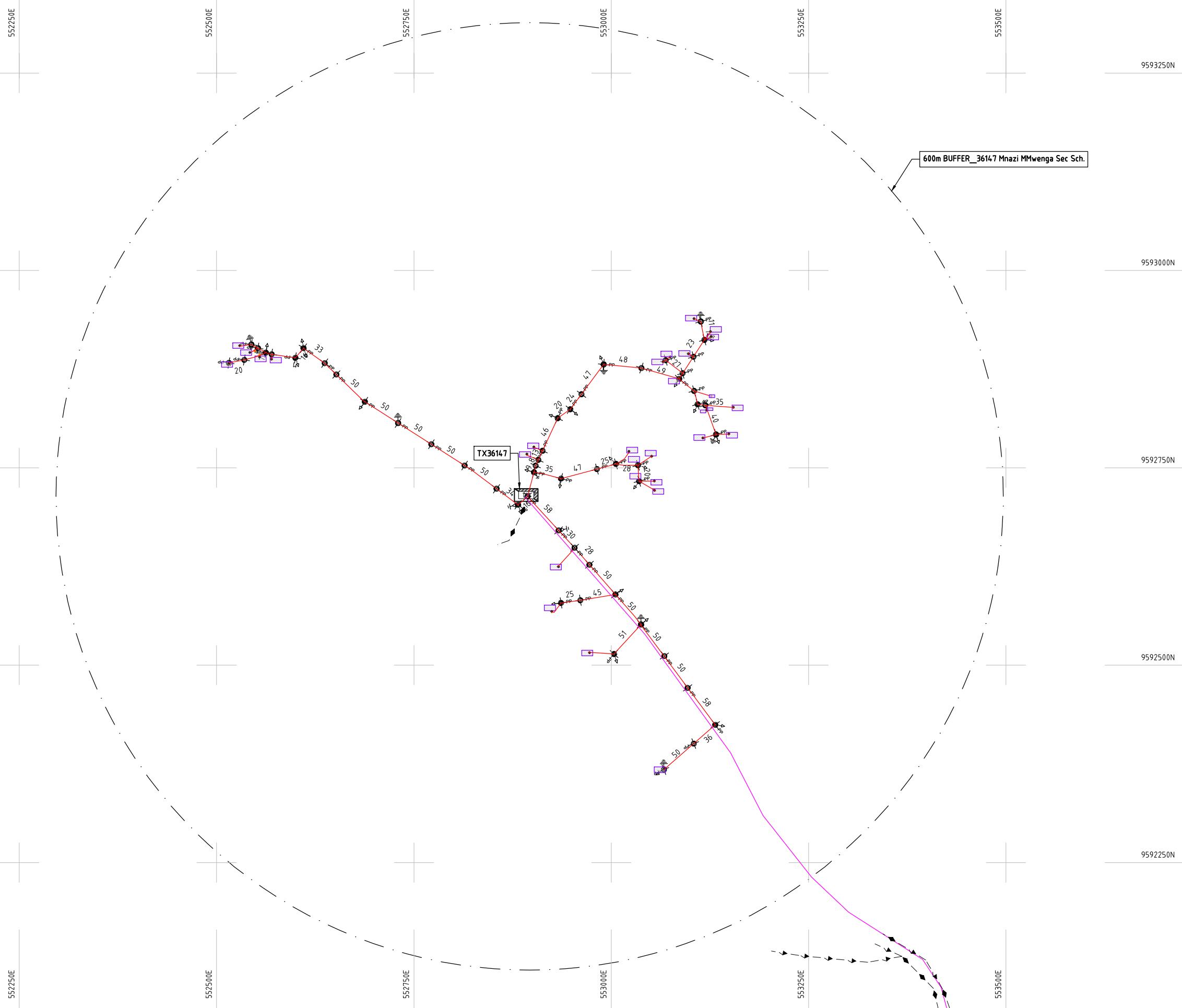
LEGEND

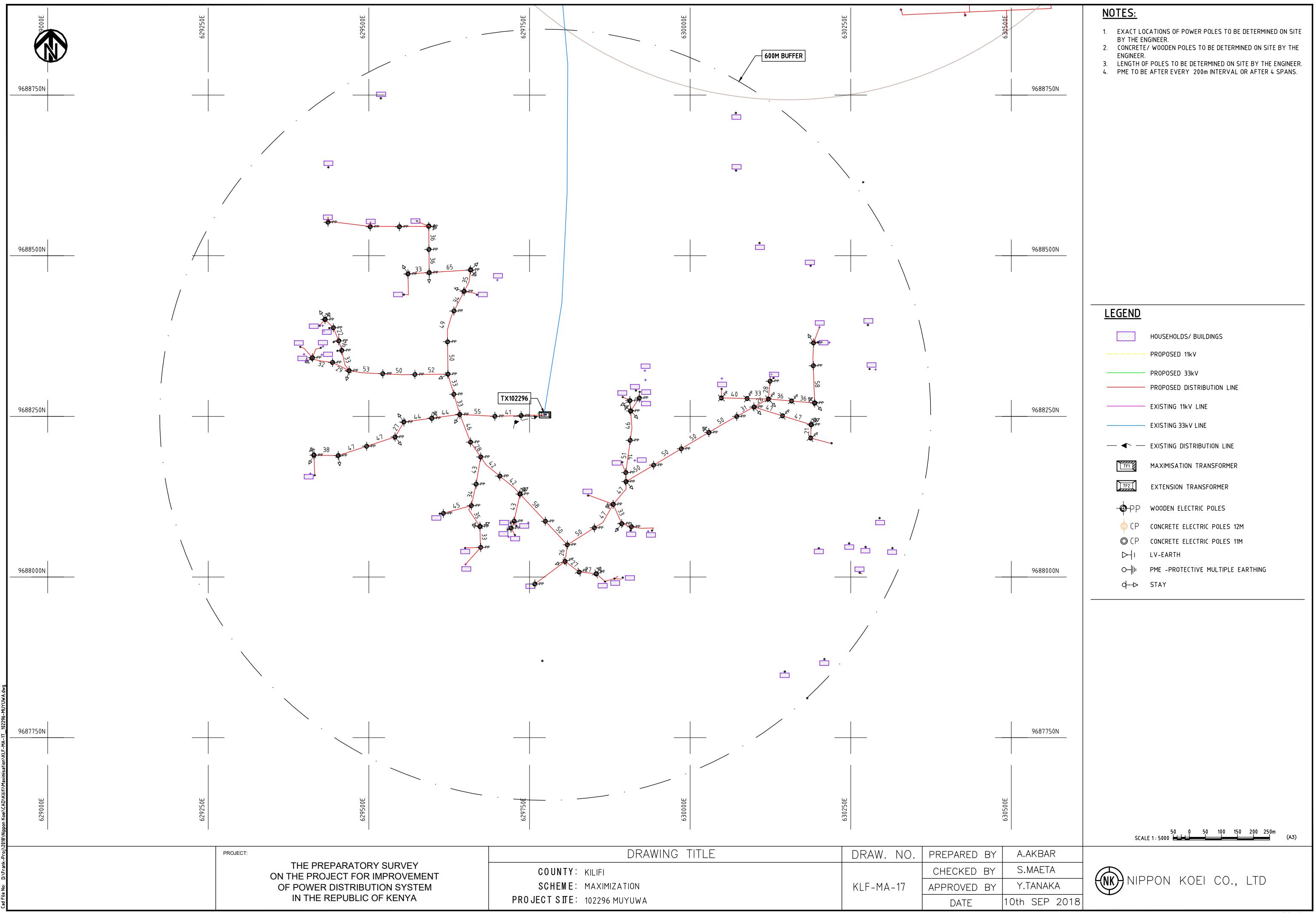
- [Hatched Box] HOUSEHOLDS/ BUILDINGS
- [Red Line] PROPOSED DISTRIBUTION LINE
- [Magenta Line] EXISTING 11kV LINE
- [Blue Line] EXISTING 33kV LINE
- [Dashed Line] EXISTING DISTRIBUTION LINE
- [Transformer Symbol] MAXIMISATION TRANSFORMER
- [Transformer Symbol] EXTENSION TRANSFORMER
- [Transformer Symbol] OTHER EXISTING TRANSFORMER
- [Wooden Pole Symbol] WOODEN ELECTRIC POLES
- [Concrete Pole Symbol] CONCRETE ELECTRIC POLES
- [LV-Earth Symbol] LV-EARTH
- [PME Symbol] PME -PROTECTIVE MULTIPLE EARTHING
- [Stay Symbol] STAY

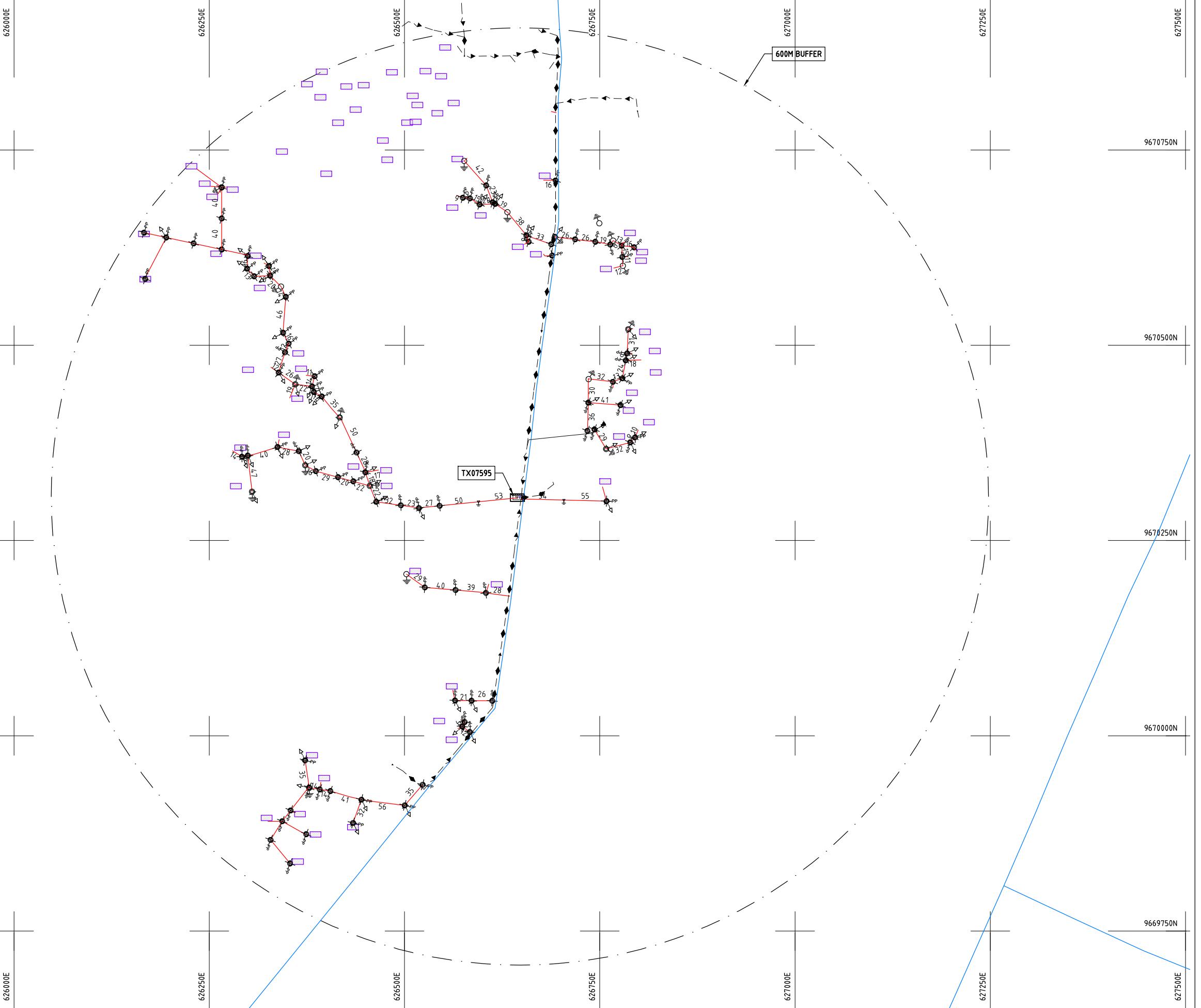


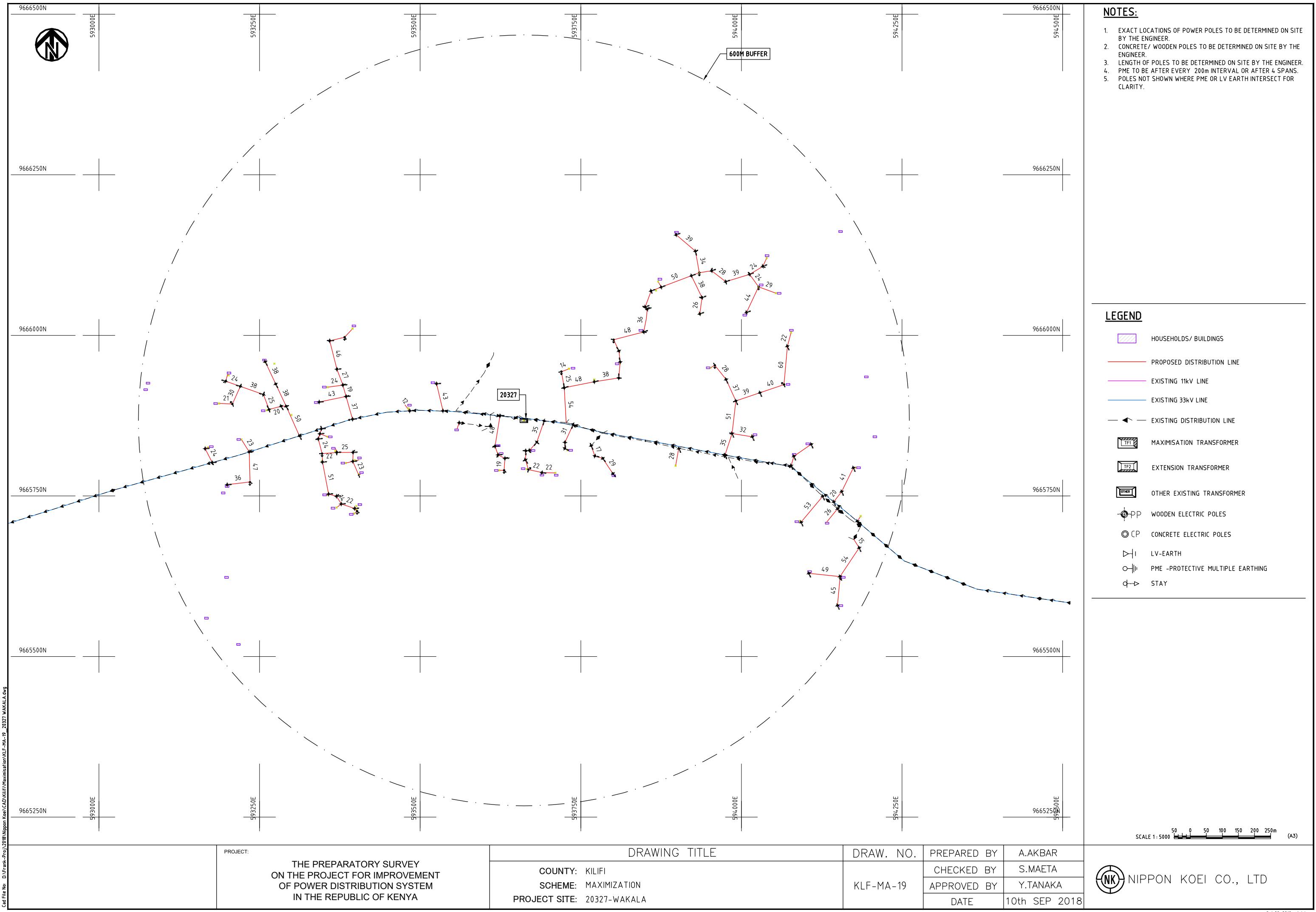


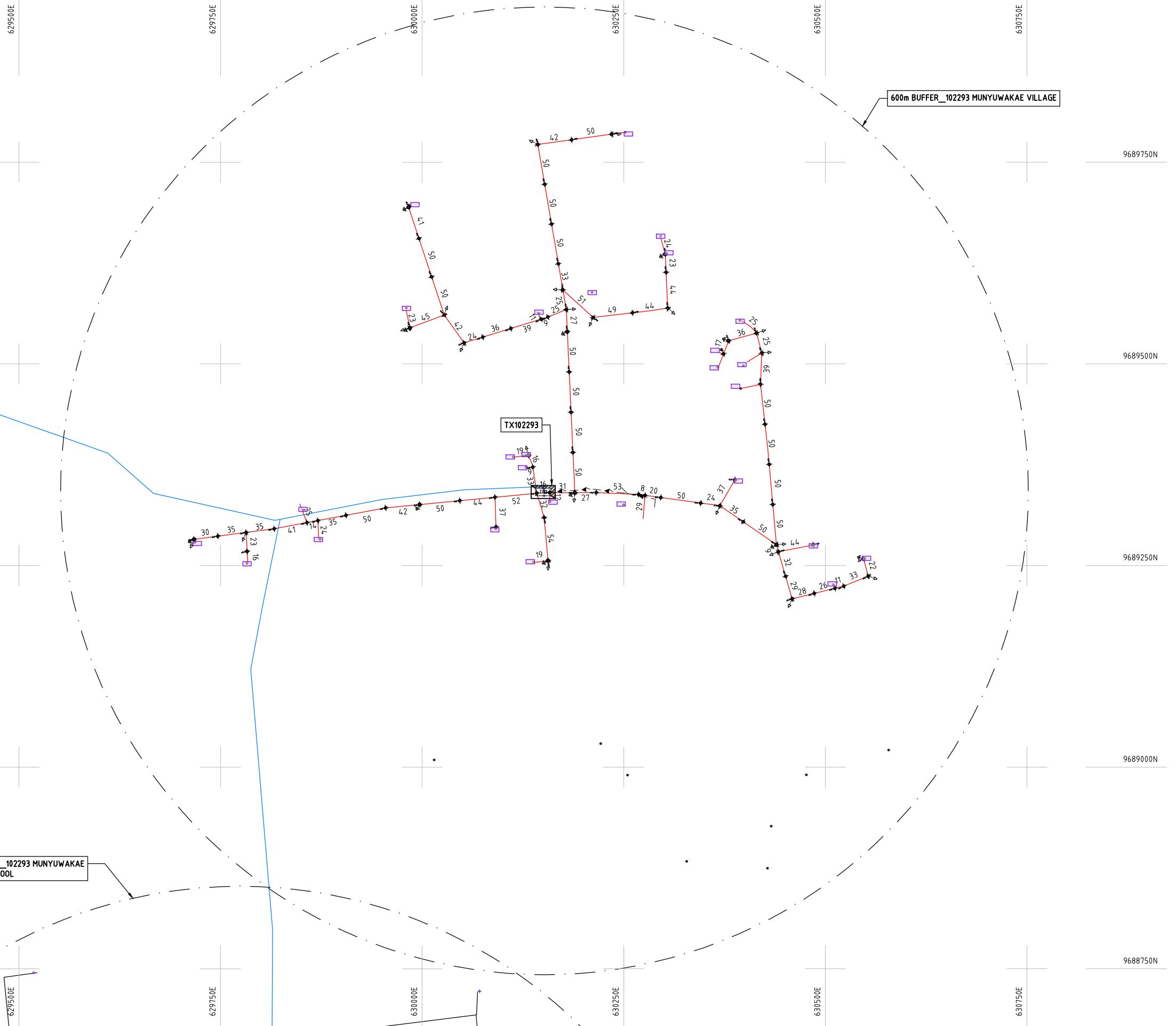
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**NOTES:**

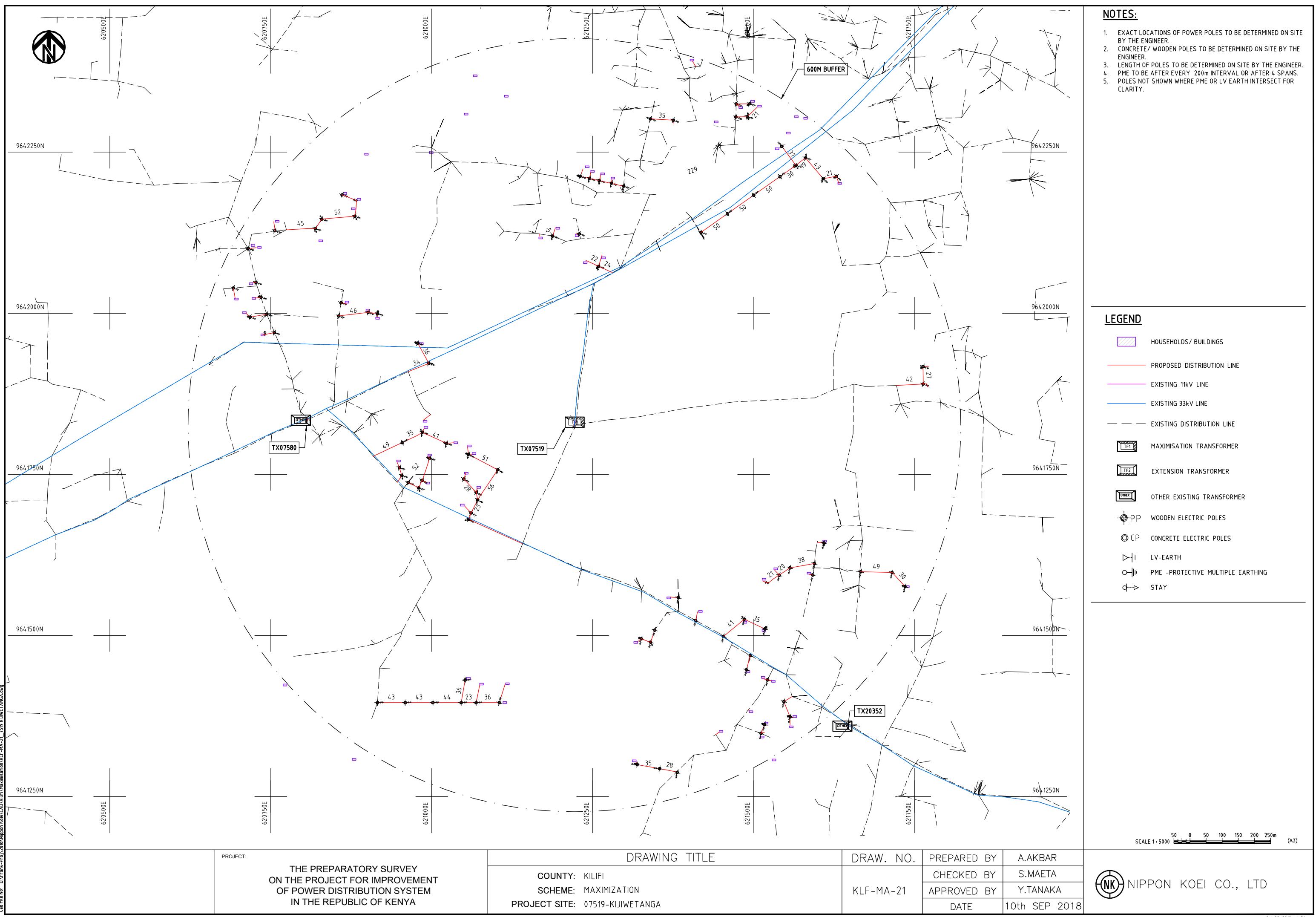
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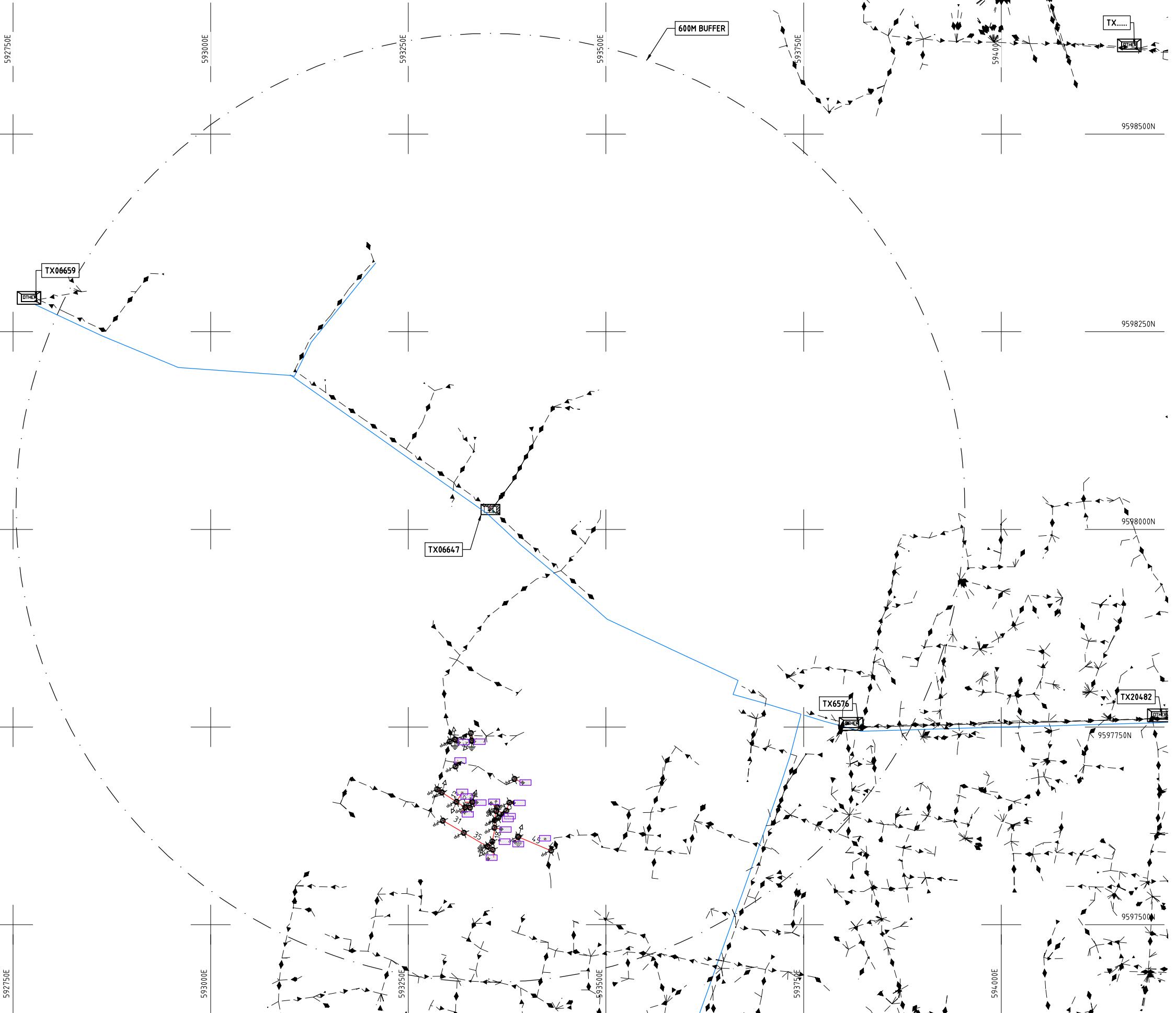
LEGEND

- HOUSEHOLDS/ BUILDINGS
- PROPOSED DISTRIBUTION LINE
- EXISTING 11kV LINE
- EXISTING 33kV LINE
- EXISTING DISTRIBUTION LINE
- MAXIMISATION TRANSFORMER
- EXTENSION TRANSFORMER
- OTHER EXISTING TRANSFORMER
- WOODEN ELECTRIC POLES
- CONCRETE ELECTRIC POLES
- LV-EARTH
- PME -PROTECTIVE MULTIPLE EARTHING
- STAY

SCALE 1:5000 50 0 50 100 150 200 250m (A3)







NOTES:

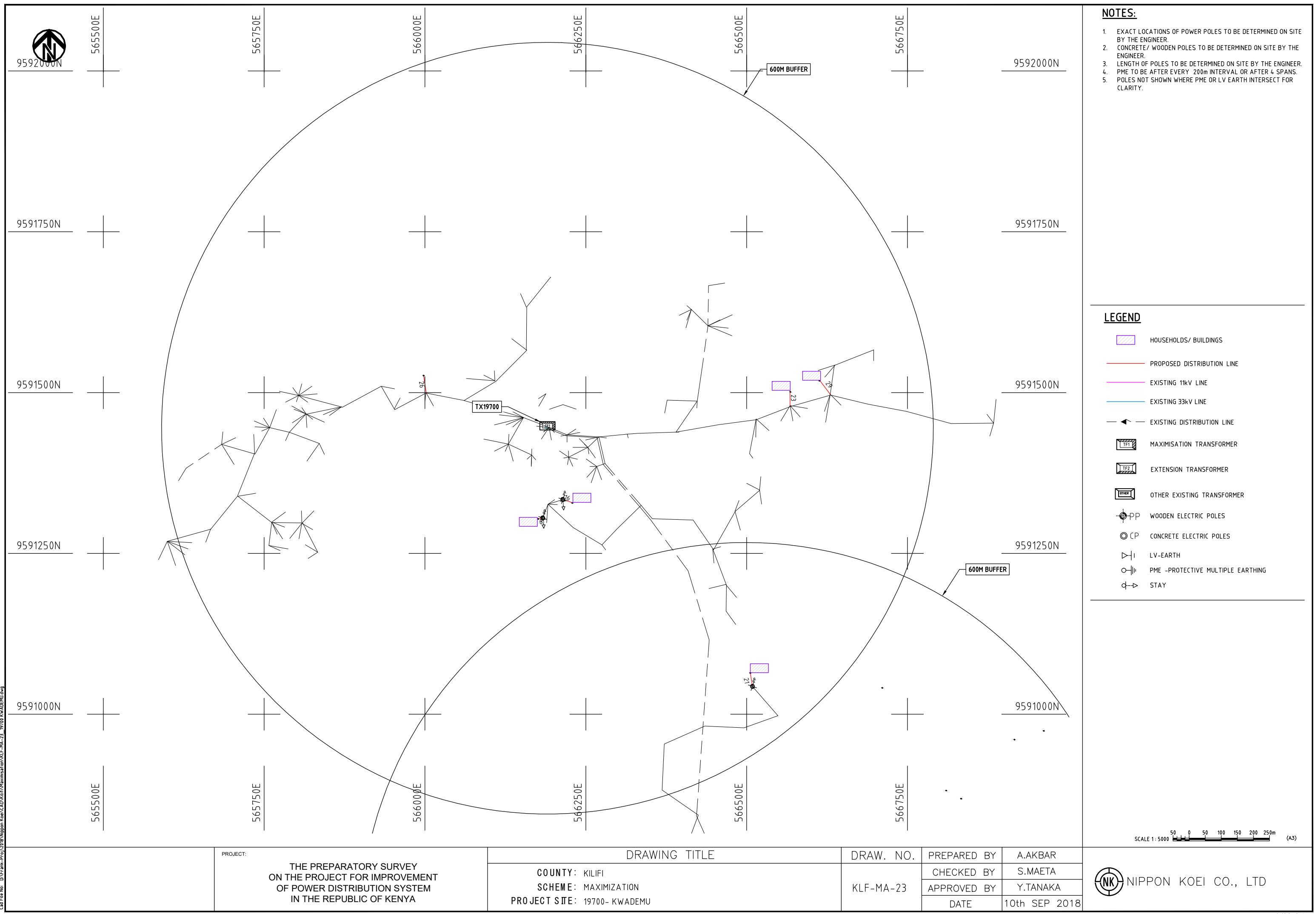
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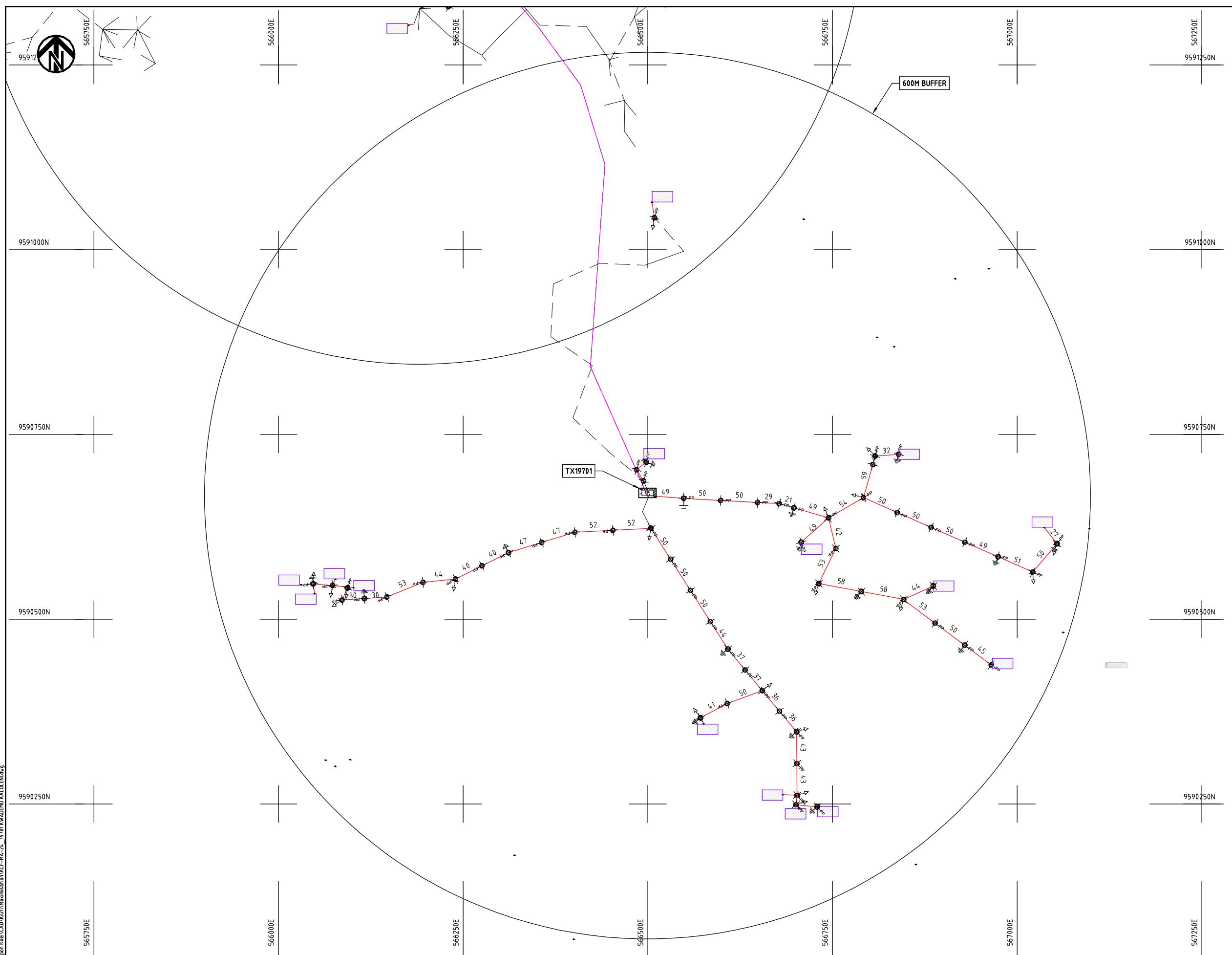
LEGEND

- HOUSEHOLDS/ BUILDINGS
- PROPOSED DISTRIBUTION LINE
- EXISTING 11kV LINE
- EXISTING 33kV LINE
- > EXISTING DISTRIBUTION LINE
- T1 MAXIMISATION TRANSFORMER
- T2 EXTENSION TRANSFORMER
- OTHER OTHER EXISTING TRANSFORMER
- PP WOODEN ELECTRIC POLES
- CP CONCRETE ELECTRIC POLES
- △ I LV-EARTH
- II PME -PROTECTIVE MULTIPLE EARTHING
- □ STAY

SCALE 1:5000 50 0 50 100 150 200 250m (A3)







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- PROPOSED DISTRIBUTION LINE
- EXISTING 11kV LINE
- EXISTING 33kV LINE
- EXISTING DISTRIBUTION LINE
- TF1 MAXIMISATION TRANSFORMER
- TF2 EXTENSION TRANSFORMER
- OTHER OTHER EXISTING TRANSFORMER
- WOODEN ELECTRIC POLES
- CP CONCRETE ELECTRIC POLES
- LV-EARTH
- PME -PROTECTIVE MULTIPLE EARTHING
- STAY

SCALE 1:5000 50 0 50 100 150 200 250m (A3)

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PROJECT:
THE PREPARATORY SURVEY
ON THE PROJECT FOR IMPROVEMENT
OF POWER DISTRIBUTION SYSTEM
IN THE REPUBLIC OF KENYA

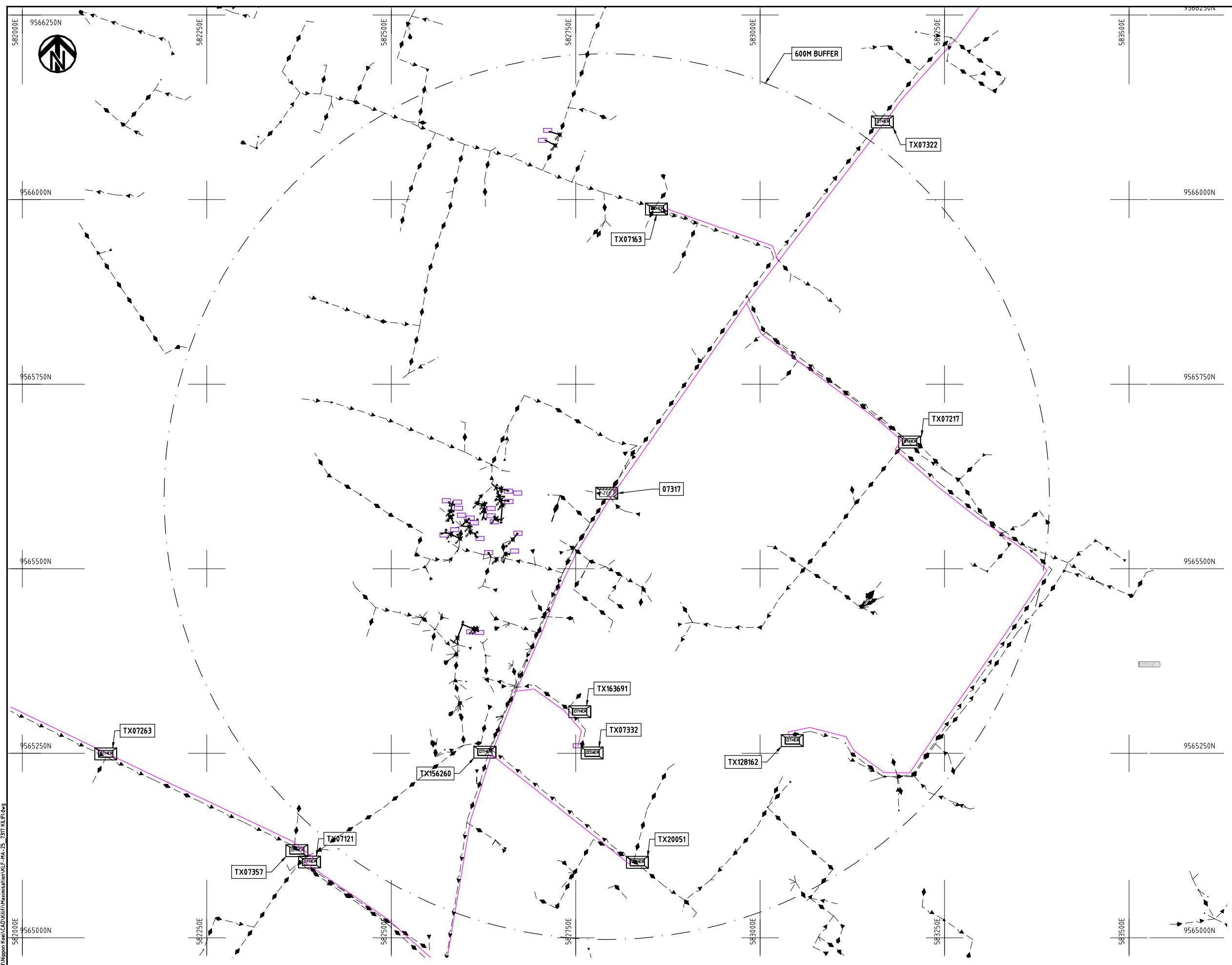
DRAWING TITLE
COUNTY: KILIFI
SCHEME: MAXIMIZATION
PROJECT SITE: 19701 - KWADEMU KALOLENI

DRAW. NO.
KLF-MA-24

PREPARED BY
A.AKBAR
CHECKED BY
S.MAETA
APPROVED BY
Y.TANAKA
DATE
10th SEP 2018



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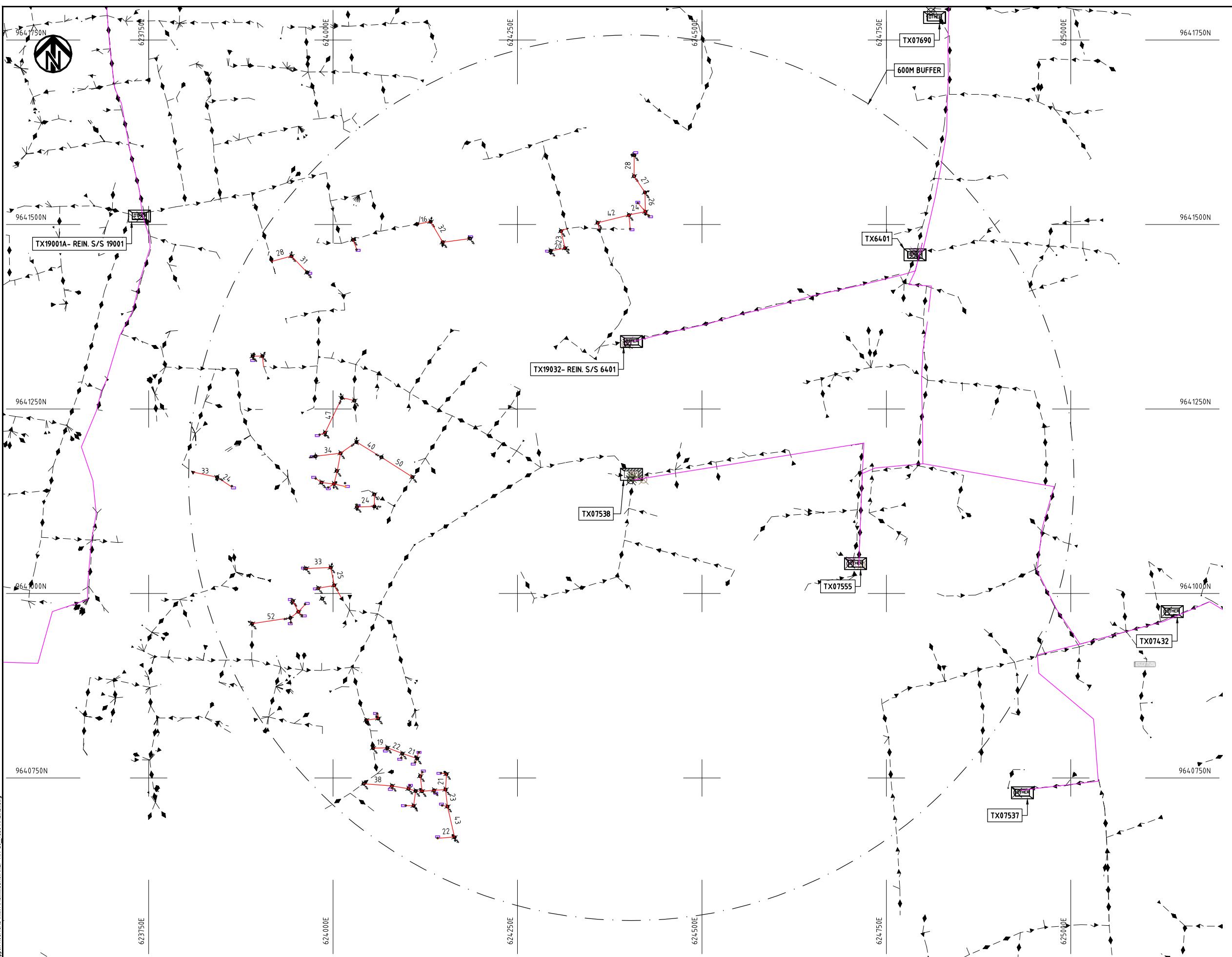
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LEGEND

- HOUSEHOLDS/ BUILDINGS
- PROPOSED DISTRIBUTION LINE
- EXISTING 11kV LINE
- EXISTING 33kV LINE
- EXISTING DISTRIBUTION LINE
- MAXIMISATION TRANSFORMER
- EXTENSION TRANSFORMER
- OTHER EXISTING TRANSFORMER
- PP WOODEN ELECTRIC POLES
- © CP CONCRETE ELECTRIC POLES
- △ I LV-EARTH
- II PME -PROTECTIVE MULTIPLE EARTHING
- STAY

SCALE 1:5000 50 0 50 100 150 200 250m (A3)



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LEGEND

 HOUSEHOLDS/ BUILDINGS

 PROPOSED DISTRIBUTION LINE

 EXISTING 11kV LINE

 EXISTING 33kV LINE

 EXISTING DISTRIBUTION LINE

 MAXIMISATION TRANSFORMER

 EXTENSION TRANSFORMER

 OTHER EXISTING TRANSFORMER

 WOODEN ELECTRIC POLES

 CONCRETE ELECTRIC POLES

 LV-EARTH

 PME -PROTECTIVE MULTIPLE EARTHING

 STAY

A scale bar at the bottom of the page shows distances from 0 to 250 meters in increments of 50. Below the scale bar, the text "SCALE 1 : 5000" is written. To the right of the scale bar, the label "(A3)" is placed in parentheses.

PROJECT:
**THE PREPARATORY SURVEY
ON THE PROJECT FOR IMPROVEMENT
OF POWER DISTRIBUTION SYSTEM
IN THE REPUBLIC OF KENYA**

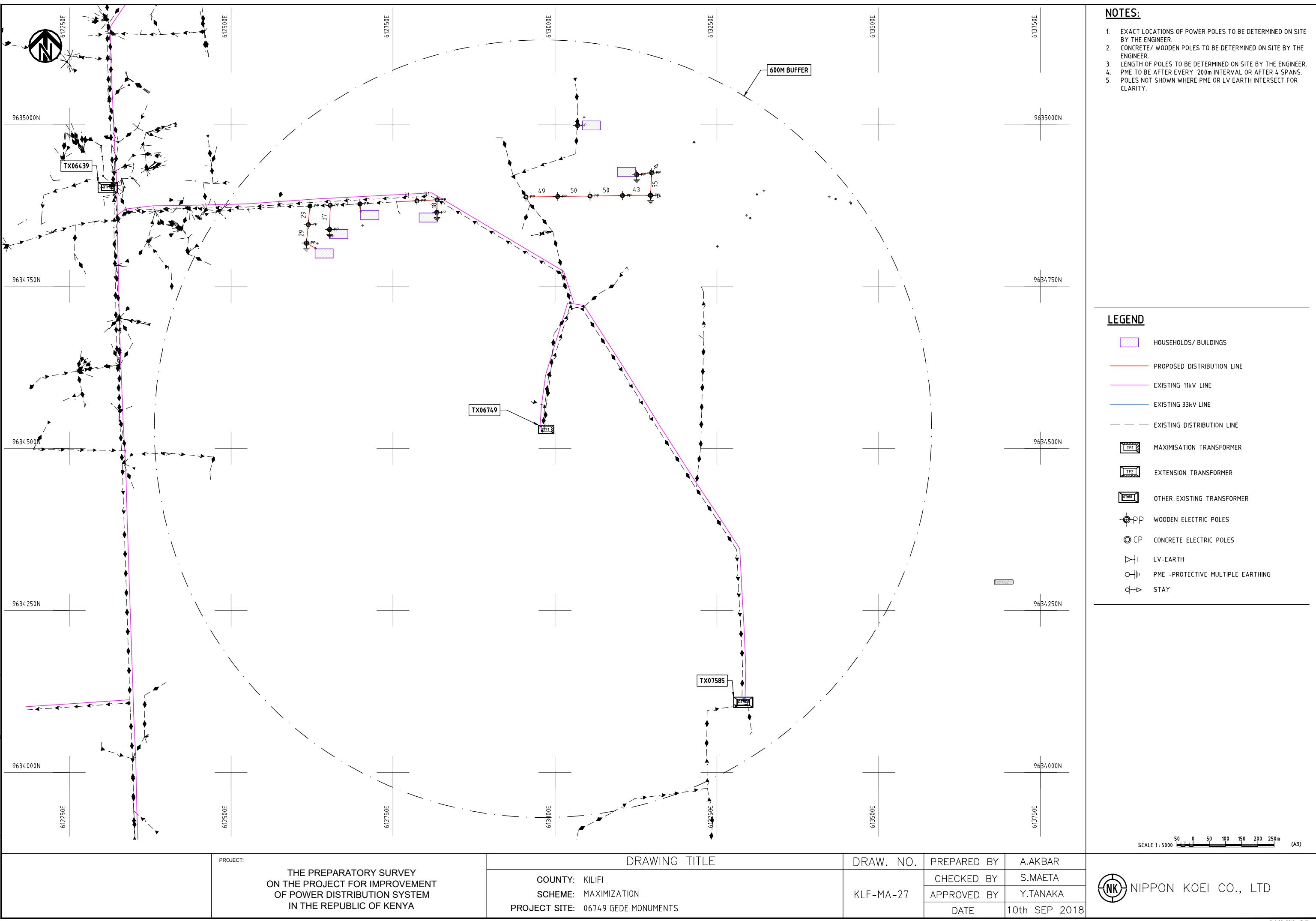
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	DRAW. NO.	
	KLF-MA-26	

PREPARED BY	A.AKBAR
CHECKED BY	S.MAETA
APPROVED BY	Y.TANAKA
DATE	10th SEP 2018

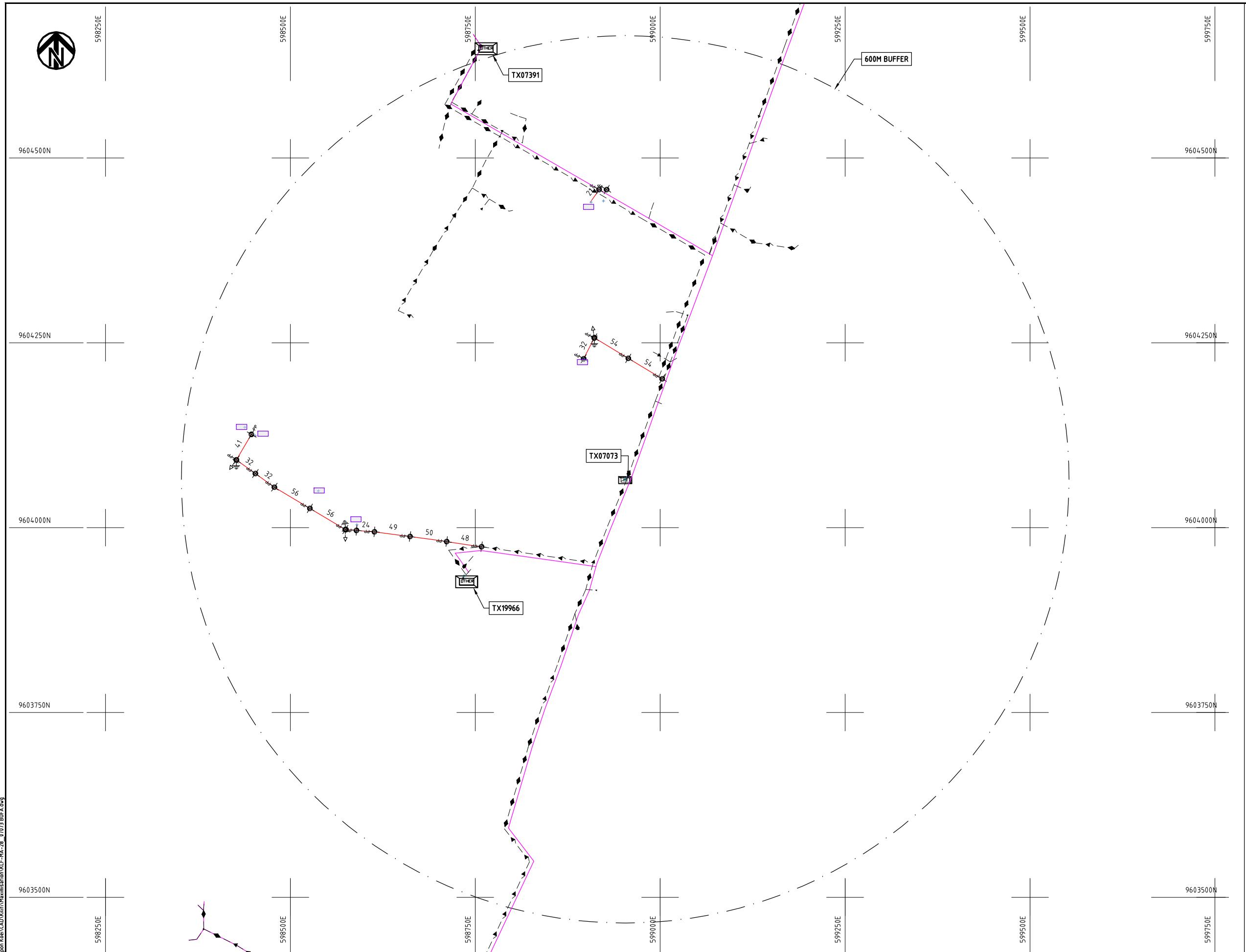


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LEGEND

 HOUSEHOLDS/ BUILDINGS

 PROPOSED DISTRIBUTION LINE

 EXISTING 11kV LINE

 EXISTING 33kV LINE

 EXISTING DISTRIBUTION LINE

 MAXIMISATION TRANSFORMER

 EXTENSION TRANSFORMER

 OTHER EXISTING TRANSFORMER

 WOODEN ELECTRIC POLES

 CONCRETE ELECTRIC POLES

 LV-EARTH

 PME -PROTECTIVE MULTIPLE EARTHING

 STAY

A scale bar at the bottom of the page, labeled "SCALE 1 : 5000". It features a horizontal line with tick marks and numerical labels: 50, 0, 50, 100, 150, 200, and 250m.

PROJECT: THE PREPARATORY SURVEY
ON THE PROJECT FOR IMPROVEMENT
OF POWER DISTRIBUTION SYSTEM
IN THE REPUBLIC OF KENYA

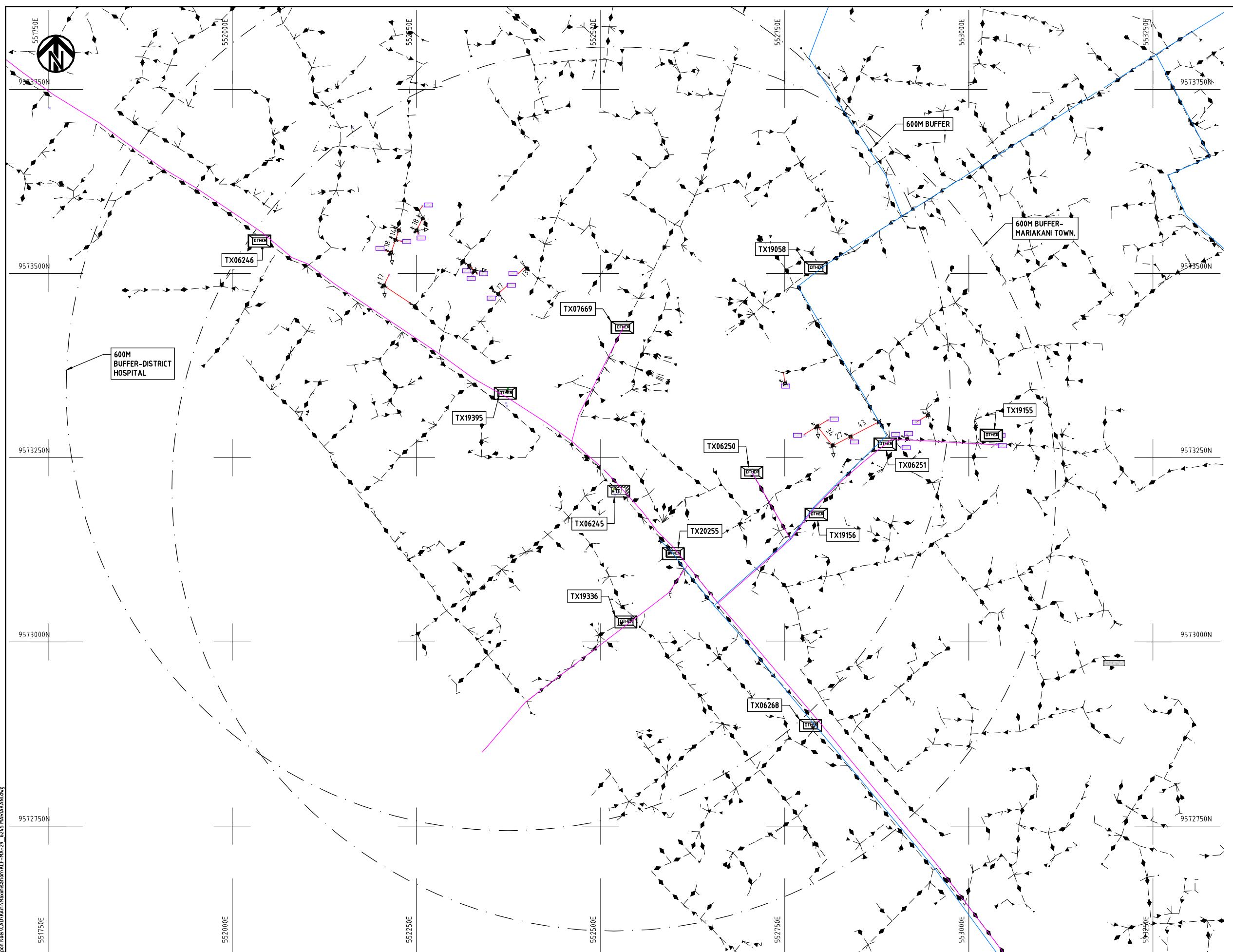
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DRAW. NO.
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REARED BY	A.AKBAR
CHECKED BY	S.MAETA
PROVED BY	Y.TANAKA
DATE	10th SEP 2018

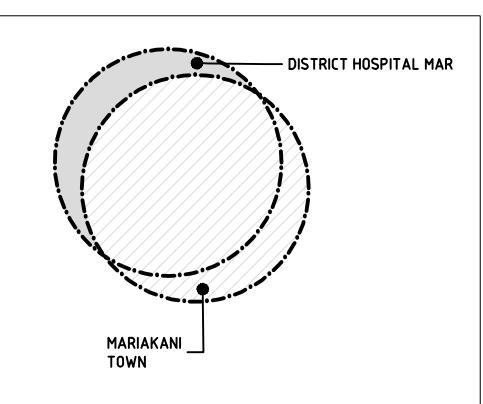


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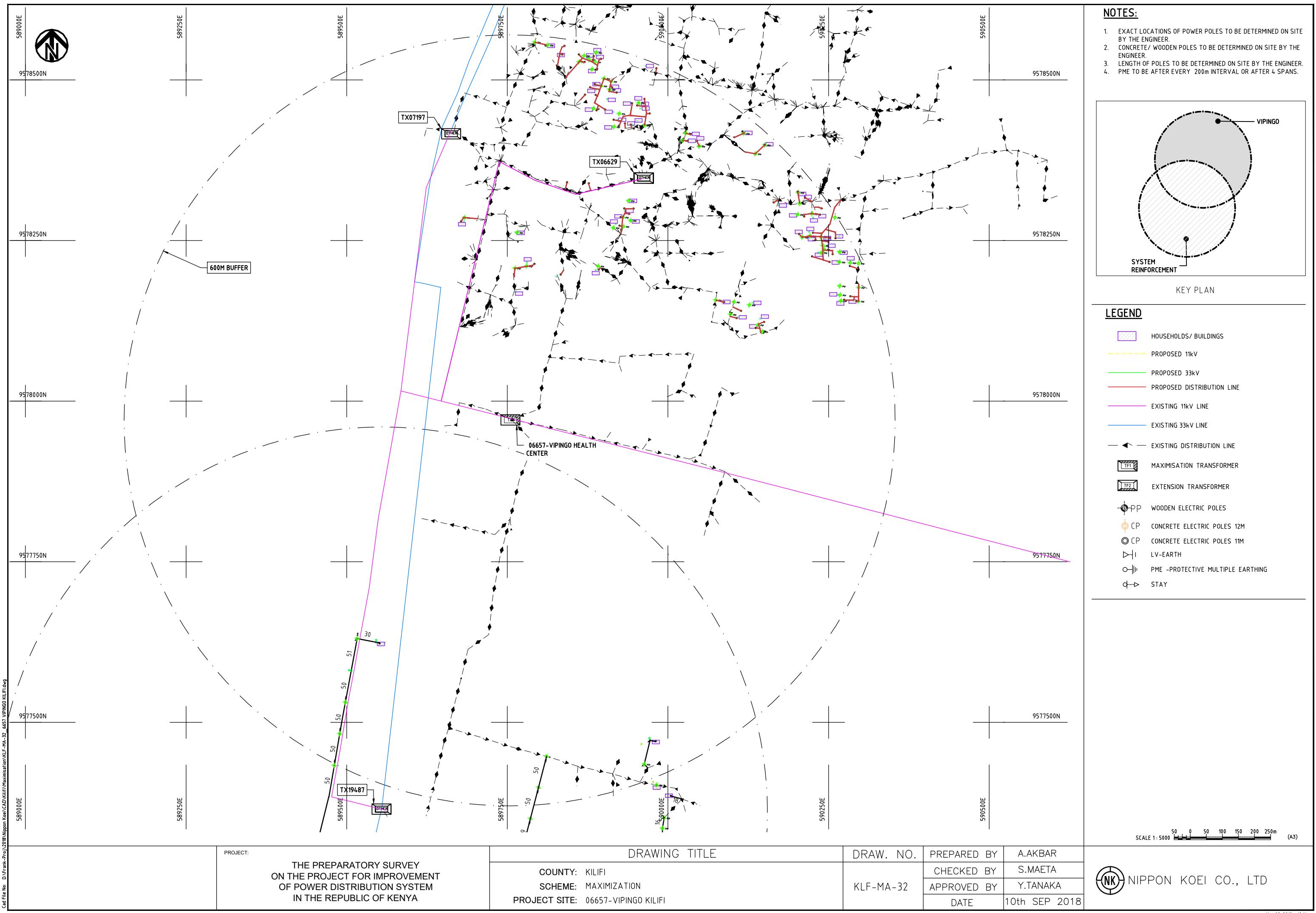


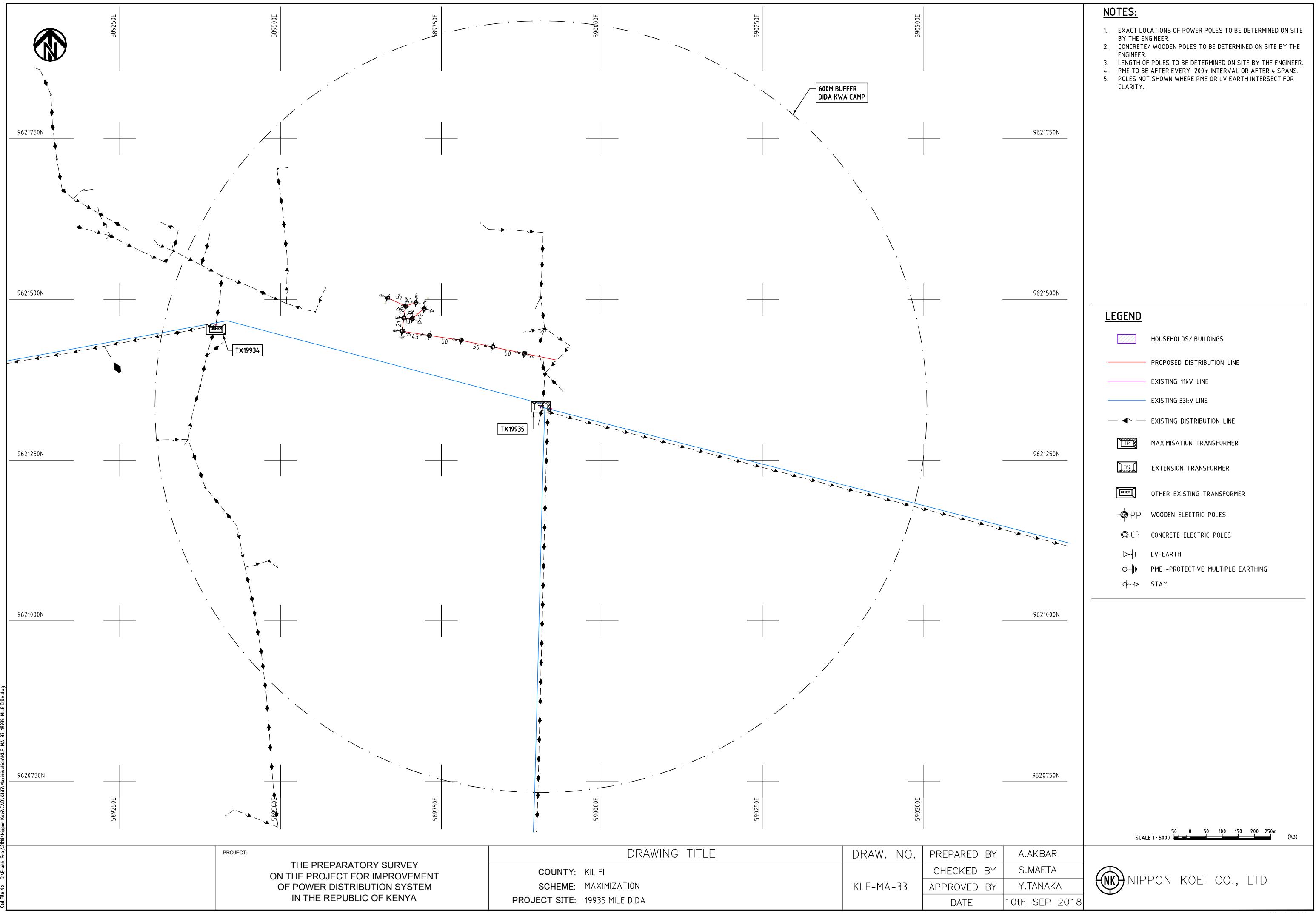
KEY PLAN

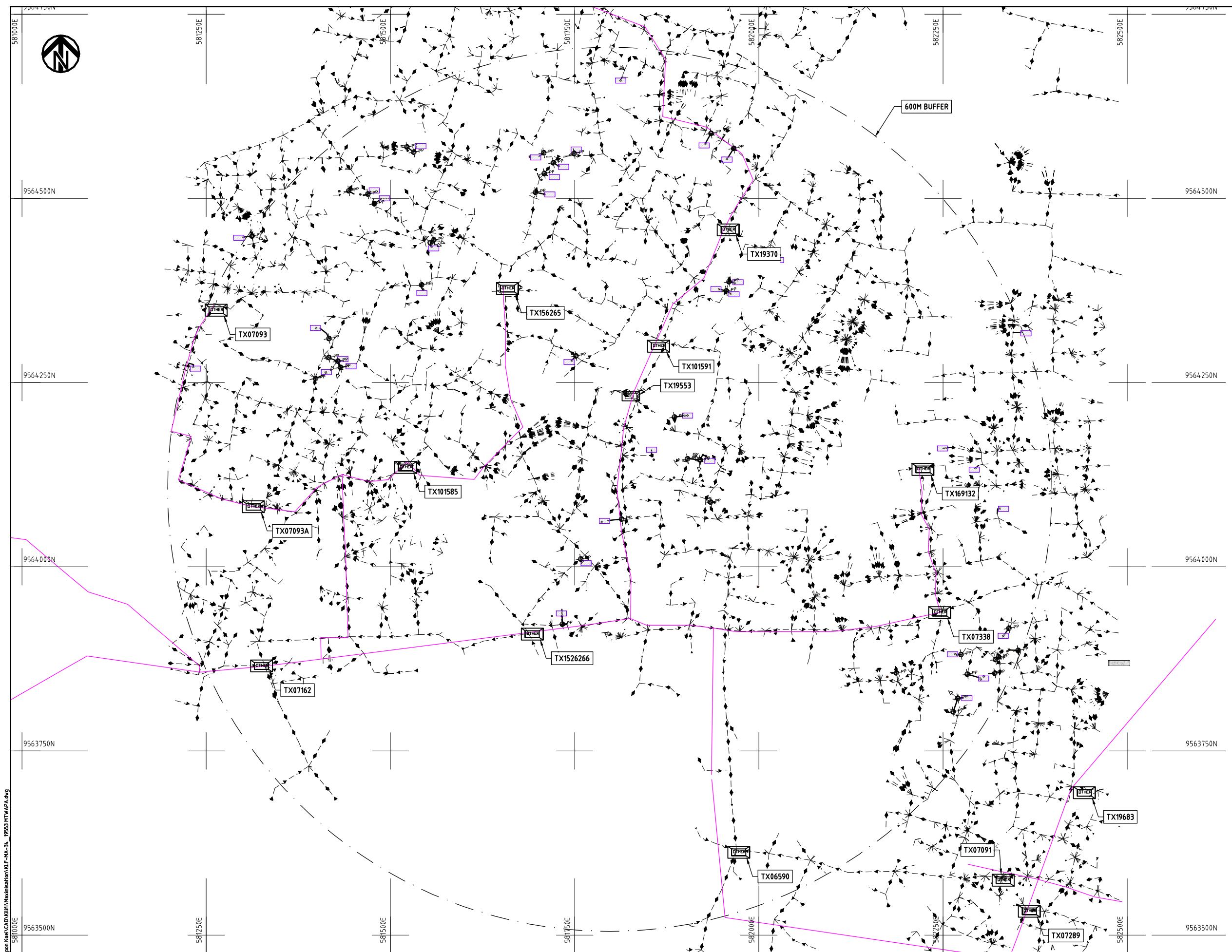
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- HOUSEHOLDS/ BUILDINGS
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- EXISTING DISTRIBUTION LINE
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SCALE 1:5000 50 0 50 100 150 200 250m (A3)







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SCALE 1:5000 50 0 50 100 150 200 250m (A3)

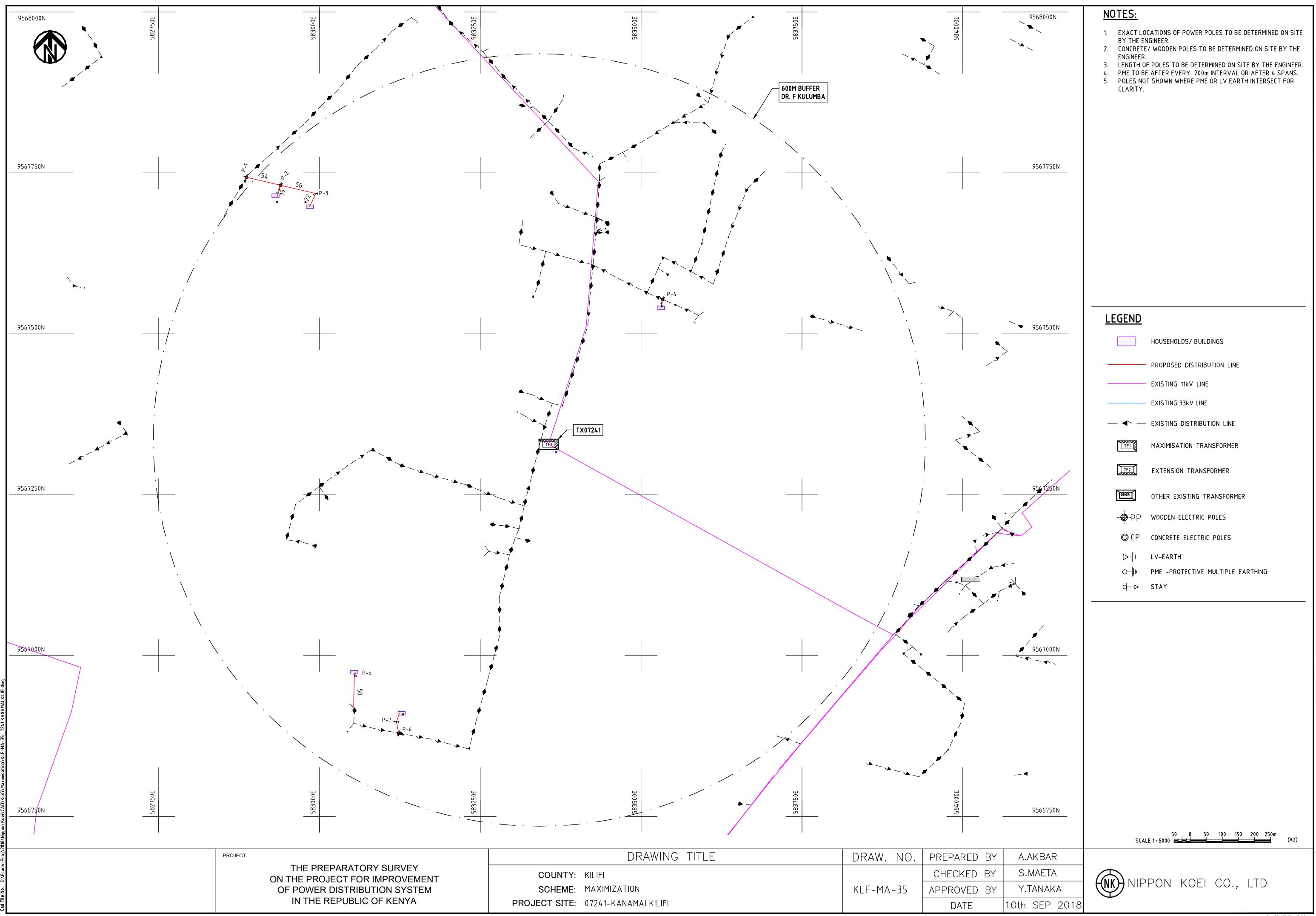
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OF POWER DISTRIBUTION SYSTEM
IN THE REPUBLIC OF KENYA

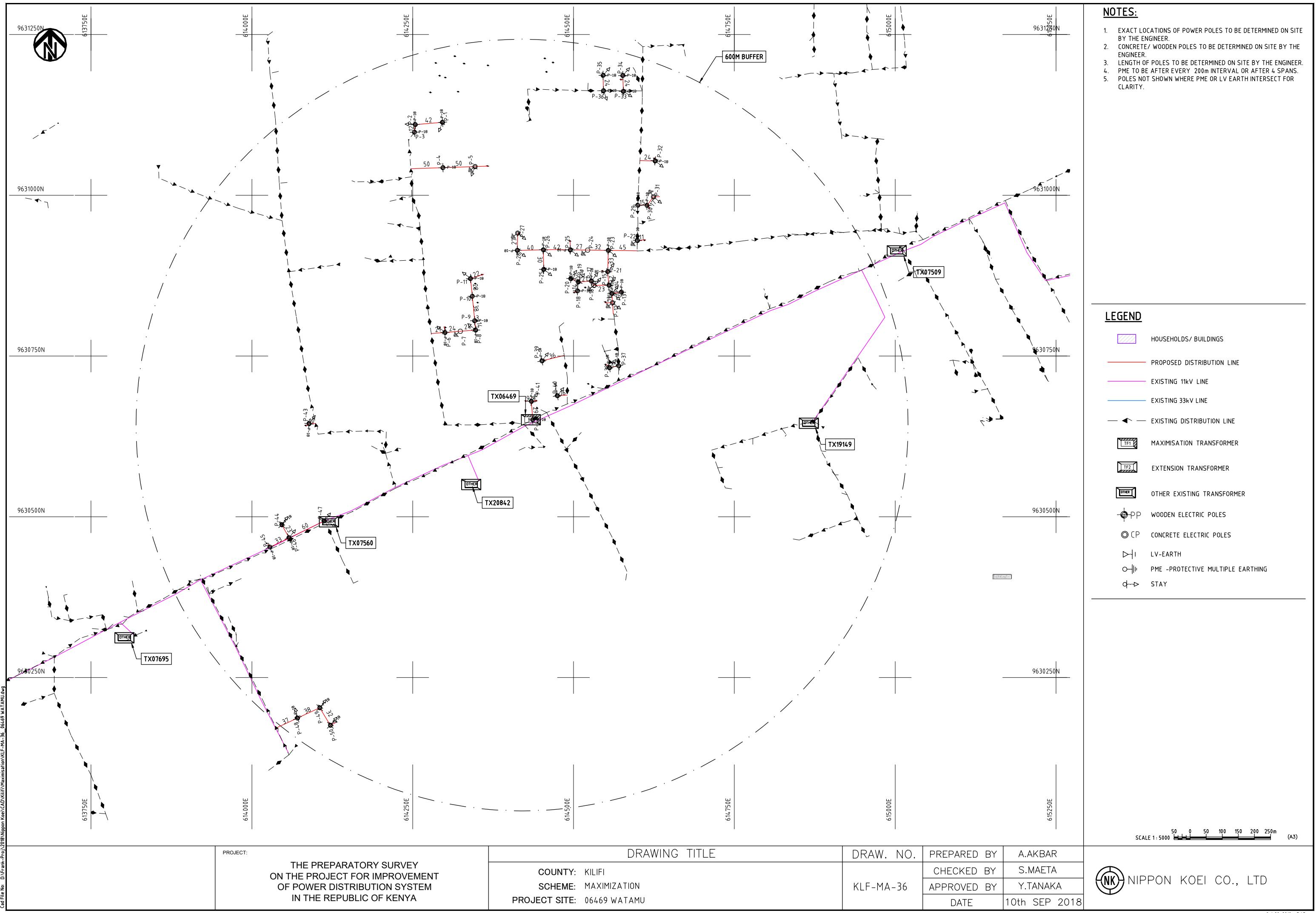
DRAWING TITLE
COUNTY: KILIFI
SCHEME: MAXIMIZATION
PROJECT SITE: 19553 MTWAPA

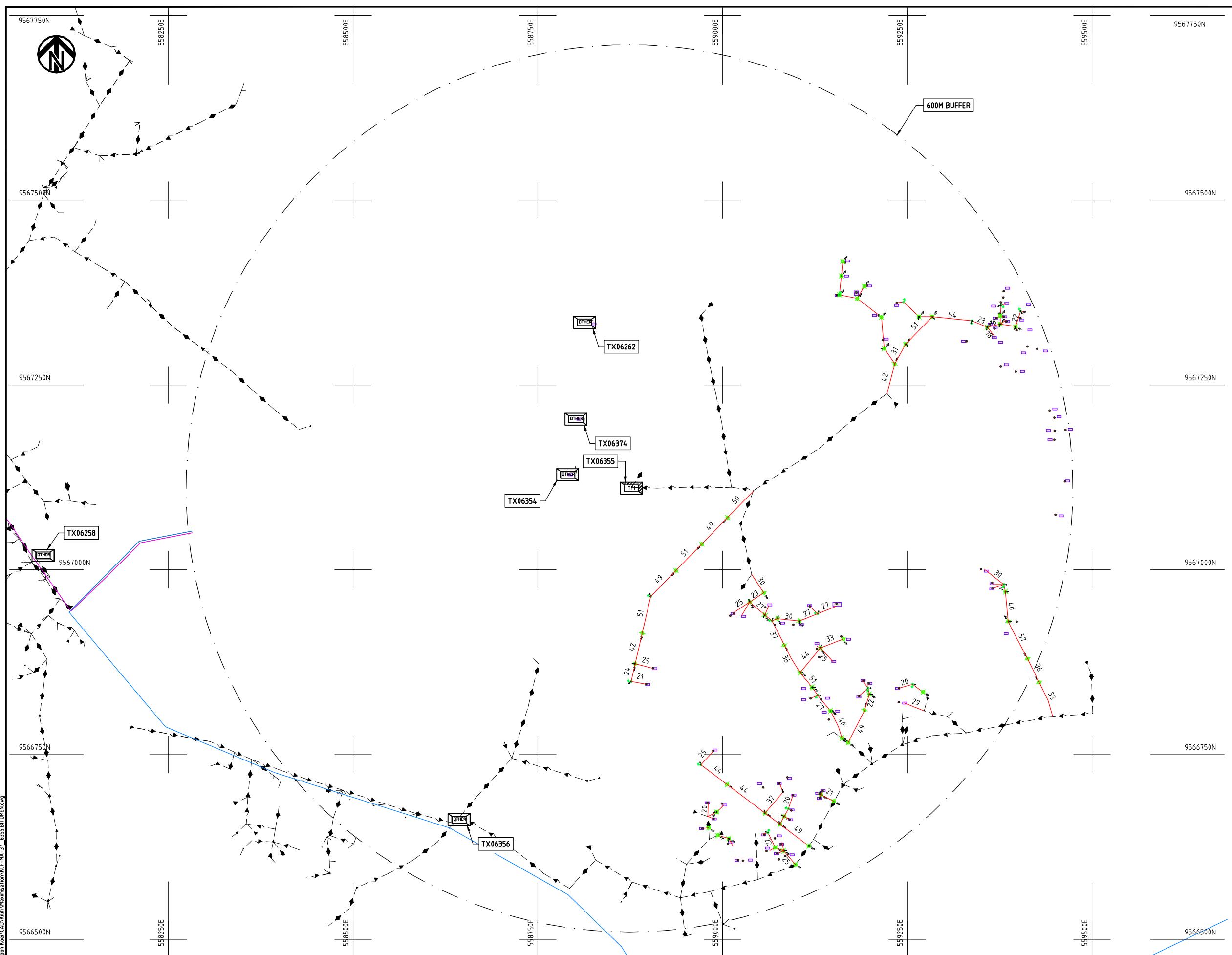
DRAW. NO. KLF-MA-34
PREPARED BY A.AKBAR
CHECKED BY S.MAETA
APPROVED BY Y.TANAKA
DATE 10th SEP 2018



NIPPON KOEI CO., LTD







NOTES:

1. EXACT LOCATIONS OF POWER POLES TO BE DETERMINED ON SITE BY THE ENGINEER.
2. CONCRETE/ WOODEN POLES TO BE DETERMINED ON SITE BY THE ENGINEER.
3. LENGTH OF POLES TO BE DETERMINED ON SITE BY THE ENGINEER.
4. PME TO BE AFTER EVERY 200m INTERVAL OR AFTER 4 SPANS.

LEGEND

- HOUSEHOLDS/ BUILDINGS
- PROPOSED 11kV
- PROPOSED 33kV
- PROPOSED DISTRIBUTION LINE
- EXISTING 11kV LINE
- EXISTING 33kV LINE
- > EXISTING DISTRIBUTION LINE
- TF1 MAXIMISATION TRANSFORMER
- TF2 EXTENSION TRANSFORMER
- PP WOODEN ELECTRIC POLES
- CP CONCRETE ELECTRIC POLES 12M
- CP CONCRETE ELECTRIC POLES 11M
- △ LV-EARTH
- PME -PROTECTIVE MULTIPLE EARTHING
- STAY

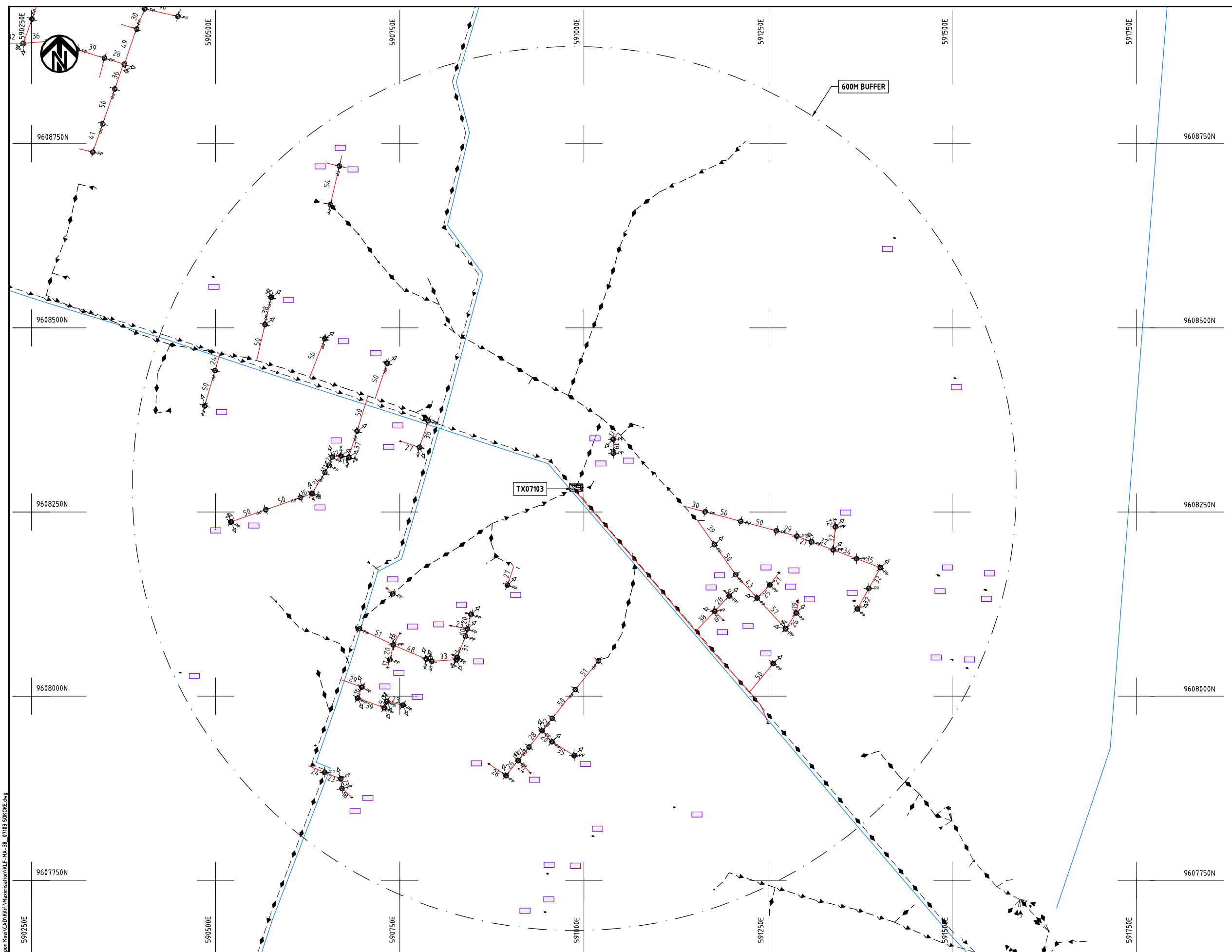
SCALE 1: 5000 50 0 50 100 150 200 250m (A3)

PROJECT:	THE PREPARATORY SURVEY ON THE PROJECT FOR IMPROVEMENT OF POWER DISTRIBUTION SYSTEM IN THE REPUBLIC OF KENYA
DRAWING TITLE	

COUNTY: KILIFI	DRAW. NO.	PREPARED BY
SCHEME: MAXIMIZATION	KLF-MA-37	A.AKBAR
PROJECT SITE: 06355-BITUMEN		CHECKED BY S.MAETA
		APPROVED BY Y.TANAKA
		DATE 10th SEP 2018

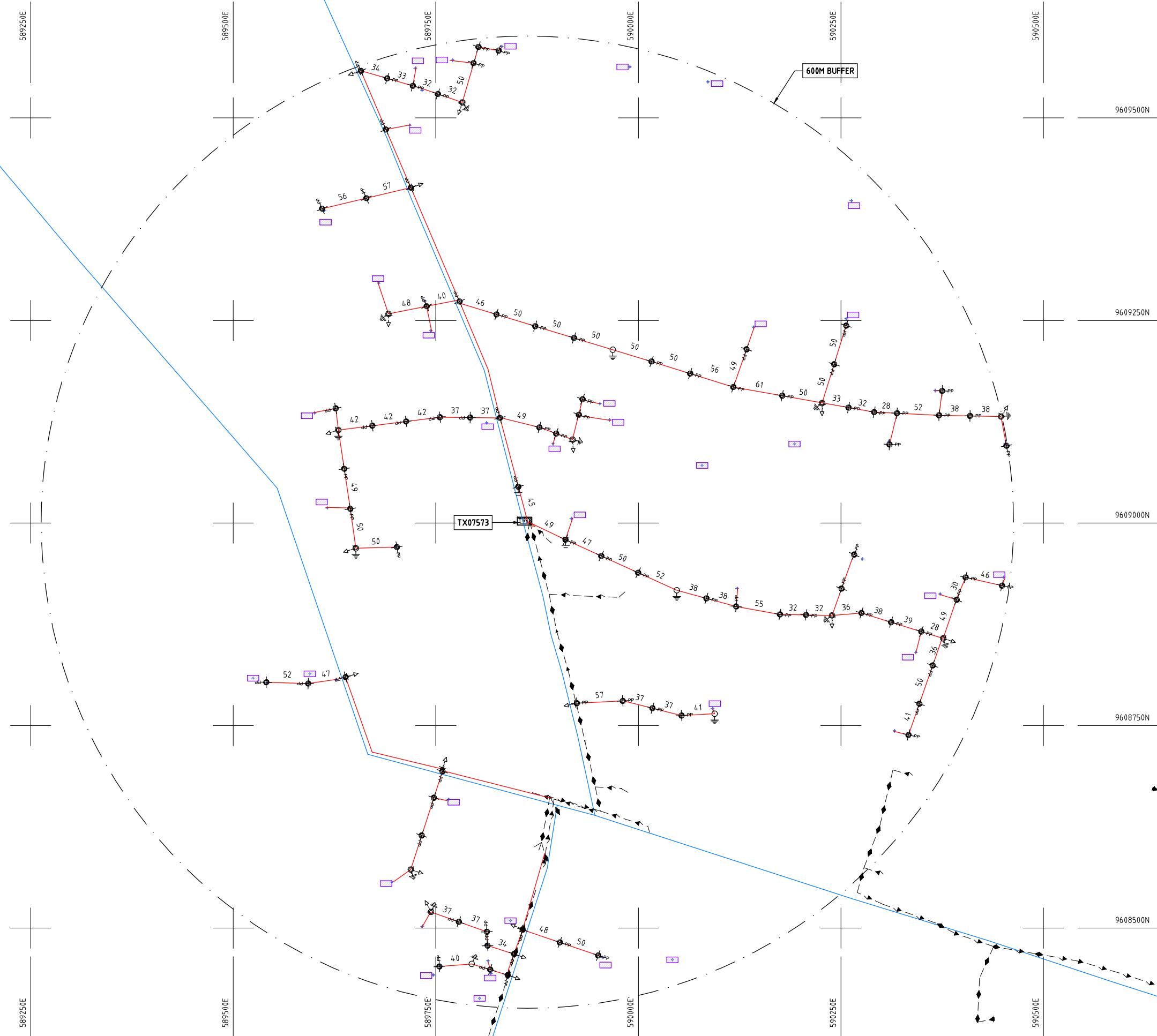


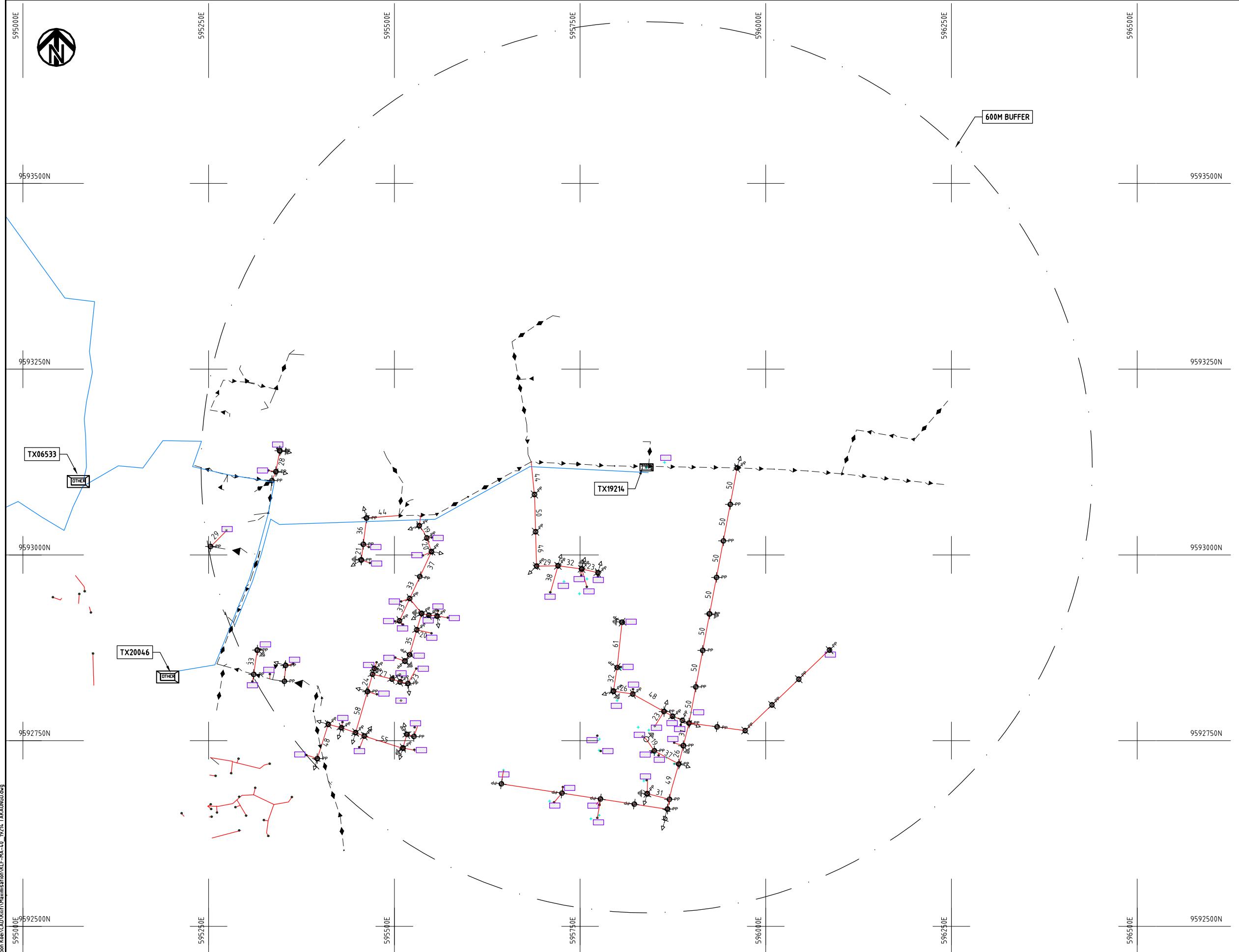
NIPPON KOEI CO., LTD



LEGEND

- [Purple square] HOUSEHOLDS/ BUILDINGS
- [Red line] PROPOSED DISTRIBUTION LINE
- [Pink line] EXISTING 11kV LINE
- [Blue line] EXISTING 33kV LINE
- [Dashed line with arrows] EXISTING DISTRIBUTION LINE
- [Transformer icon] MAXIMISATION TRANSFORMER
- [Transformer icon] EXTENSION TRANSFORMER
- [Transformer icon] OTHER EXISTING TRANSFORMER
- [Pole icon] PP WOODEN ELECTRIC POLES
- [Pole icon] CP CONCRETE ELECTRIC POLES
- [Earth symbol] LV-EARTH
- [Earth symbol] PME -PROTECTIVE MULTIPLE EARTHING
- [Stay symbol] STAY





NOTES:

- EXACT LOCATIONS OF POWER POLES TO BE DETERMINED ON SITE BY THE ENGINEER.
- CONCRETE/ WOODEN POLES TO BE DETERMINED ON SITE BY THE ENGINEER.
- LENGTH OF POLES TO BE DETERMINED ON SITE BY THE ENGINEER.
- PME TO BE AFTER EVERY 200m INTERVAL OR AFTER 4 SPANS.
- POLES NOT SHOWN WHERE PME OR LV EARTH INTERSECT FOR CLARITY.

LEGEND	
	HOUSEHOLDS/ BUILDINGS
	PROPOSED DISTRIBUTION LINE
	EXISTING 11kV LINE
	EXISTING 33kV LINE
	EXISTING DISTRIBUTION LINE
	MAXIMISATION TRANSFORMER
	EXTENSION TRANSFORMER
	OTHER EXISTING TRANSFORMER
	WOODEN ELECTRIC POLES
	CONCRETE ELECTRIC POLES
	LV-EARTH
	PME -PROTECTIVE MULTIPLE EARTHING
	STAY

SCALE 1:5000 50 0 50 100 150 200 250m (A3)

PROJECT: THE PREPARATORY SURVEY ON THE PROJECT FOR IMPROVEMENT OF POWER DISTRIBUTION SYSTEM IN THE REPUBLIC OF KENYA	DRAWING TITLE COUNTY: KILIFI SCHEME: MAXIMIZATION PROJECT SITE: 19214 TAKAUNGU	DRAW. NO.	PREPARED BY	A.AKBAR
		KLF-MA-40	CHECKED BY	S.MAETA

NIPPON KOEI CO., LTD



NOTES:

1. EXACT LOCATIONS OF POWER POLES TO BE DETERMINED ON SITE BY THE ENGINEER.
 2. CONCRETE/ WOODEN POLES TO BE DETERMINED ON SITE BY THE ENGINEER.
 3. LENGTH OF POLES TO BE DETERMINED ON SITE BY THE ENGINEER.
 4. PME TO BE AFTER EVERY 200m INTERVAL OR AFTER 4 SPANS.
 5. POLES NOT SHOWN WHERE PME OR LV EARTH INTERSECT FOR CLARITY.

LEGEND

	HOUSEHOLDS/ BUILDINGS
	PROPOSED DISTRIBUTION LINE
	EXISTING 11kV LINE
	EXISTING 33kV LINE
	EXISTING DISTRIBUTION LINE
	MAXIMISATION TRANSFORMER
	EXTENSION TRANSFORMER
	OTHER EXISTING TRANSFORMER
	WOODEN ELECTRIC POLES
	CONCRETE ELECTRIC POLES
	LV-EARTH
	PME -PROTECTIVE MULTIPLE EARTHING
	STAY

SCALE 1 : 5000

PROJECT: THE PREPARATORY SURVEY
ON THE PROJECT FOR IMPROVEMENT
OF POWER DISTRIBUTION SYSTEM
IN THE REPUBLIC OF KENYA

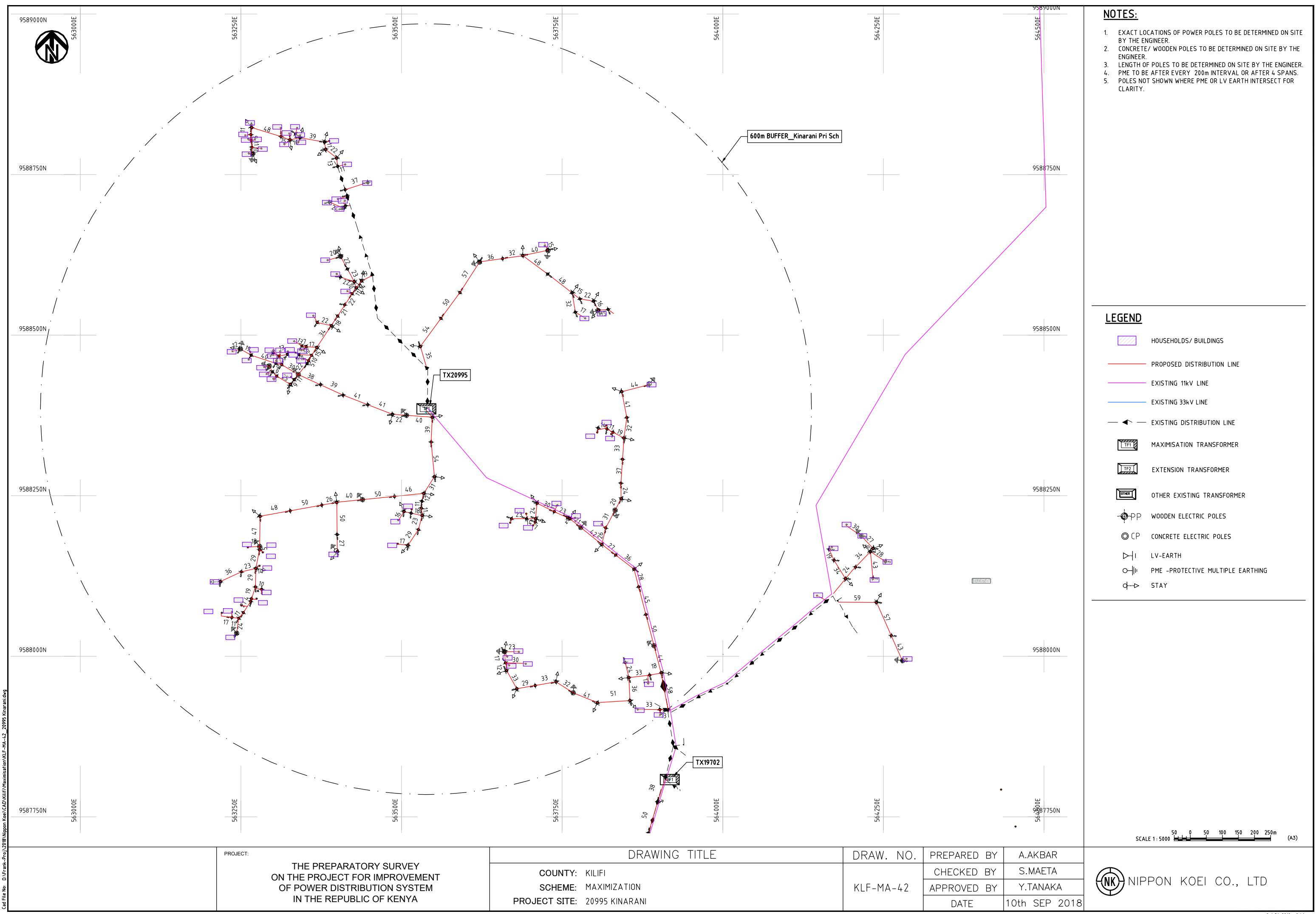
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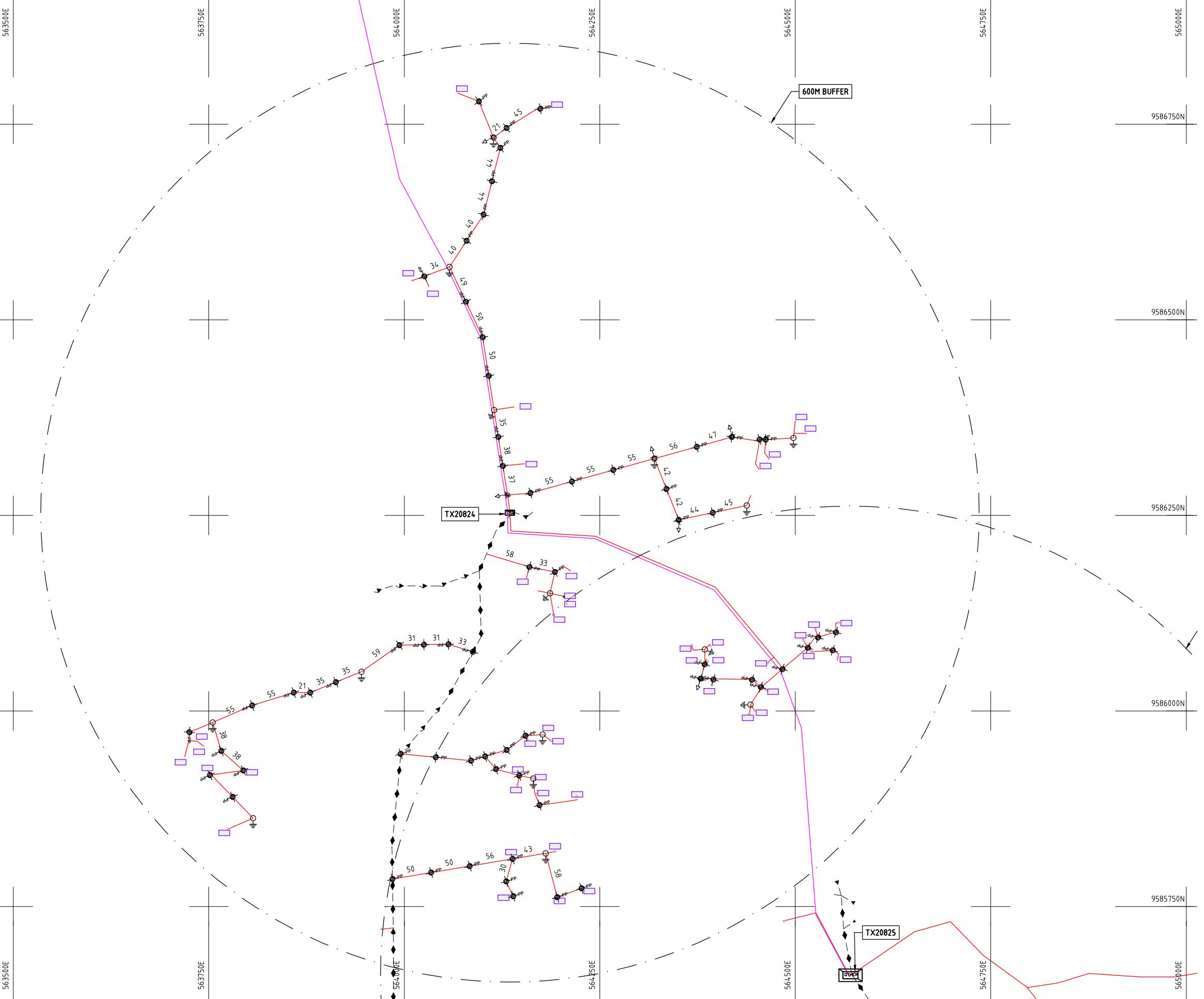
DRAW

KLF-M

NO.	PREPARED BY	A.AKBAR
-41	CHECKED BY	S.MAETA
	APPROVED BY	Y.TANAKA
	DATE	10th SEP 2018

 NIPPON KOEI CO., LTD



**NOTES:**

- EXACT LOCATIONS OF POWER POLES TO BE DETERMINED ON SITE BY THE ENGINEER.
- CONCRETE/ WOODEN POLES TO BE DETERMINED ON SITE BY THE ENGINEER.
- LENGTH OF POLES TO BE DETERMINED ON SITE BY THE ENGINEER.
- PME TO BE AFTER EVERY 200m INTERVAL OR AFTER 4 SPANS.

LEGEND

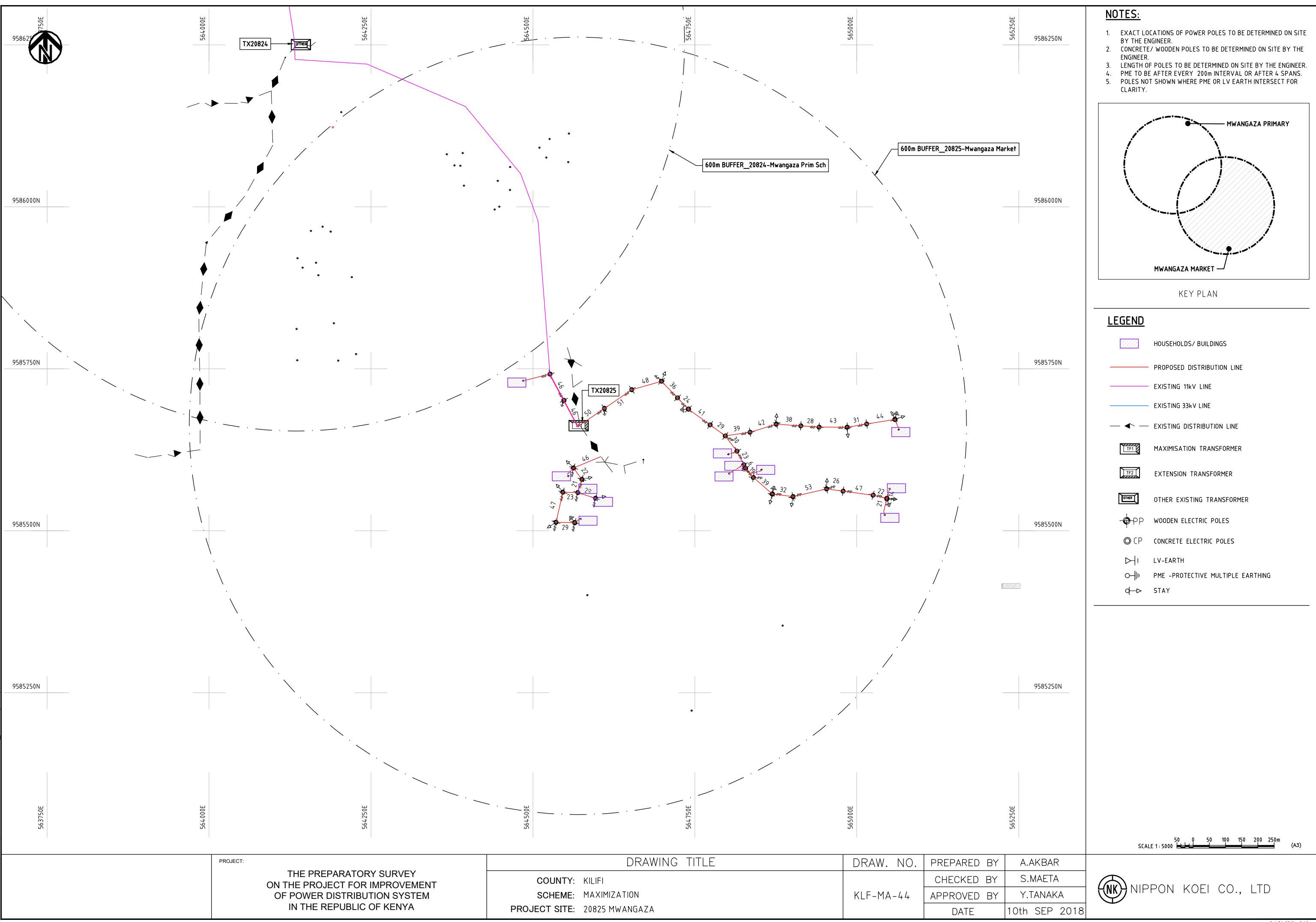
- | | |
|--|-----------------------------------|
| | HOUSEHOLDS / BUILDINGS |
| | PROPOSED 11kV |
| | PROPOSED 33kV |
| | PROPOSED DISTRIBUTION LINE |
| | EXISTING 11kV LINE |
| | EXISTING 33kV LINE |
| | EXISTING DISTRIBUTION LINE |
| | MAXIMISATION TRANSFORMER |
| | EXTENSION TRANSFORMER |
| | WOODEN ELECTRIC POLES |
| | CONCRETE ELECTRIC POLES 12M |
| | CONCRETE ELECTRIC POLES 11M |
| | LV-EARTH |
| | PME -PROTECTIVE MULTIPLE EARTHING |
| | STAY |

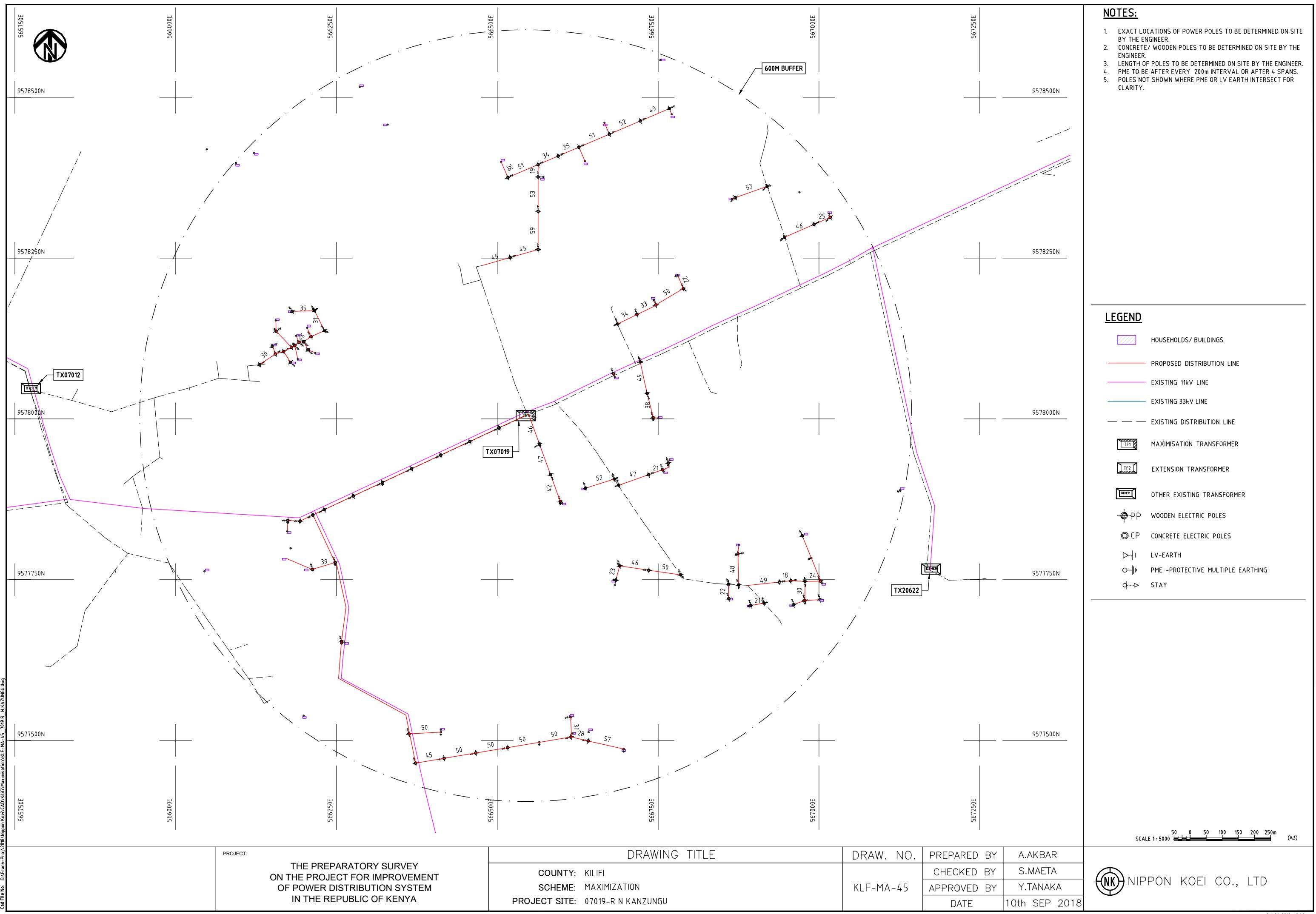
NIPPON KOEI CO., LTD

PROJECT:
THE PREPARATORY SURVEY
ON THE PROJECT FOR IMPROVEMENT
OF POWER DISTRIBUTION SYSTEM
IN THE REPUBLIC OF KENYA

DRAWING TITLE
COUNTY: KILIFI
SCHEME: MAXIMIZATION
PROJECT SITE: 20824 MWANGAZA PRIMARY SCHOOL

DRAW. NO. KLF-MA-43
PREPARED BY A.AKBAR
CHECKED BY S.MAETA
APPROVED BY Y.TANAKA
DATE 10th SEP 2018







959400N

557500E

557750E

558000E

558250E

558500E

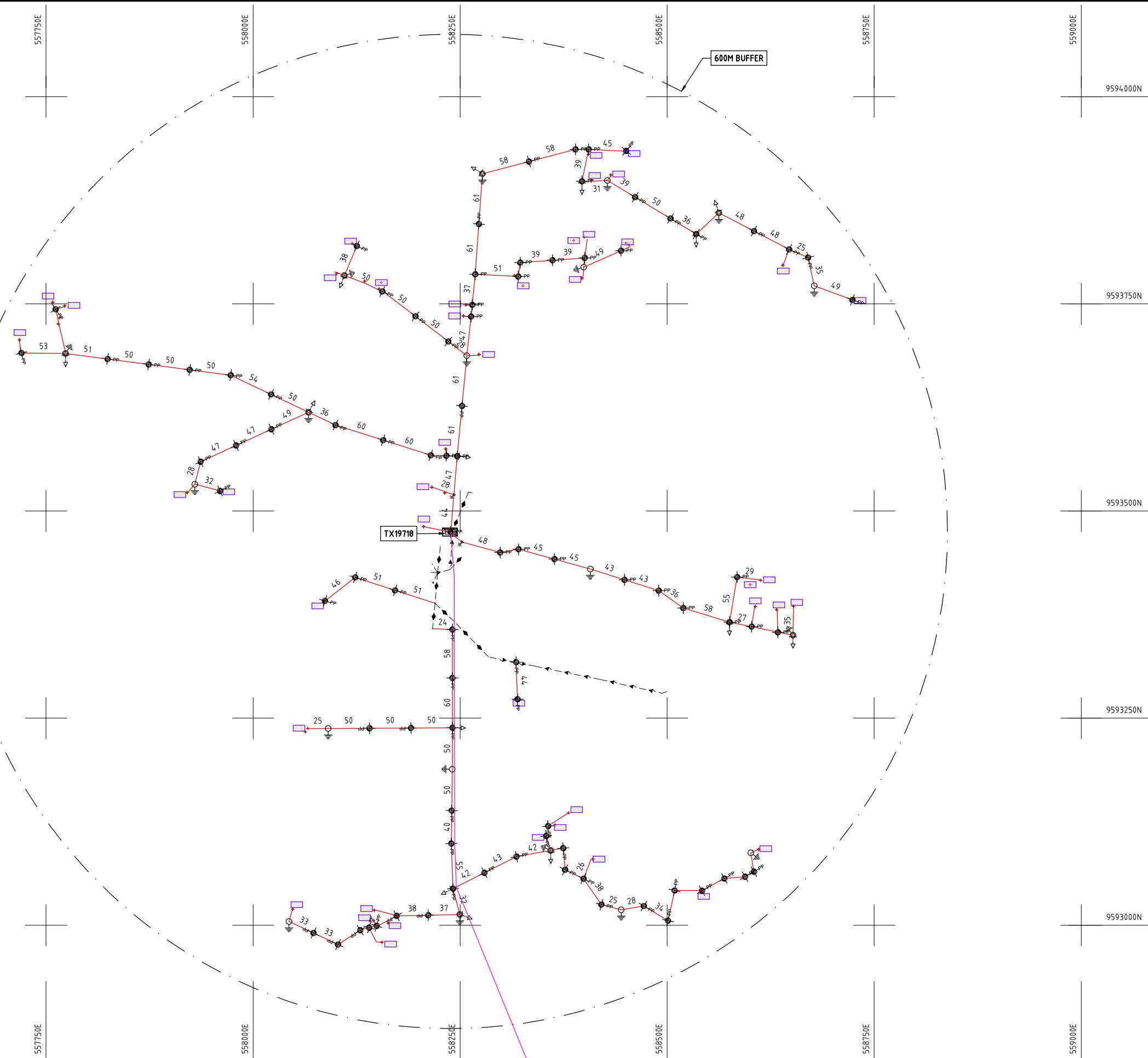
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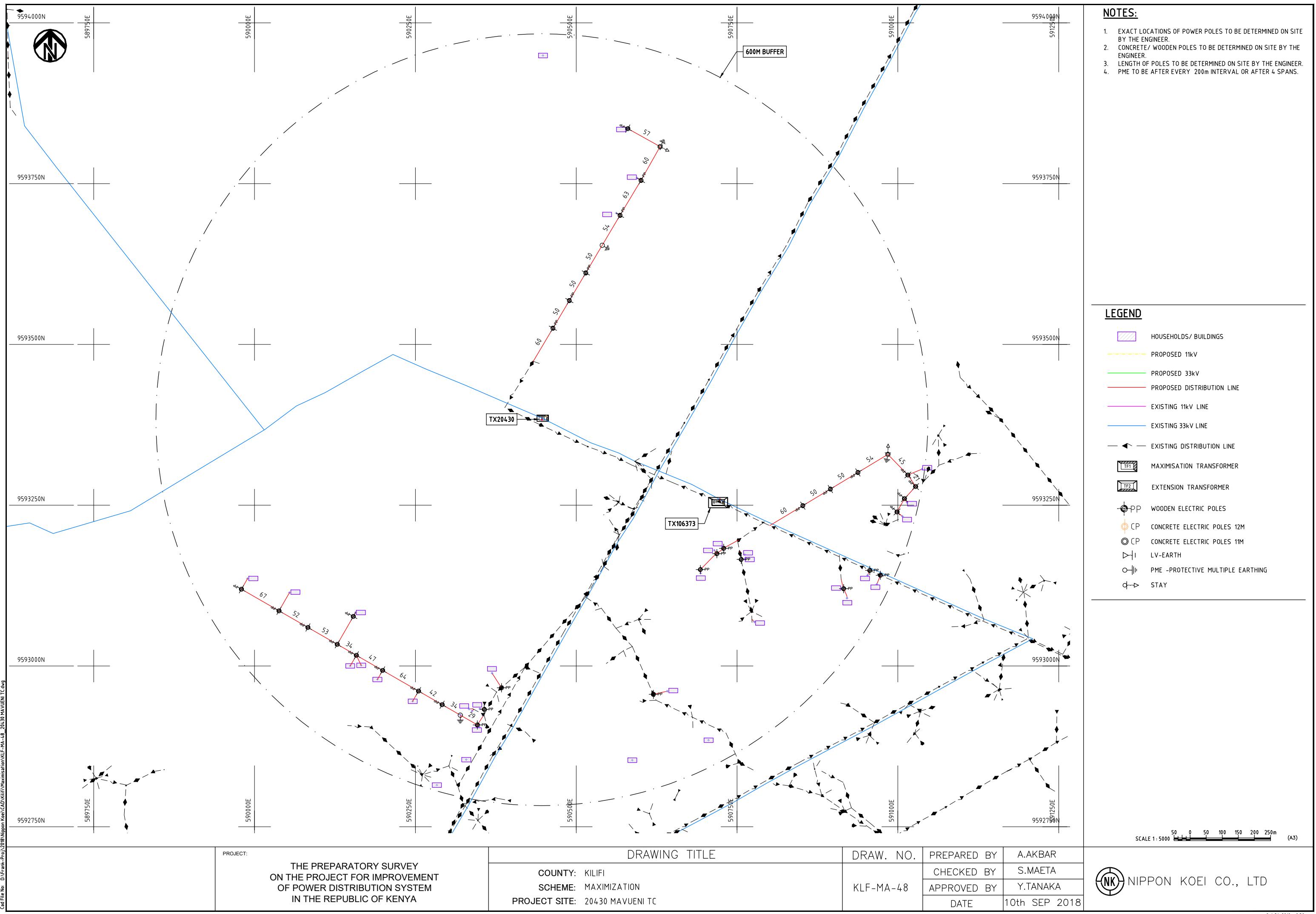
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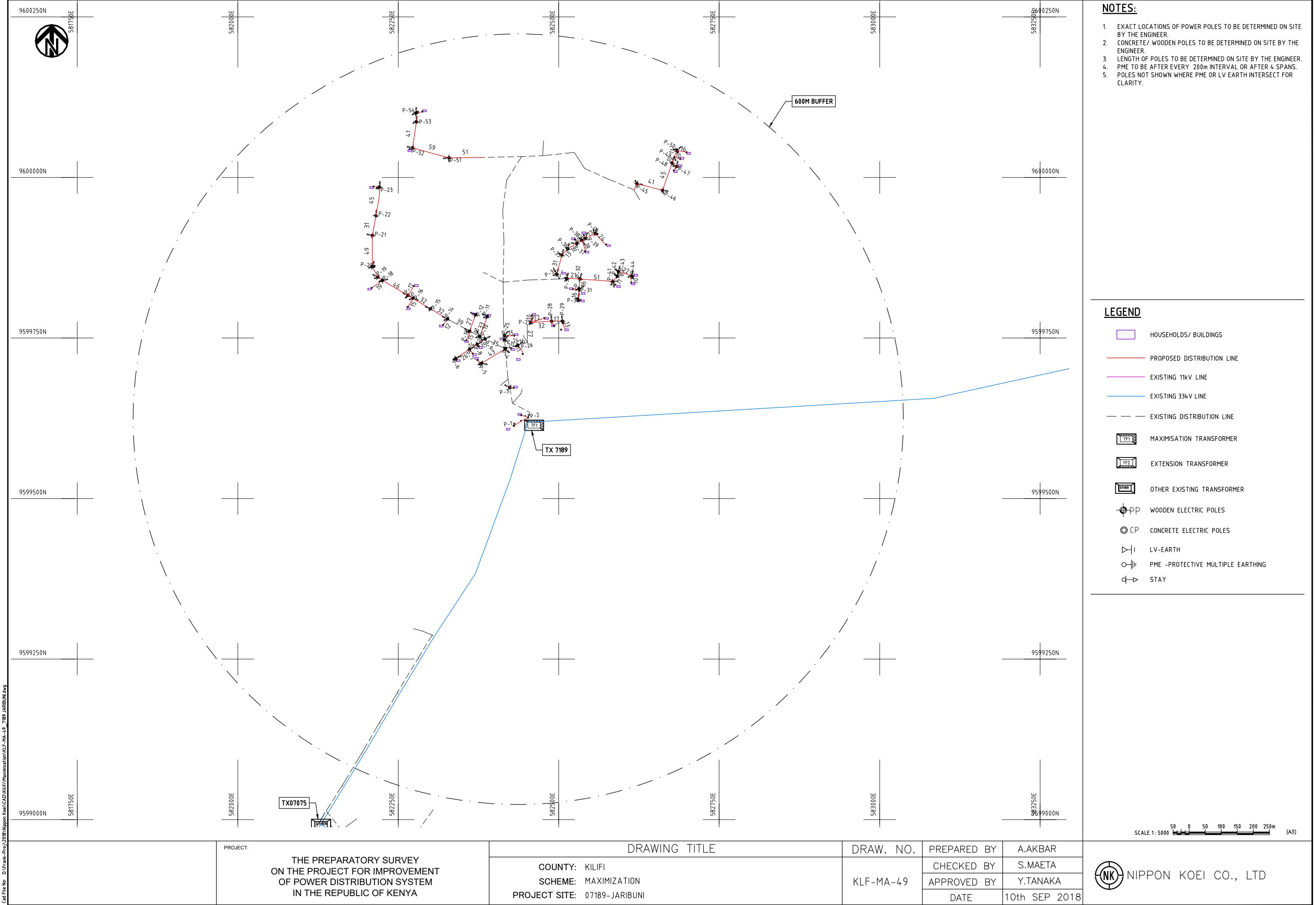
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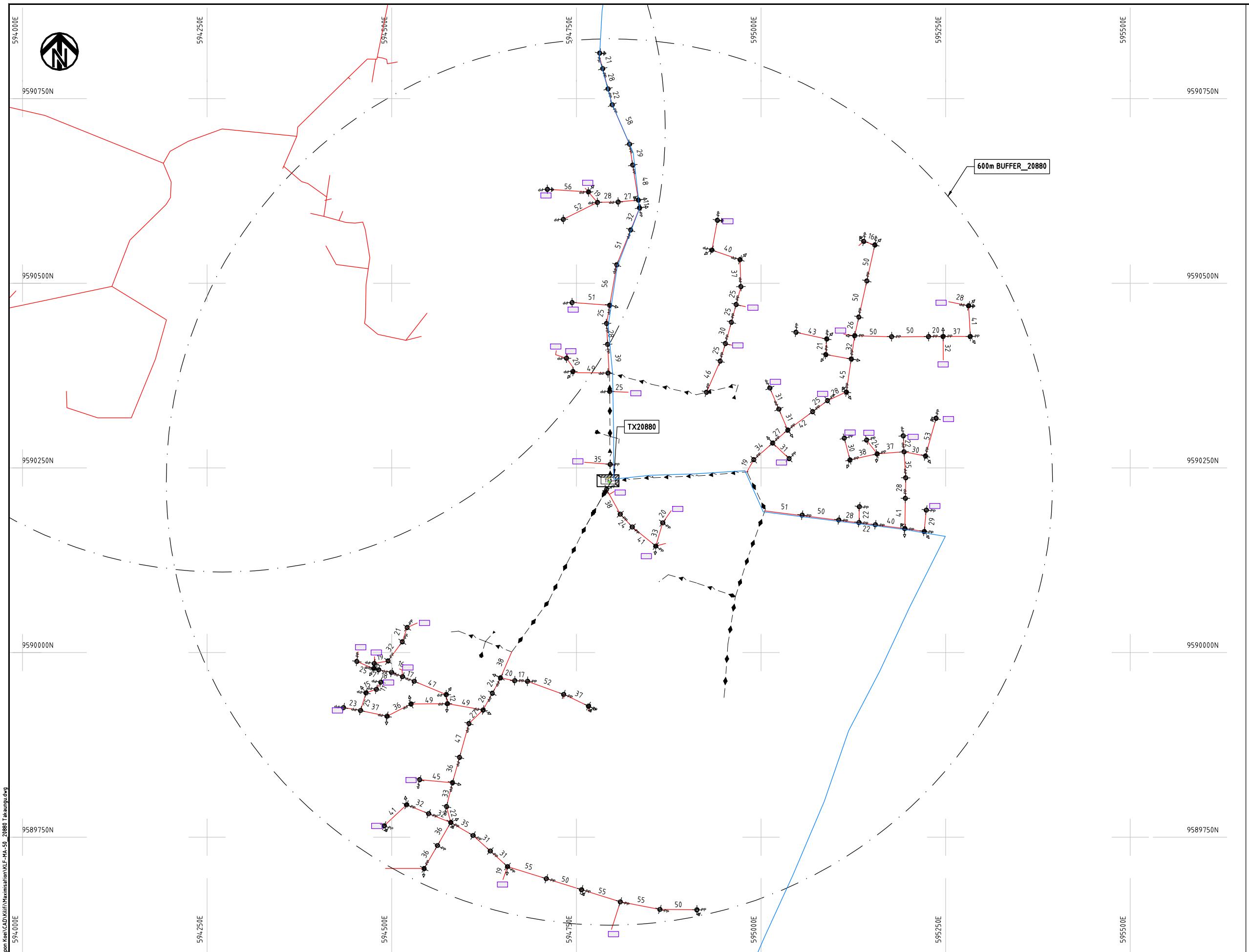
NOTES:

- EXACT LOCATIONS OF POWER POLES TO BE DETERMINED ON SITE BY THE ENGINEER.
- CONCRETE/ WOODEN POLES TO BE DETERMINED ON SITE BY THE ENGINEER.
- LENGTH OF POLES TO BE DETERMINED ON SITE BY THE ENGINEER.
- PME TO BE AFTER EVERY 200m INTERVAL OR AFTER 4 SPANS.



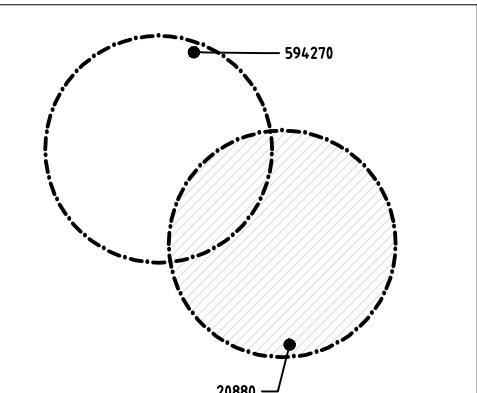






NOTES:

- EXACT LOCATIONS OF POWER POLES TO BE DETERMINED ON SITE BY THE ENGINEER.
- CONCRETE/ WOODEN POLES TO BE DETERMINED ON SITE BY THE ENGINEER.
- LENGTH OF POLES TO BE DETERMINED ON SITE BY THE ENGINEER.
- PME TO BE AFTER EVERY 200m INTERVAL OR AFTER 4 SPANS.
- POLES NOT SHOWN WHERE PME OR LV EARTH INTERSECT FOR CLARITY.



LEGEND

- [Purple square] HOUSEHOLDS/ BUILDINGS
- [Red line] PROPOSED DISTRIBUTION LINE
- [Pink line] EXISTING 11kV LINE
- [Blue line] EXISTING 33kV LINE
- [Dashed line] EXISTING DISTRIBUTION LINE
- [Transformer icon] MAXIMISATION TRANSFORMER
- [Transformer icon] EXTENSION TRANSFORMER
- [Transformer icon] OTHER EXISTING TRANSFORMER
- [Wooden pole icon] WOODEN ELECTRIC POLES
- [Concrete pole icon] CONCRETE ELECTRIC POLES
- [Earth symbol] LV-EARTH
- [Multiple earth symbol] PME -PROTECTIVE MULTIPLE EARTHING
- [Stay symbol] STAY

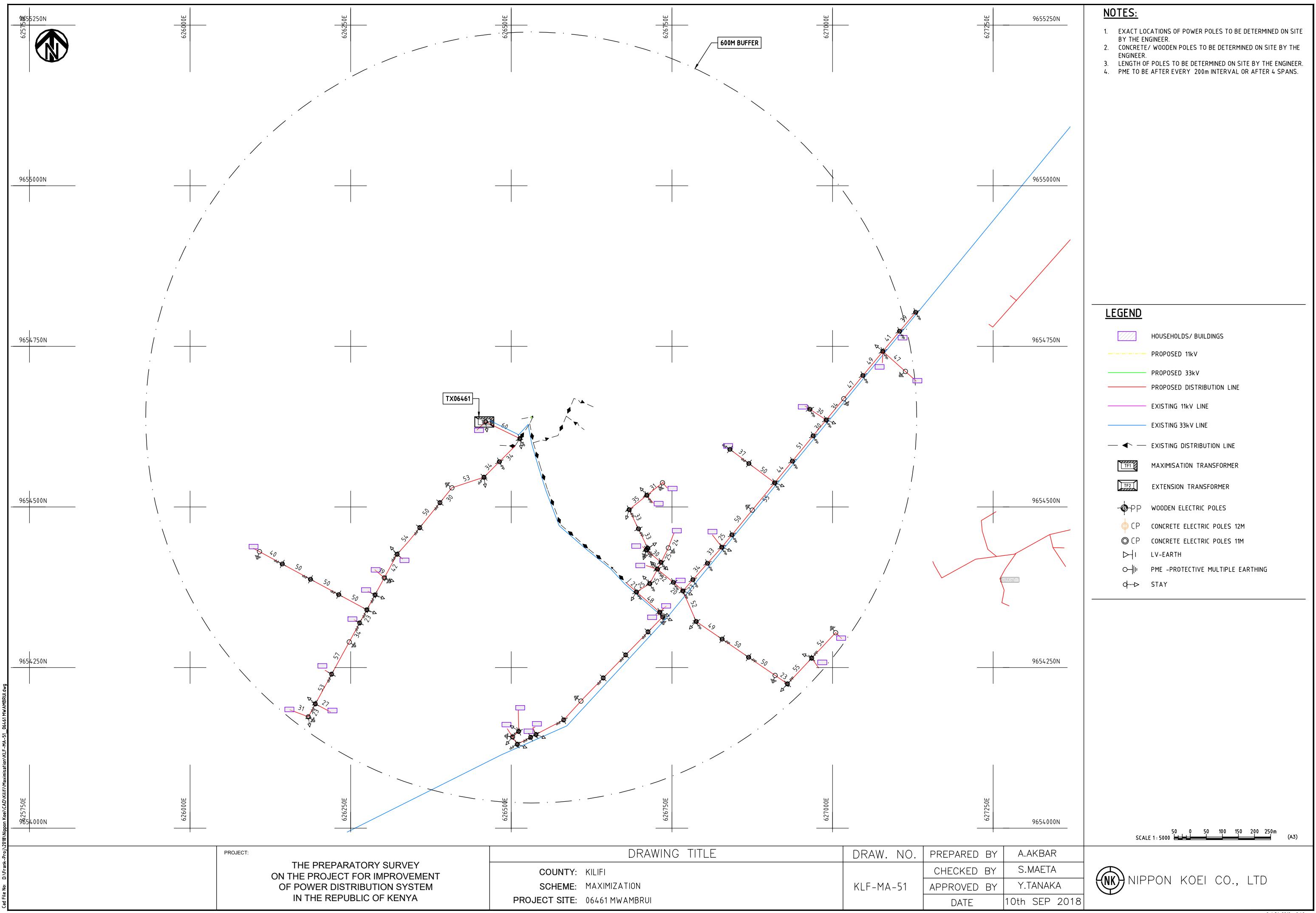
SCALE 1:5000 50 0 50 100 150 200 250m (A3)

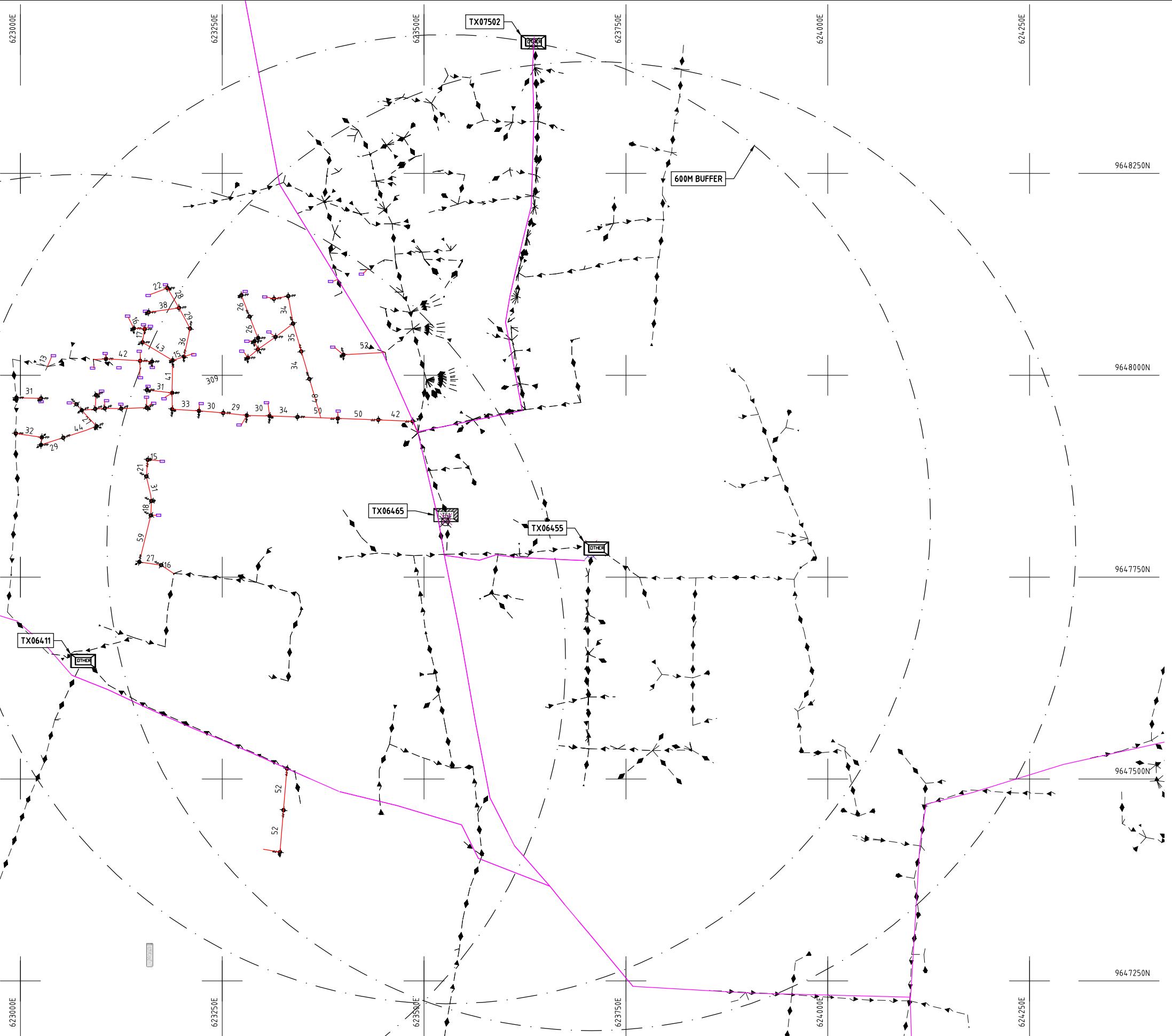
PROJECT:
THE PREPARATORY SURVEY
ON THE PROJECT FOR IMPROVEMENT
OF POWER DISTRIBUTION SYSTEM
IN THE REPUBLIC OF KENYA

DRAWING TITLE
COUNTY: KILIFI
SCHEME: MAXIMIZATION
PROJECT SITE: 20880 TAKAUNGU

DRAW. NO. KLF-MA-50
PREPARED BY A.AKBAR
CHECKED BY S.MAETA
APPROVED BY Y.TANAKA
DATE 10th SEP 2018

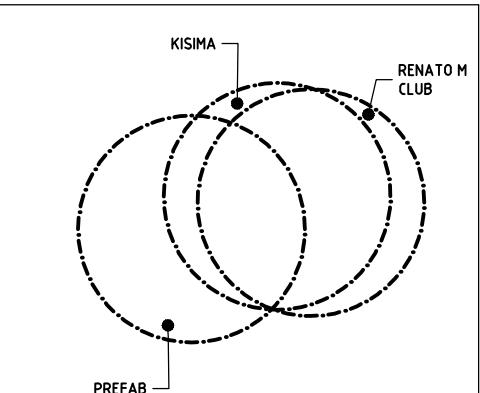
NIPPON KOEI CO., LTD





NOTES:

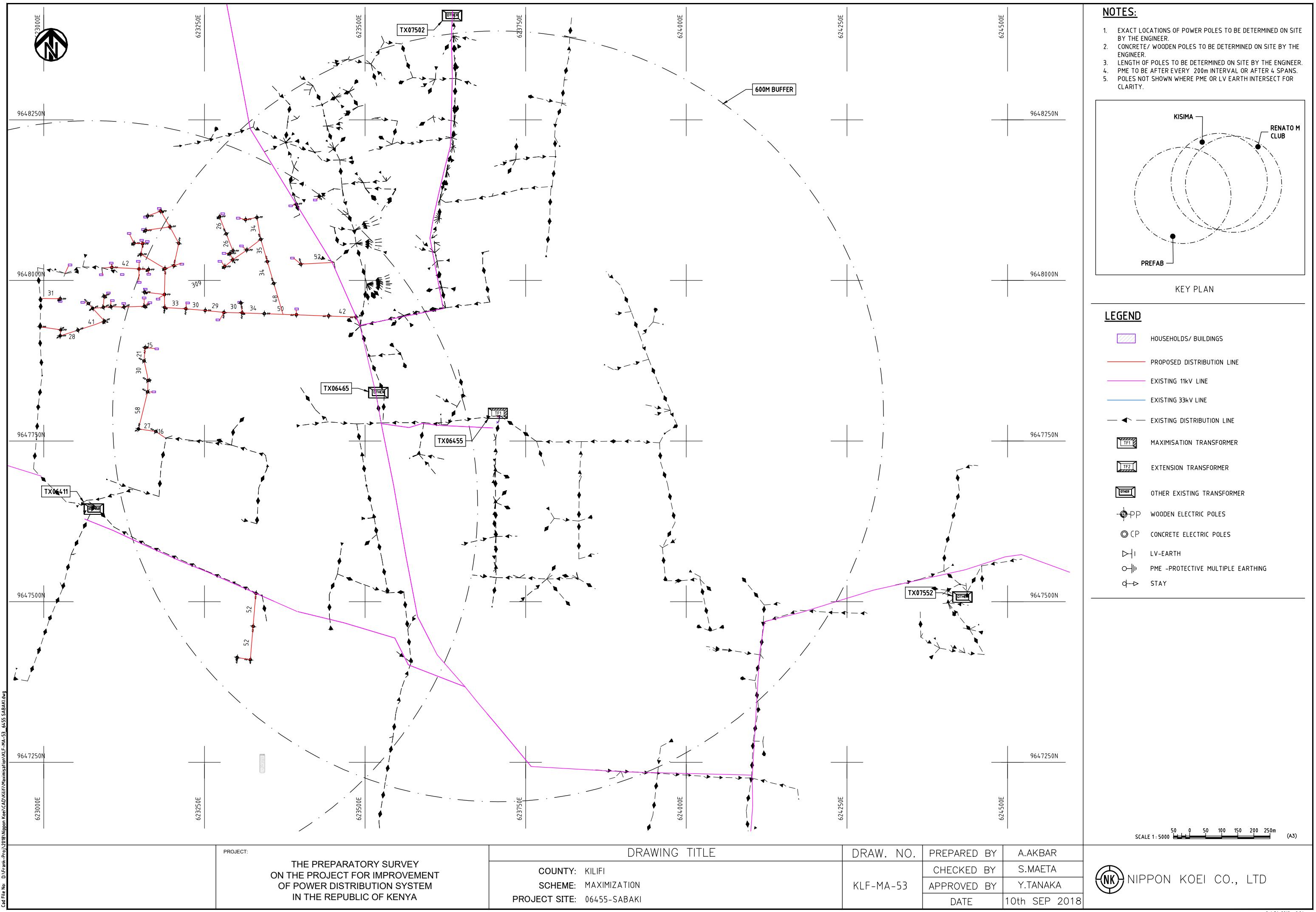
1. EXACT LOCATIONS OF POWER POLES TO BE DETERMINED ON SITE BY THE ENGINEER.
2. CONCRETE/ WOODEN POLES TO BE DETERMINED ON SITE BY THE ENGINEER.
3. LENGTH OF POLES TO BE DETERMINED ON SITE BY THE ENGINEER.
4. PME TO BE AFTER EVERY 200m INTERVAL OR AFTER 4 SPANS.
5. POLES NOT SHOWN WHERE PME OR LV EARTH INTERSECT FOR CLARITY.

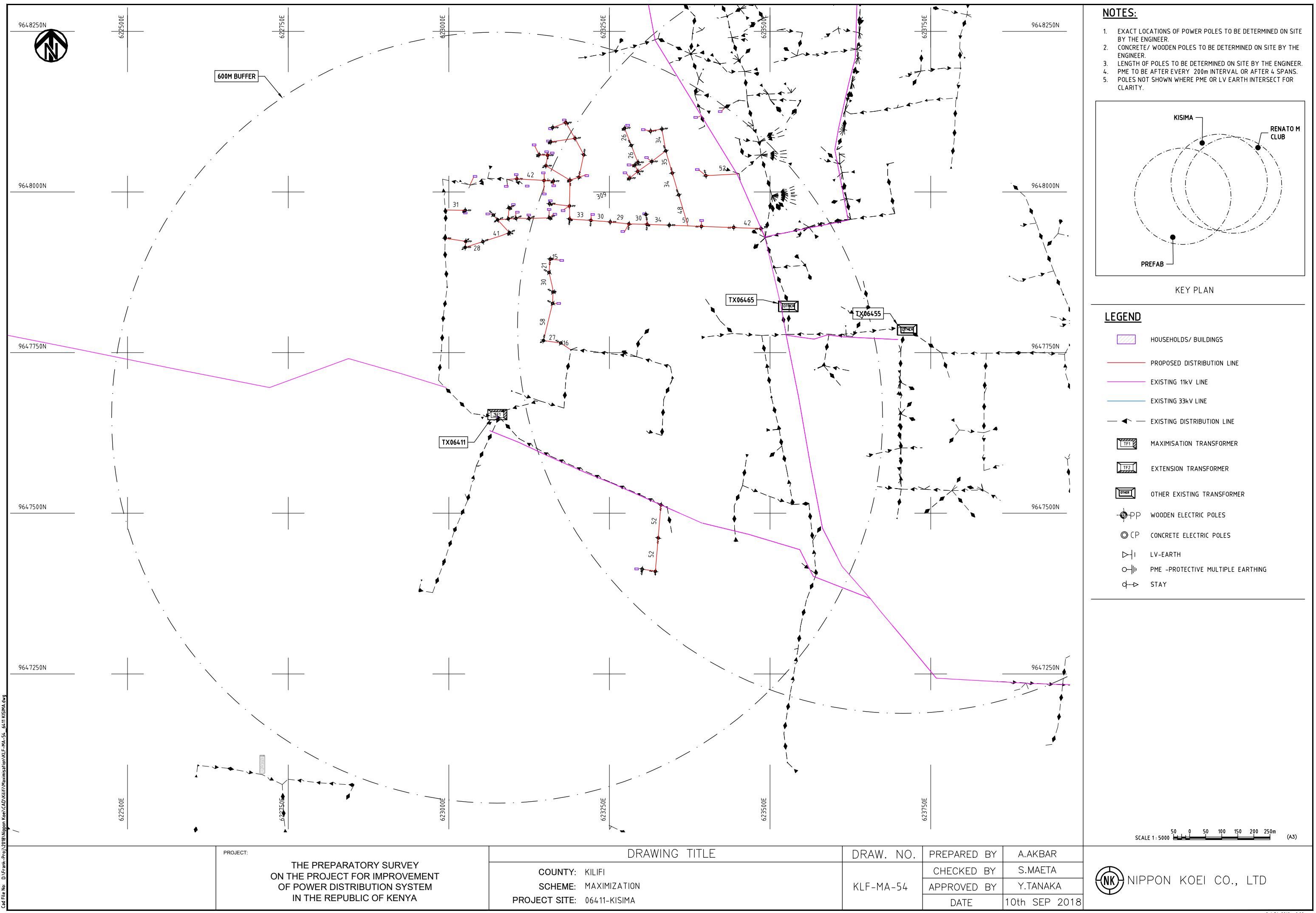


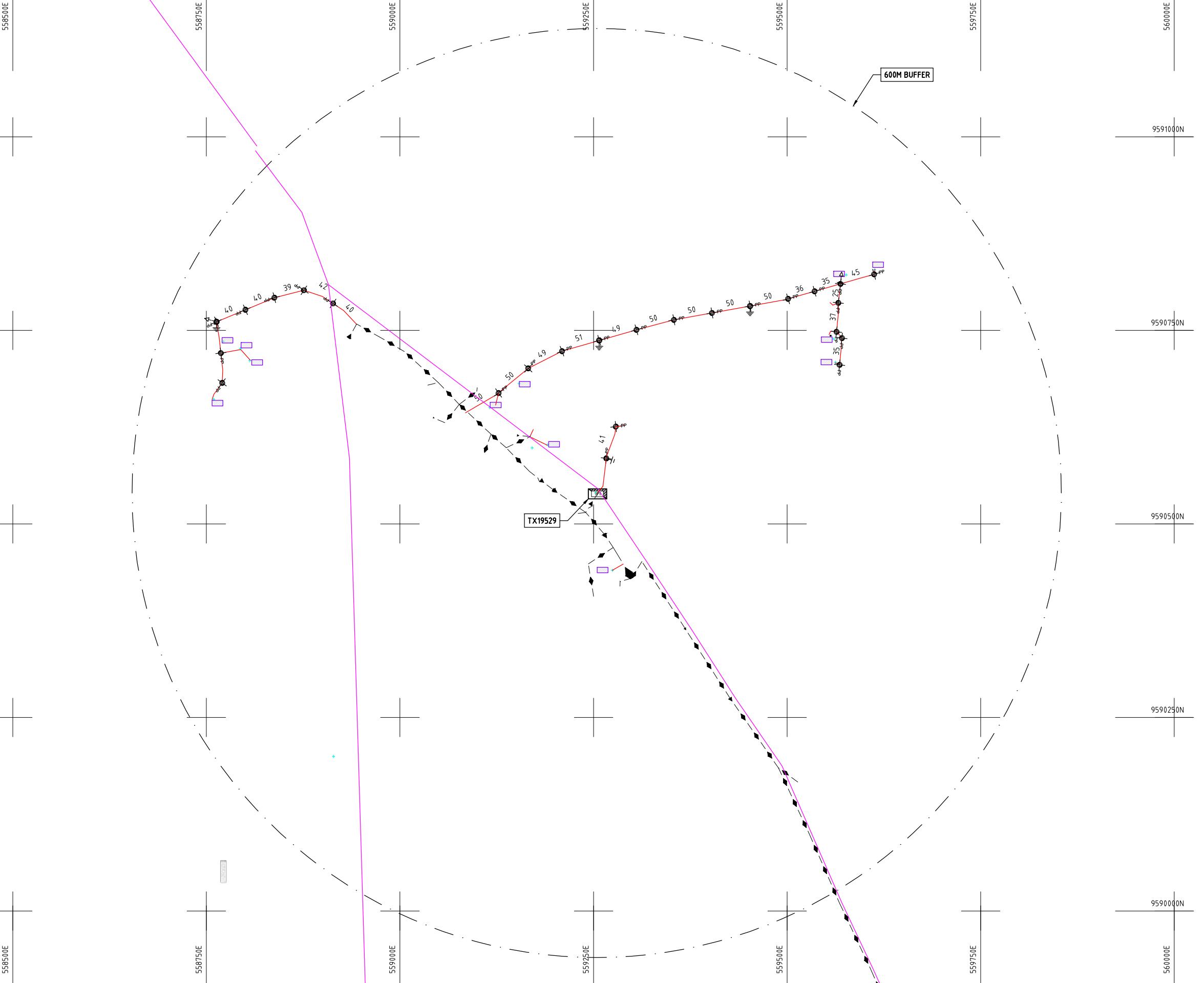
LEGEND

- HOUSEHOLDS/ BUILDINGS
- PROPOSED DISTRIBUTION LINE
- EXISTING 11kV LINE
- EXISTING 33kV LINE
- > EXISTING DISTRIBUTION LINE
- TF1 MAXIMISATION TRANSFORMER
- TF2 EXTENSION TRANSFORMER
- OTHER OTHER EXISTING TRANSFORMER
- PP WOODEN ELECTRIC POLES
- CP CONCRETE ELECTRIC POLES
- △ I LV-EARTH
- III PME -PROTECTIVE MULTIPLE EARTHING
- → STAY

SCALE 1:5000 50 0 50 100 150 200 250m (A3)





**NOTES:**

1. EXACT LOCATIONS OF POWER POLES TO BE DETERMINED ON SITE BY THE ENGINEER.
2. CONCRETE/ WOODEN POLES TO BE DETERMINED ON SITE BY THE ENGINEER.
3. LENGTH OF POLES TO BE DETERMINED ON SITE BY THE ENGINEER.
4. PME TO BE AFTER EVERY 200m INTERVAL OR AFTER 4 SPANS.

LEGEND

- HOUSEHOLDS/ BUILDINGS
- PROPOSED 11kV
- PROPOSED 33kV
- PROPOSED DISTRIBUTION LINE
- EXISTING 11kV LINE
- EXISTING 33kV LINE
- EXISTING DISTRIBUTION LINE
- MAXIMISATION TRANSFORMER
- EXTENSION TRANSFORMER
- PP WOODEN ELECTRIC POLES
- CP CONCRETE ELECTRIC POLES 12M
- CP CONCRETE ELECTRIC POLES 11M
- △ I LV-EARTH
- III PME -PROTECTIVE MULTIPLE EARTHING
- → STAY

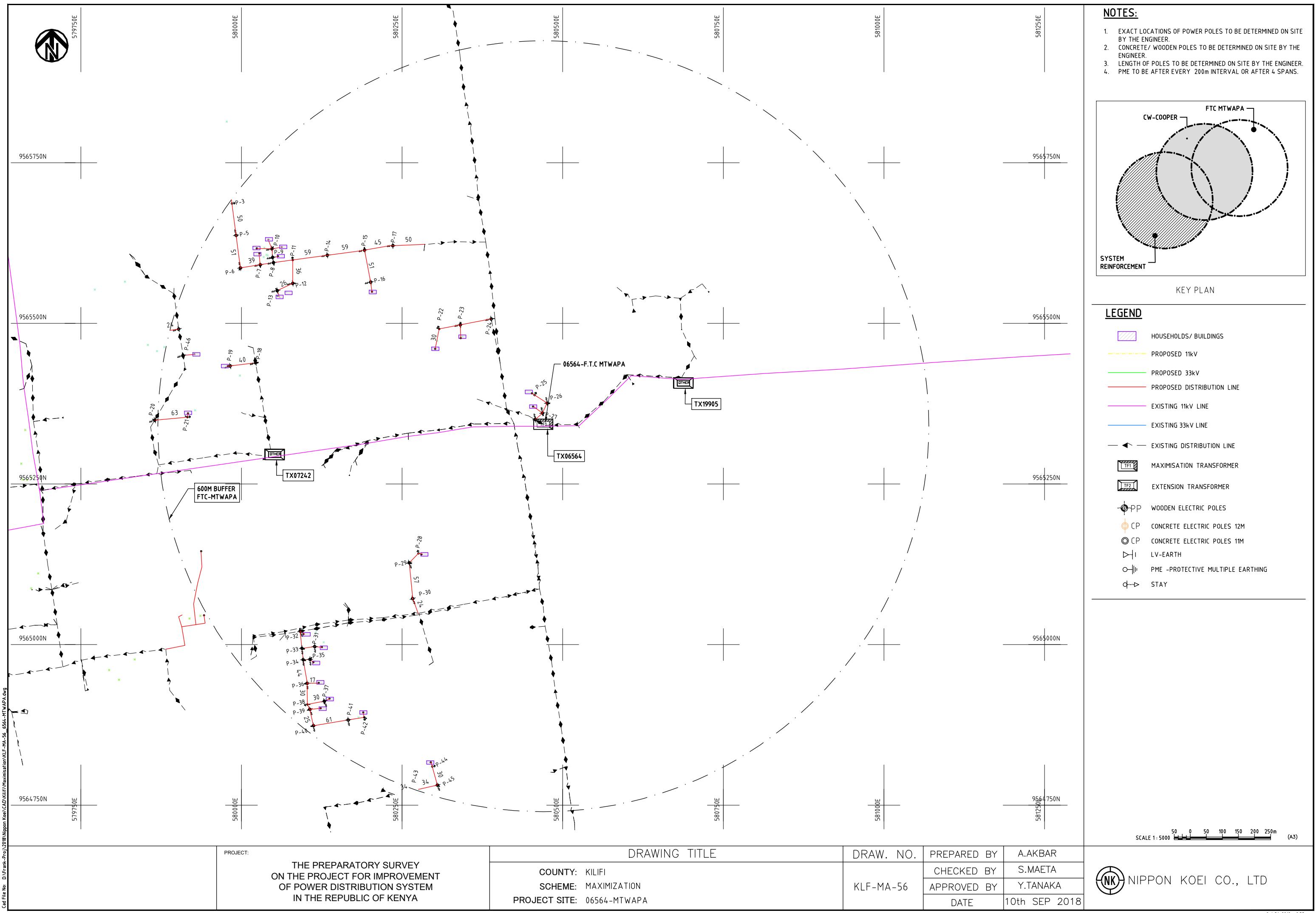
NIPON KOEI CO., LTD

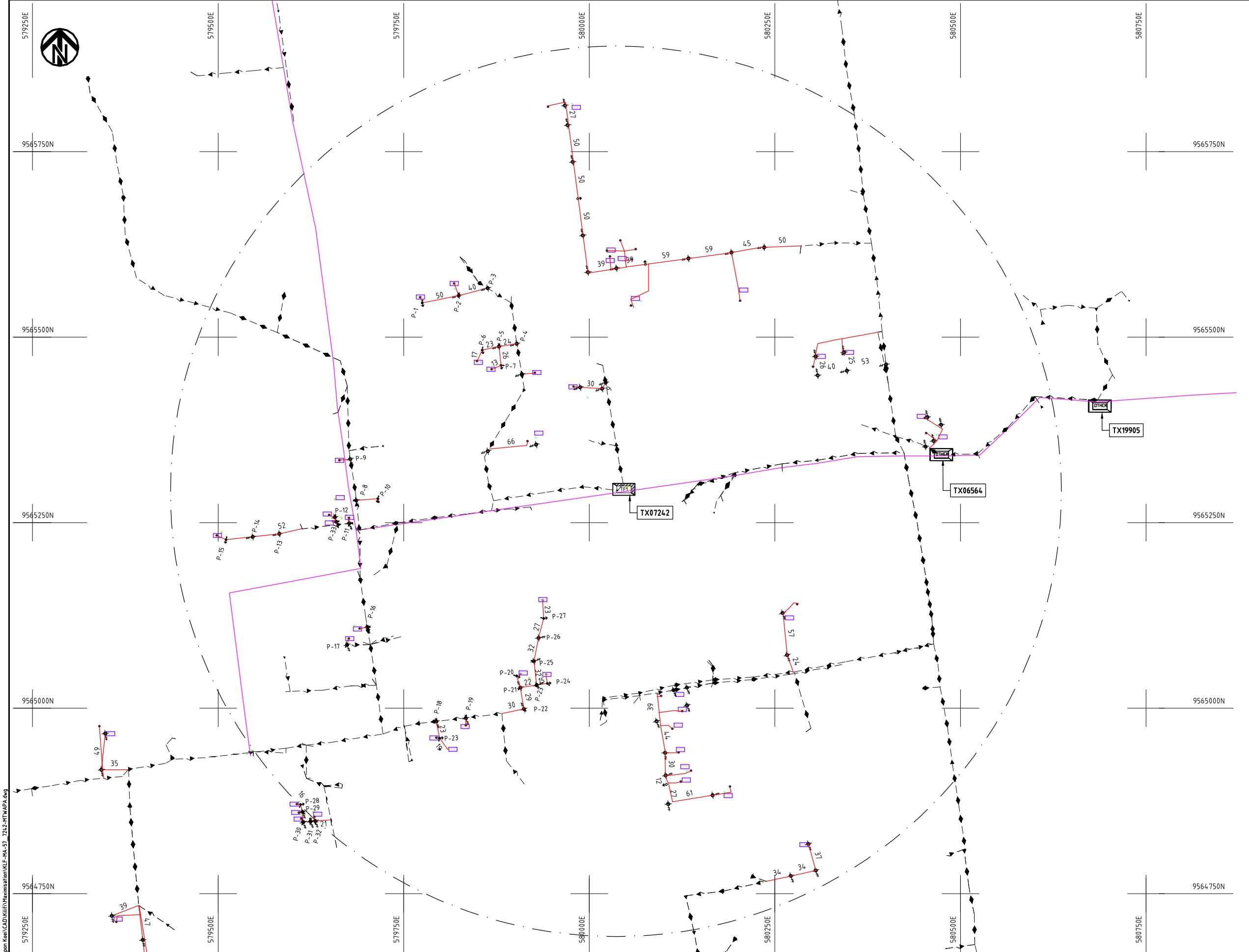
PROJECT:
THE PREPARATORY SURVEY
ON THE PROJECT FOR IMPROVEMENT
OF POWER DISTRIBUTION SYSTEM
IN THE REPUBLIC OF KENYA

DRAWING TITLE
COUNTY: KILIFI
SCHEME: MAXIMIZATION
PROJECT SITE: 19529 VIRAGONI

DRAW. NO. KLF-MA-55
PREPARED BY A.AKBAR
CHECKED BY S.MAETA
APPROVED BY Y.TANAKA
DATE 10th SEP 2018

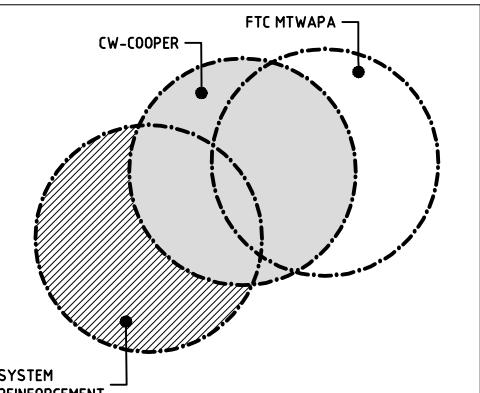
NIPON KOEI CO., LTD





NOTES:

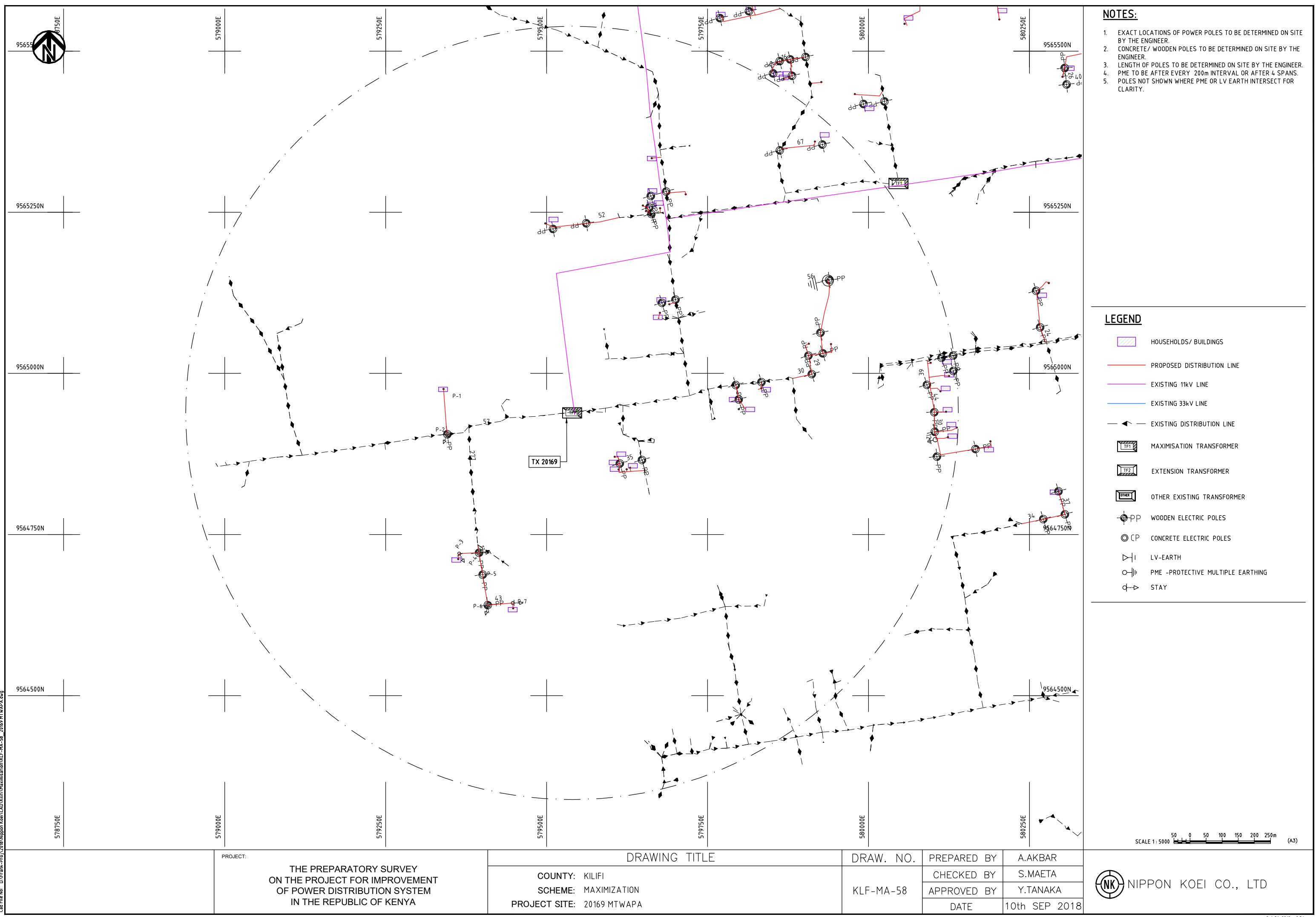
- EXACT LOCATIONS OF POWER POLES TO BE DETERMINED ON SITE BY THE ENGINEER.
- CONCRETE/ WOODEN POLES TO BE DETERMINED ON SITE BY THE ENGINEER.
- LENGTH OF POLES TO BE DETERMINED ON SITE BY THE ENGINEER.
- PME TO BE AFTER EVERY 200m INTERVAL OR AFTER 4 SPANS.



LEGEND

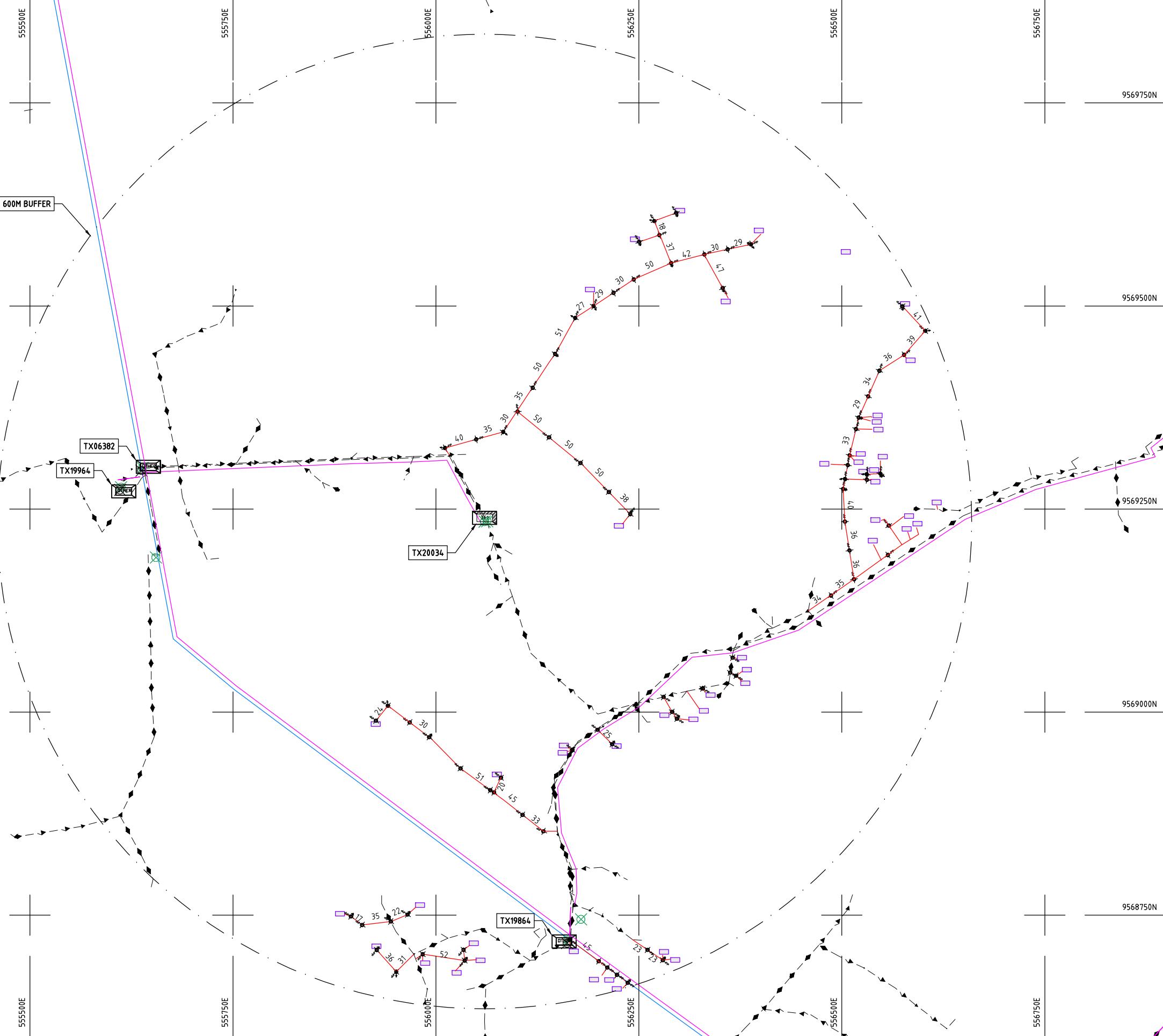
- HOUSEHOLDS / BUILDINGS
- PROPOSED 11kV
- PROPOSED 33kV
- PROPOSED DISTRIBUTION LINE
- EXISTING 11kV LINE
- EXISTING 33kV LINE
- EXISTING DISTRIBUTION LINE
- TF1 MAXIMISATION TRANSFORMER
- TF2 EXTENSION TRANSFORMER
- PP WOODEN ELECTRIC POLES
- CP CONCRETE ELECTRIC POLES 12M
- ◎ CP CONCRETE ELECTRIC POLES 11M
- △ I LV-EARTH
- II PME -PROTECTIVE MULTIPLE EARTHING
- ▷ STAY

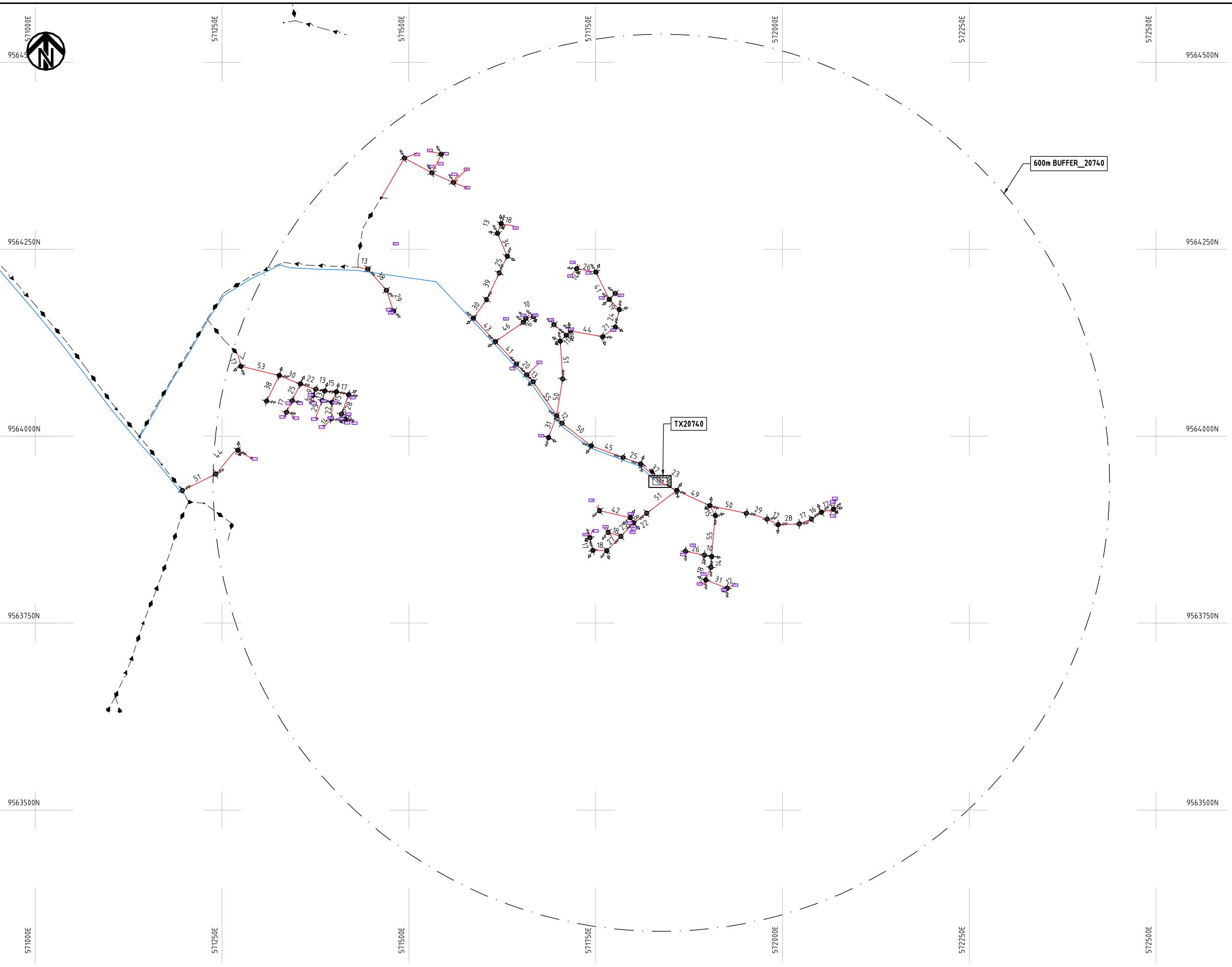
NIPPON KOEI CO., LTD





9569750N





NOTES:

1. EXACT LOCATIONS OF POWER POLES TO BE DETERMINED ON SITE BY THE ENGINEER.
 2. CONCRETE/ WOODEN POLES TO BE DETERMINED ON SITE BY THE ENGINEER.
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 4. PME TO BE AFTER EVERY 200m INTERVAL OR AFTER 4 SPANS.
 5. POLES NOT SHOWN WHERE PME OR LV EARTH INTERSECT FOR CLARITY.

LEGEND

 HOUSEHOLDS/ BUILDINGS
 PROPOSED DISTRIBUTION LINE
 EXISTING 11kV LINE
 EXISTING 33kV LINE
 EXISTING DISTRIBUTION LINE

 MAXIMISATION TRANSFORMER
 EXTENSION TRANSFORMER
 OTHER EXISTING TRANSFORMER

 WOODEN ELECTRIC POLES
 CONCRETE ELECTRIC POLES

 LV-EARTH
 PME -PROTECTIVE MULTIPLE EARTHING
 STAY

SCALE 1 : 5000 (A3)

PROJECT: THE PREPARATORY SURVEY
ON THE PROJECT FOR IMPROVEMENT
OF POWER DISTRIBUTION SYSTEM
IN THE REPUBLIC OF KENYA

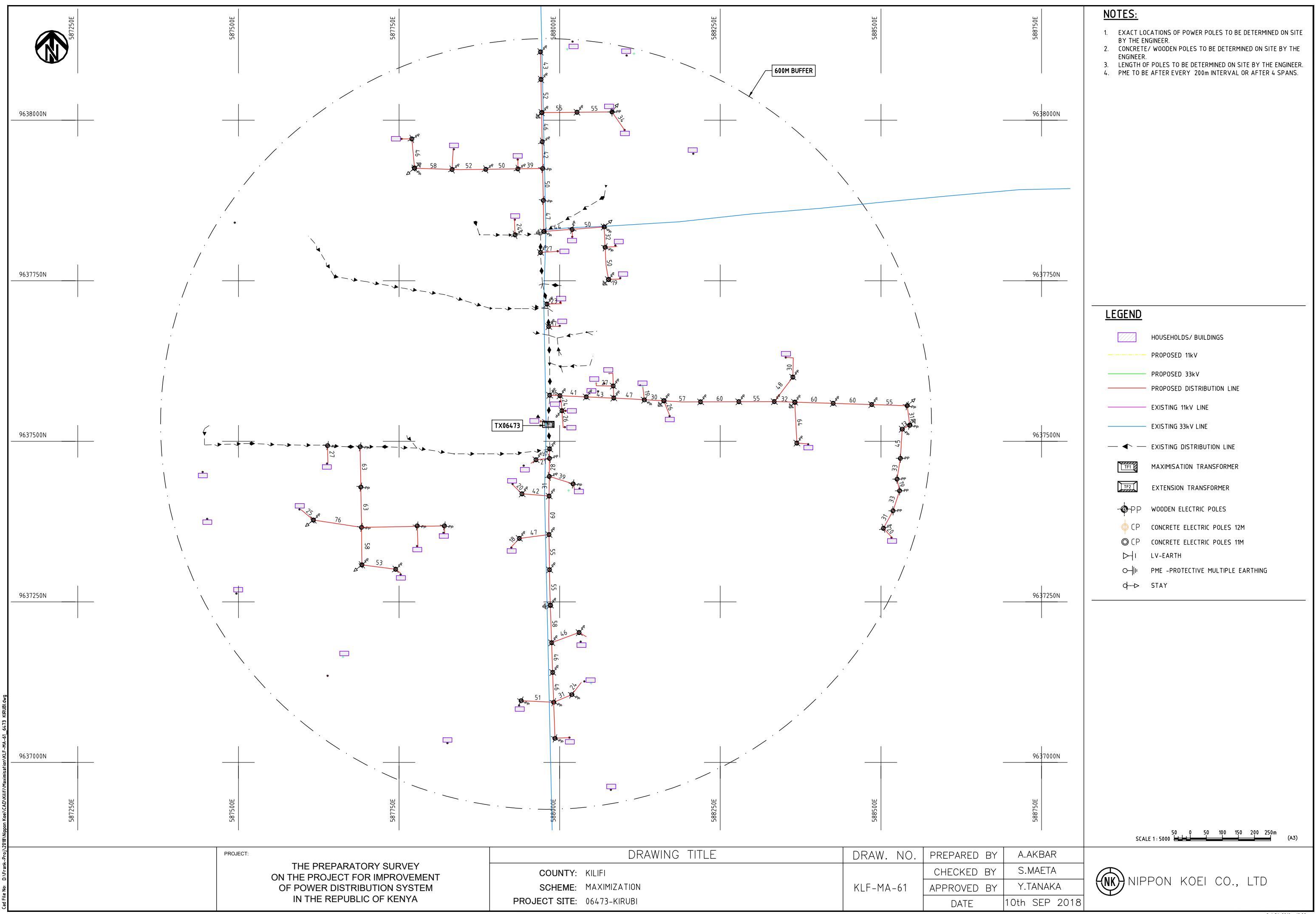
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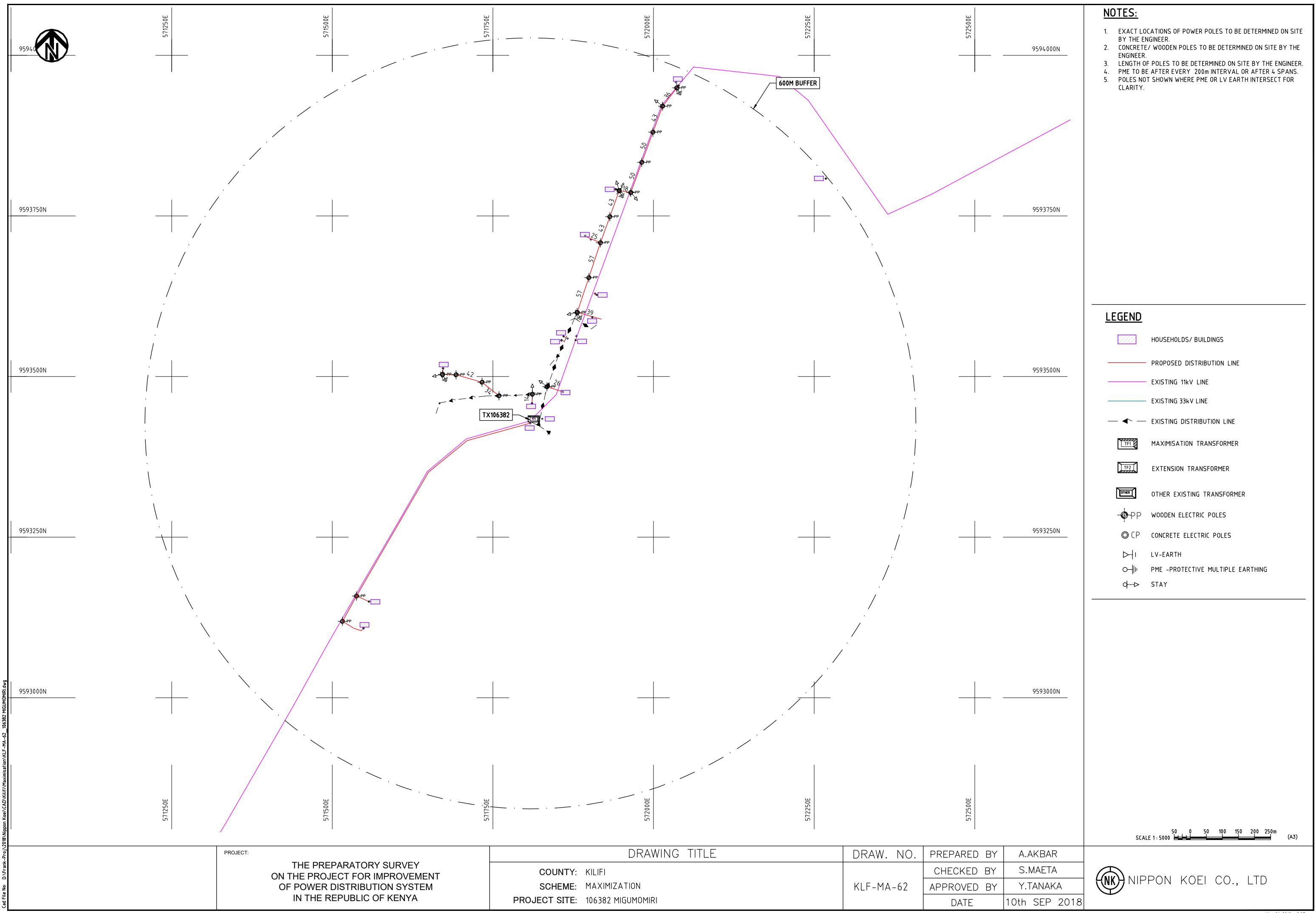
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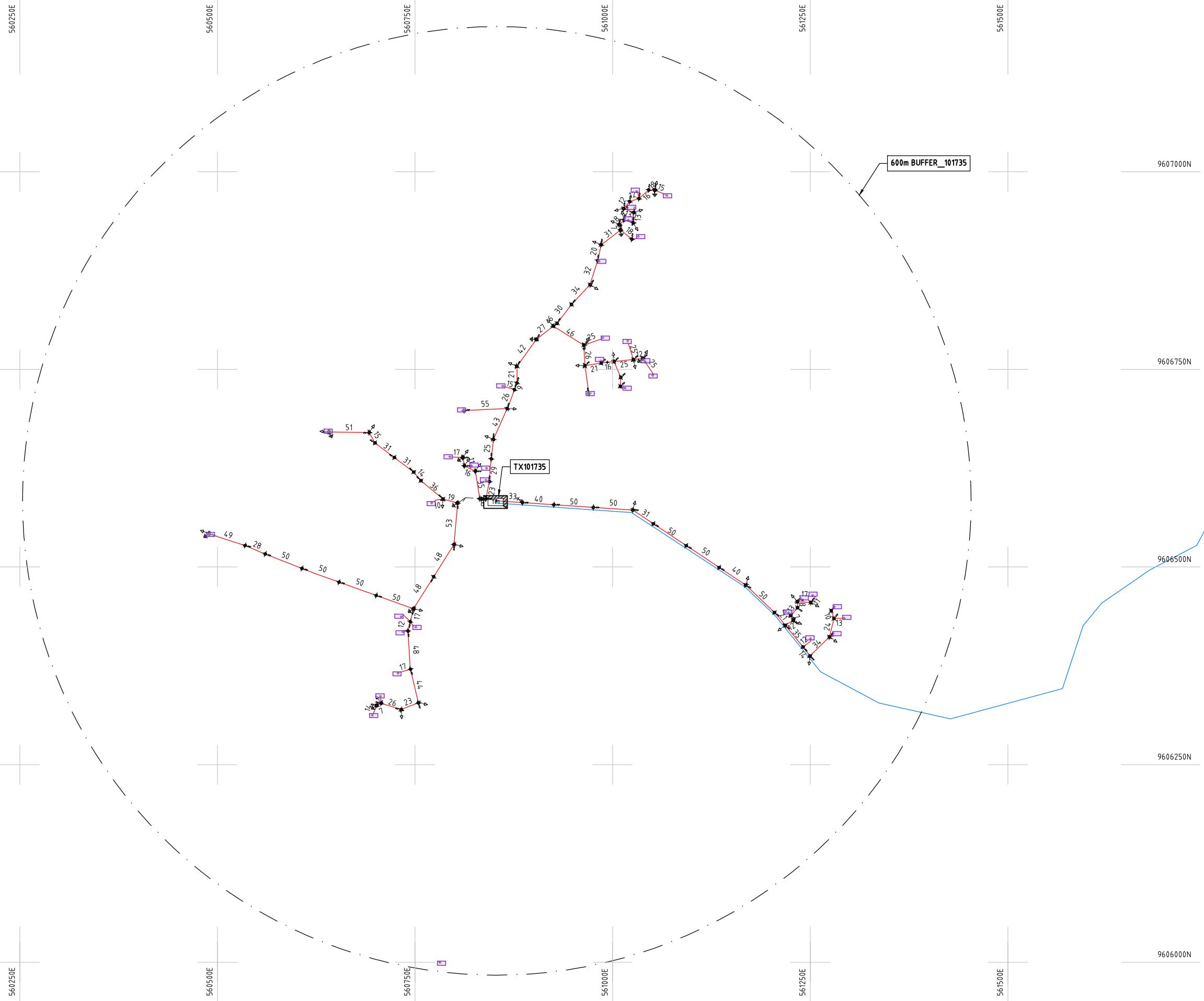
PREPARED BY	A.AKBAR
CHECKED BY	S.MAETA
APPROVED BY	Y.TANAKA
DATE	10th SEP 2018



 NIPPON KOEI CO., LTD





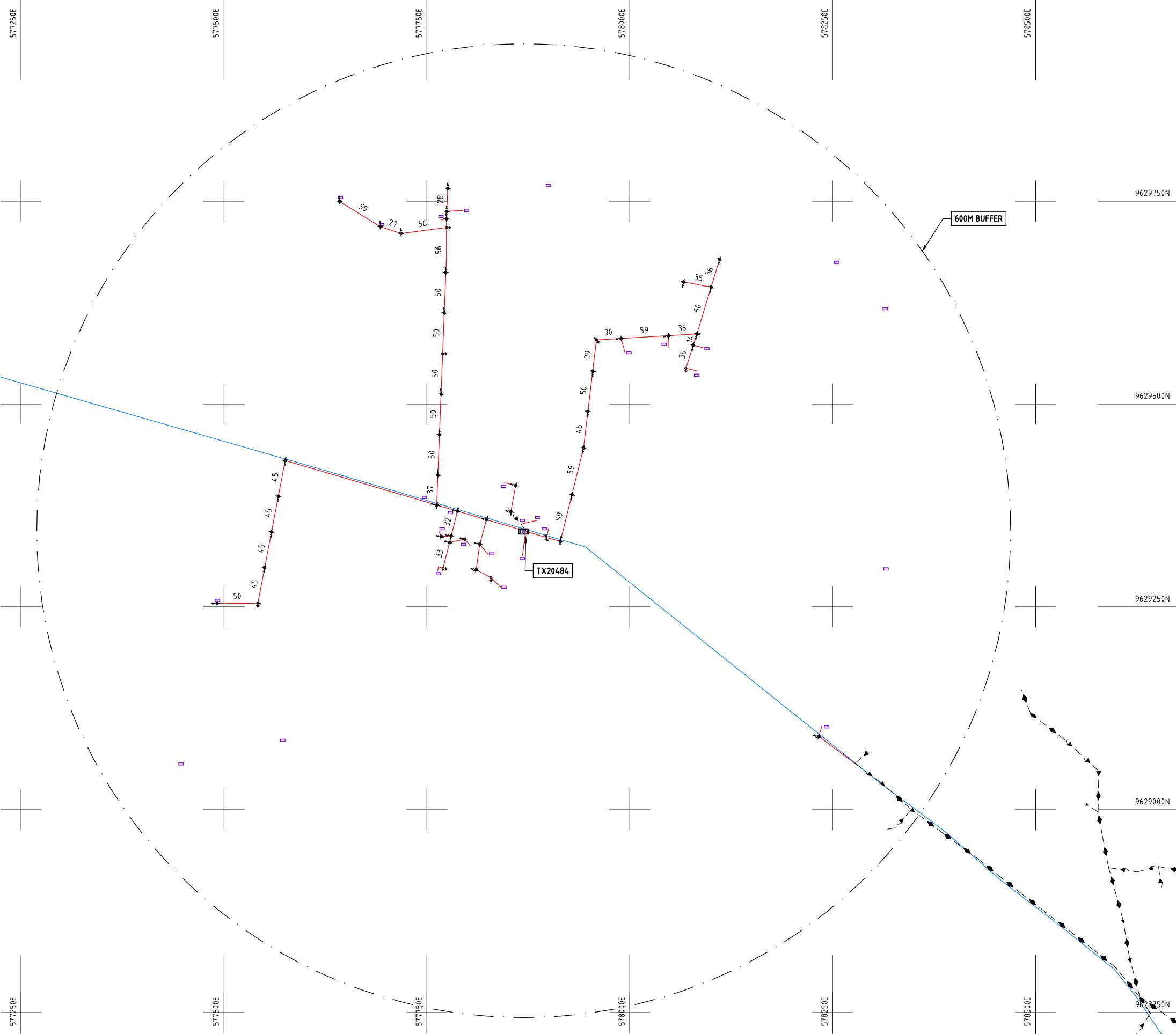
**NOTES:**

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- CONCRETE/ WOODEN POLES TO BE DETERMINED ON SITE BY THE ENGINEER.
- LENGTH OF POLES TO BE DETERMINED ON SITE BY THE ENGINEER.
- PME TO BE AFTER EVERY 200m INTERVAL OR AFTER 4 SPANS.
- POLES NOT SHOWN WHERE PME OR LV EARTH INTERSECT FOR CLARITY.

LEGEND

- HOUSEHOLDS/ BUILDINGS
- PROPOSED DISTRIBUTION LINE
- EXISTING 11kV LINE
- EXISTING 33kV LINE
- EXISTING DISTRIBUTION LINE
- MAXIMISATION TRANSFORMER
- EXTENSION TRANSFORMER
- OTHER EXISTING TRANSFORMER
- WOODEN ELECTRIC POLES
- CONCRETE ELECTRIC POLES
- LV-EARTH
- PME -PROTECTIVE MULTIPLE EARTHING
- STAY

NIPPON KOEI CO., LTD

**NOTES:**

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- CONCRETE/ WOODEN POLES TO BE DETERMINED ON SITE BY THE ENGINEER.
- LENGTH OF POLES TO BE DETERMINED ON SITE BY THE ENGINEER.
- PME TO BE AFTER EVERY 200m INTERVAL OR AFTER 4 SPANS.

LEGEND

- | | |
|--|-----------------------------------|
| | HOUSEHOLDS/ BUILDINGS |
| | PROPOSED 11kV |
| | PROPOSED 33kV |
| | PROPOSED DISTRIBUTION LINE |
| | EXISTING 11kV LINE |
| | EXISTING 33kV LINE |
| | EXISTING DISTRIBUTION LINE |
| | MAXIMISATION TRANSFORMER |
| | EXTENSION TRANSFORMER |
| | WOODEN ELECTRIC POLES |
| | CONCRETE ELECTRIC POLES 12M |
| | CONCRETE ELECTRIC POLES 11M |
| | LV-EARTH |
| | PME -PROTECTIVE MULTIPLE EARTHING |
| | STAY |

NIPPON KOEI CO., LTD

PROJECT:
THE PREPARATORY SURVEY
ON THE PROJECT FOR IMPROVEMENT
OF POWER DISTRIBUTION SYSTEM
IN THE REPUBLIC OF KENYA

DRAWING TITLE
COUNTY: KILIFI
SCHEME: MAXIMIZATION
PROJECT SITE: 20484-NZOVUNI

DRAW. NO.
KLF-MA-64

PREPARED BY
A.AKBAR
CHECKED BY
S.MAETA
APPROVED BY
Y.TANAKA
DATE
10th SEP 2018

NIPPON KOEI CO., LTD

NIPPON KOEI CO., LTD



9604250N

554250E

554500E

554750E

55500E

555250E

555500E

9604250N

9604000N

9604000N

9603750N

9603750N

9603500N

9603500N

9603250N

9603250N

PROJECT:
THE PREPARATORY SURVEY
ON THE PROJECT FOR IMPROVEMENT
OF POWER DISTRIBUTION SYSTEM
IN THE REPUBLIC OF KENYA

DRAWING TITLE
COUNTY: KILIFI
SCHEME: MAXIMIZATION
PROJECT SITE: 107277 CHAPUNGU

DRAW. NO.
KLF-MA-65

PREPARED BY
A.AKBAR
CHECKED BY
S.MAETA
APPROVED BY
Y.TANAKA
DATE
10th SEP 2018



NIPPON KOEI CO., LTD

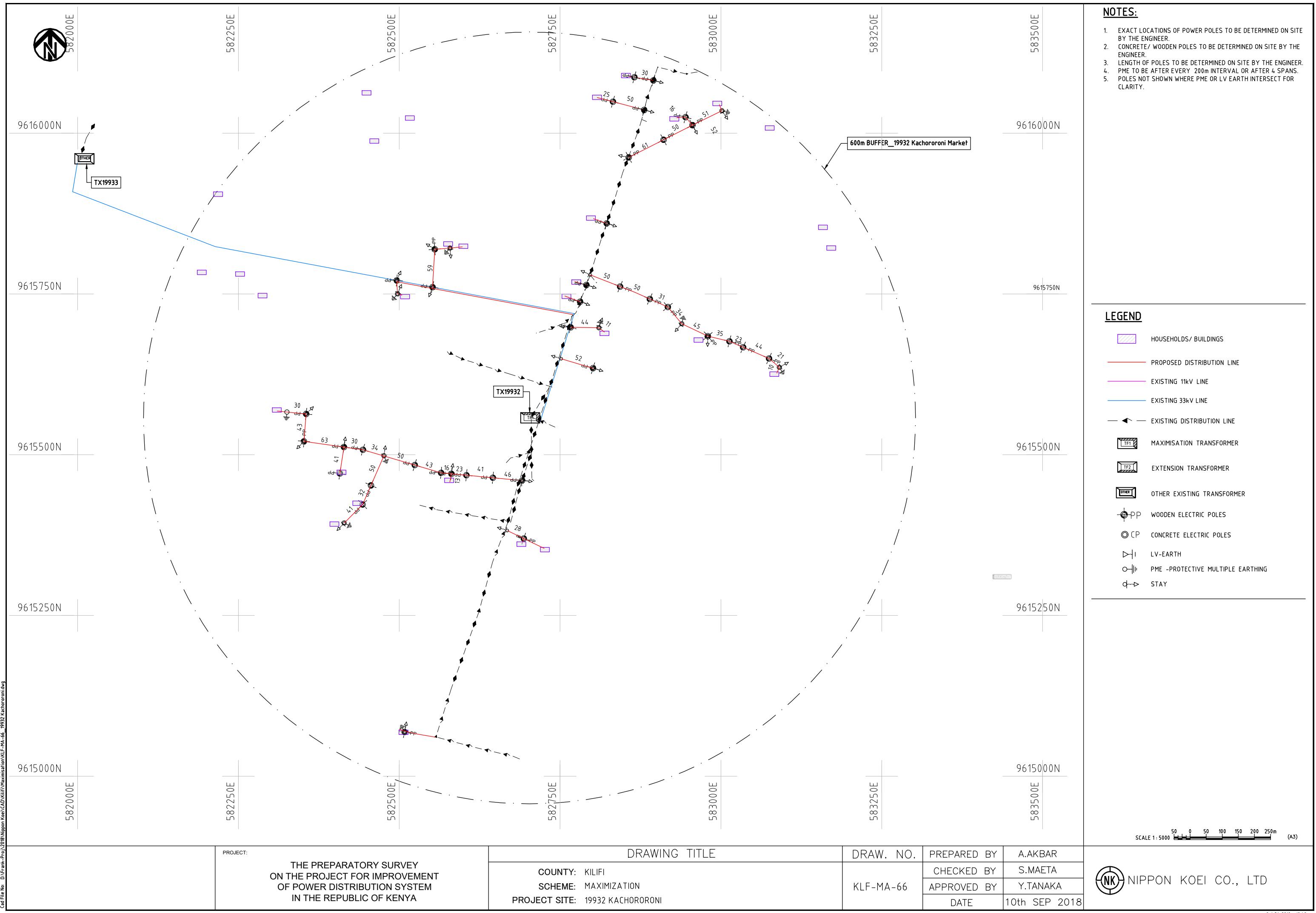
NOTES:

- EXACT LOCATIONS OF POWER POLES TO BE DETERMINED ON SITE BY THE ENGINEER.
- CONCRETE/ WOODEN POLES TO BE DETERMINED ON SITE BY THE ENGINEER.
- LENGTH OF POLES TO BE DETERMINED ON SITE BY THE ENGINEER.
- PME TO BE AFTER EVERY 200m INTERVAL OR AFTER 4 SPANS.
- POLES NOT SHOWN WHERE PME OR LV EARTH INTERSECT FOR CLARITY.

LEGEND

- HOUSEHOLDS/ BUILDINGS
- PROPOSED DISTRIBUTION LINE
- EXISTING 11kV LINE
- EXISTING 33kV LINE
- EXISTING DISTRIBUTION LINE
- MAXIMISATION TRANSFORMER
- EXTENSION TRANSFORMER
- OTHER EXISTING TRANSFORMER
- WOODEN ELECTRIC POLES
- CONCRETE ELECTRIC POLES
- LV-EARTH
- PME -PROTECTIVE MULTIPLE EARTHING
- STAY

SCALE 1:5000 50 0 50 100 150 200 250m (A3)





584250E

584500E

584750E

585000E

585250E

585500E

585750E

963500N

9634750N

9634500N

9634250N

9634000N

584250E

584500E

584750E

585000E

585250E

585500E

585750E

C:\File No. D:\Frank-Proj\2018 Nippon KOEI\Kilifi Maximization\KLF-MA-67_07884_MWAHERA.dwg

PROJECT:
THE PREPARATORY SURVEY
ON THE PROJECT FOR IMPROVEMENT
OF POWER DISTRIBUTION SYSTEM
IN THE REPUBLIC OF KENYA

DRAWING TITLE
COUNTY: KILIFI
SCHEME: MAXIMIZATION
PROJECT SITE: 07884-MWAHERA

DRAW. NO.
KLF-MA-67

PREPARED BY
A.AKBAR
CHECKED BY
S.MAETA
APPROVED BY
Y.TANAKA
DATE
10th SEP 2018



NIPPON KOEI CO., LTD

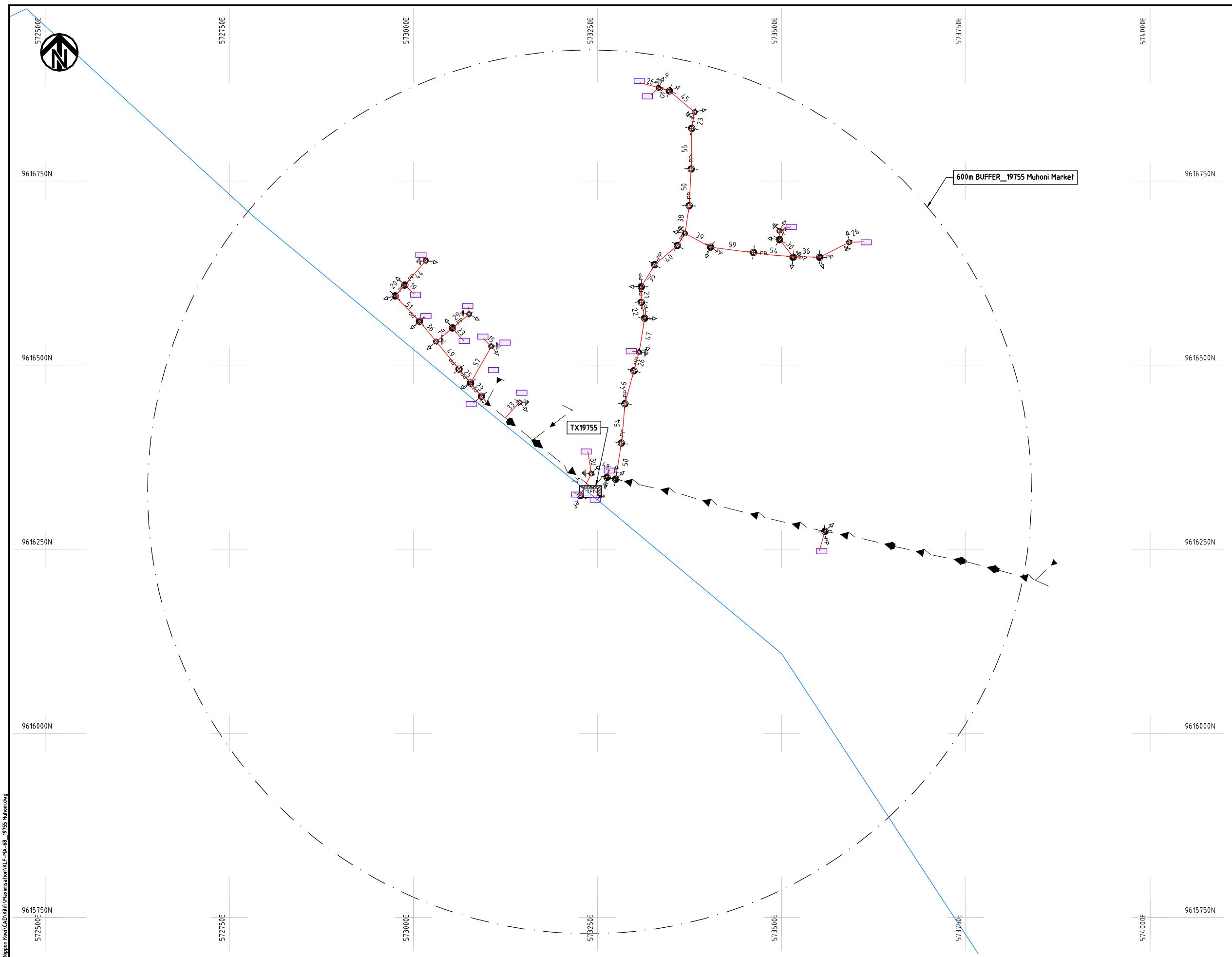
NOTES:

- EXACT LOCATIONS OF POWER POLES TO BE DETERMINED ON SITE BY THE ENGINEER.
- CONCRETE/ WOODEN POLES TO BE DETERMINED ON SITE BY THE ENGINEER.
- LENGTH OF POLES TO BE DETERMINED ON SITE BY THE ENGINEER.
- PME TO BE AFTER EVERY 200m INTERVAL OR AFTER 4 SPANS.

LEGEND

- HOUSEHOLDS / BUILDINGS
- PROPOSED 11kV
- PROPOSED 33kV
- PROPOSED DISTRIBUTION LINE
- EXISTING 11kV LINE
- EXISTING 33kV LINE
- EXISTING DISTRIBUTION LINE
- TF1 MAXIMISATION TRANSFORMER
- TF2 EXTENSION TRANSFORMER
- PP WOODEN ELECTRIC POLES
- CP CONCRETE ELECTRIC POLES 12M
- CP CONCRETE ELECTRIC POLES 11M
- △ I LV-EARTH
- II PME -PROTECTIVE MULTIPLE EARTHING
- ▷ STAY

SCALE 1:5000 50 0 50 100 150 200 250m (A3)



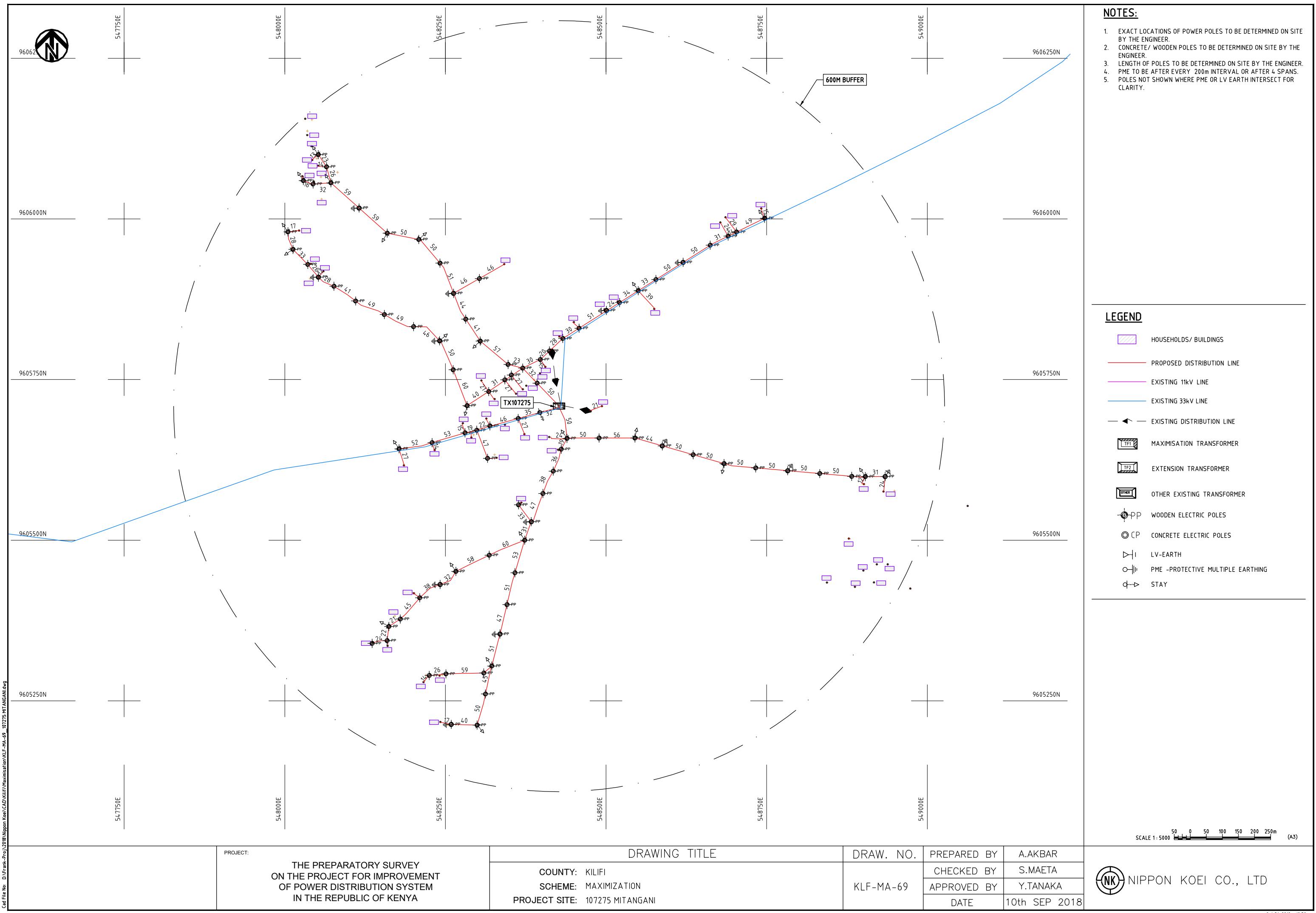
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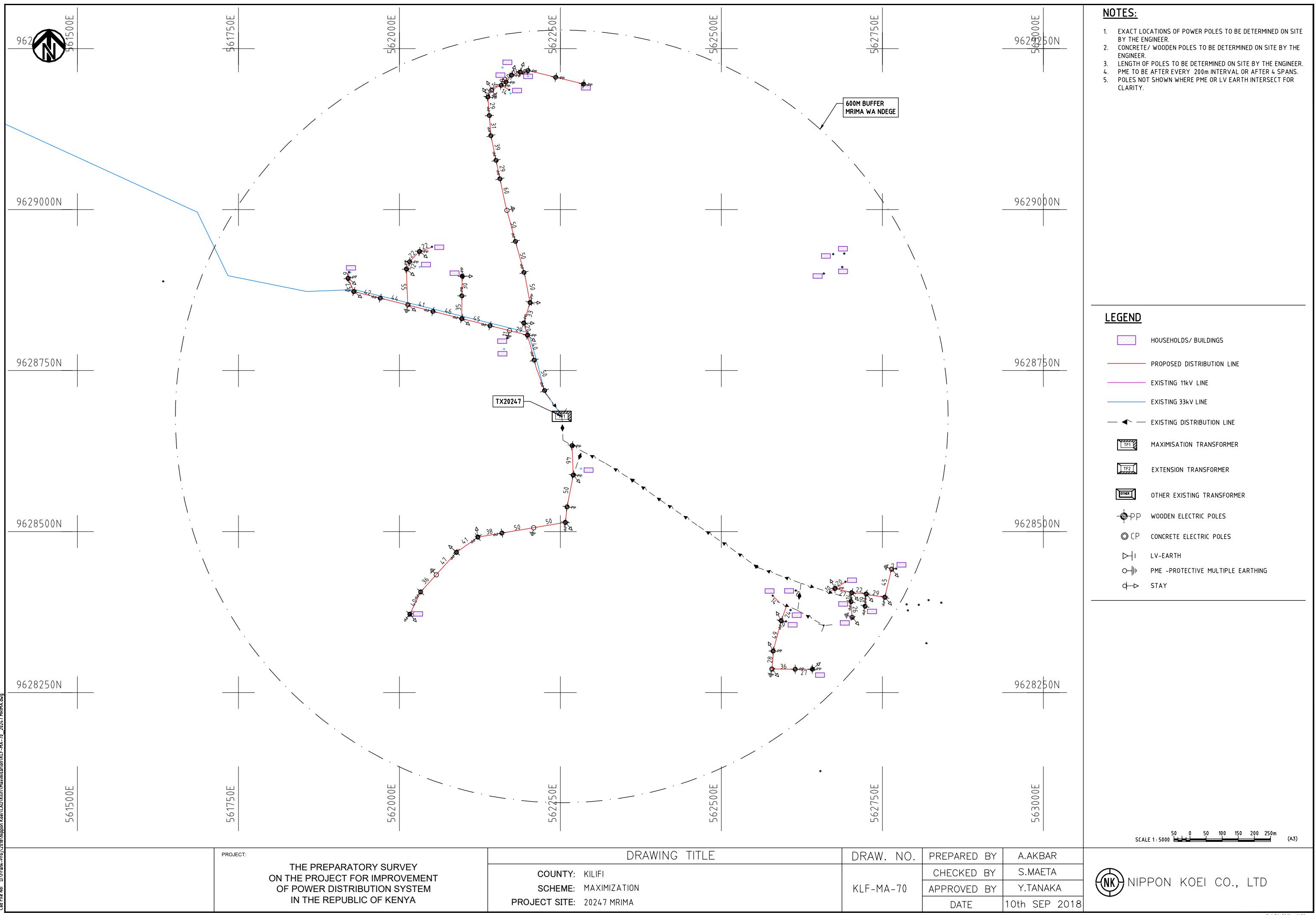
1. EXACT LOCATIONS OF POWER POLES TO BE DETERMINED ON SITE BY THE ENGINEER.
2. CONCRETE/ WOODEN POLES TO BE DETERMINED ON SITE BY THE ENGINEER.
3. LENGTH OF POLES TO BE DETERMINED ON SITE BY THE ENGINEER.
4. PME TO BE AFTER EVERY 200m INTERVAL OR AFTER 4 SPANS.
5. POLES NOT SHOWN WHERE PME OR LV EARTH INTERSECT FOR CLARITY.

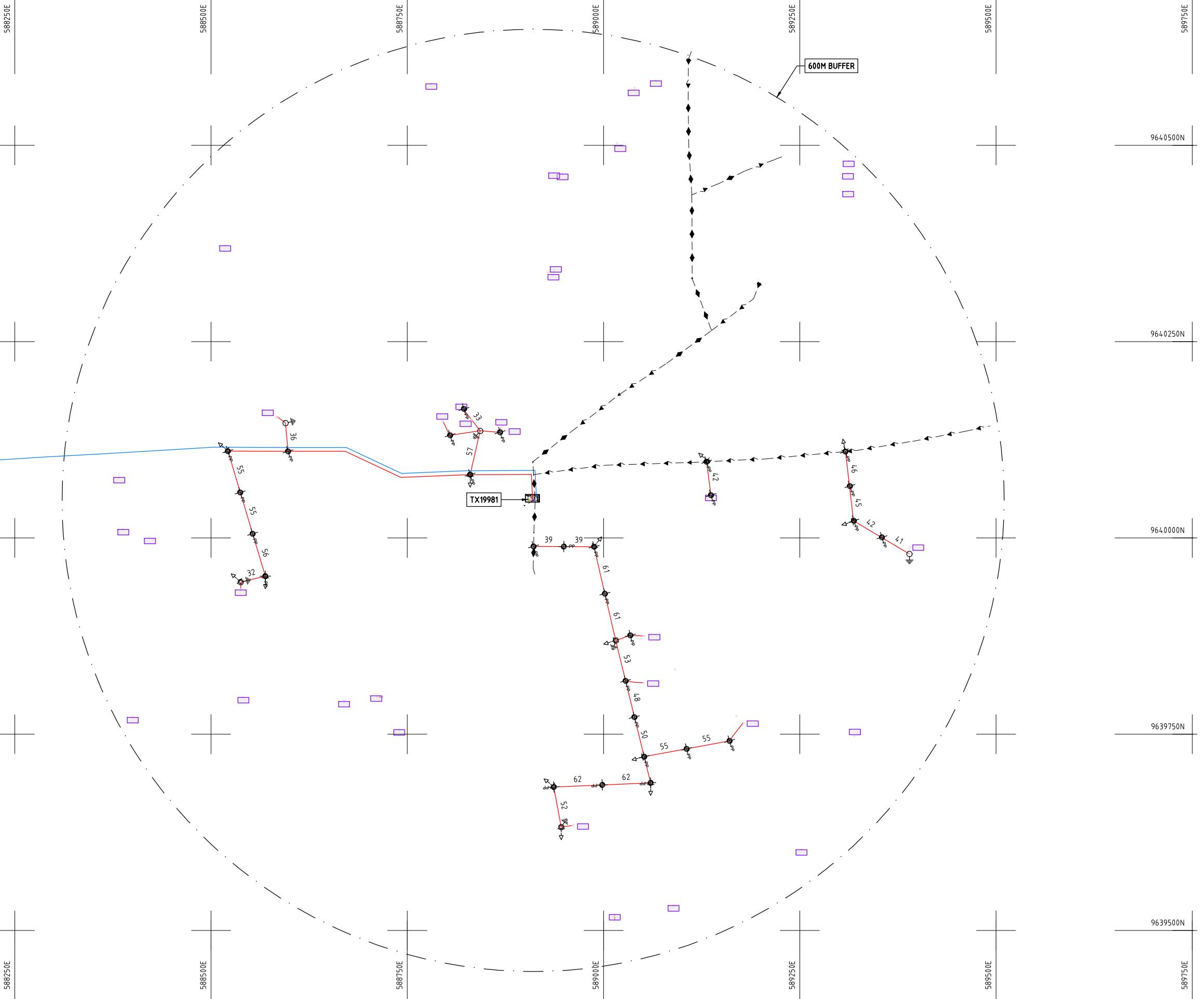
LEGEND

- [Purple square] HOUSEHOLDS/ BUILDINGS
- [Red line] PROPOSED DISTRIBUTION LINE
- [Magenta line] EXISTING 11kV LINE
- [Blue line] EXISTING 33kV LINE
- [Black arrow] EXISTING DISTRIBUTION LINE
- [Transformer icon] MAXIMISATION TRANSFORMER
- [Transformer icon] EXTENSION TRANSFORMER
- [Transformer icon] OTHER EXISTING TRANSFORMER
- [Wooden pole icon] WOODEN ELECTRIC POLES
- [Concrete pole icon] CONCRETE ELECTRIC POLES
- [Triangle icon] LV-EARTH
- [Circle icon] PME -PROTECTIVE MULTIPLE EARTHING
- [Square icon] STAY

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NOTES:

- EXACT LOCATIONS OF POWER POLES TO BE DETERMINED ON SITE BY THE ENGINEER.
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- LENGTH OF POLES TO BE DETERMINED ON SITE BY THE ENGINEER.
- PME TO BE AFTER EVERY 200m INTERVAL OR AFTER 4 SPANS.

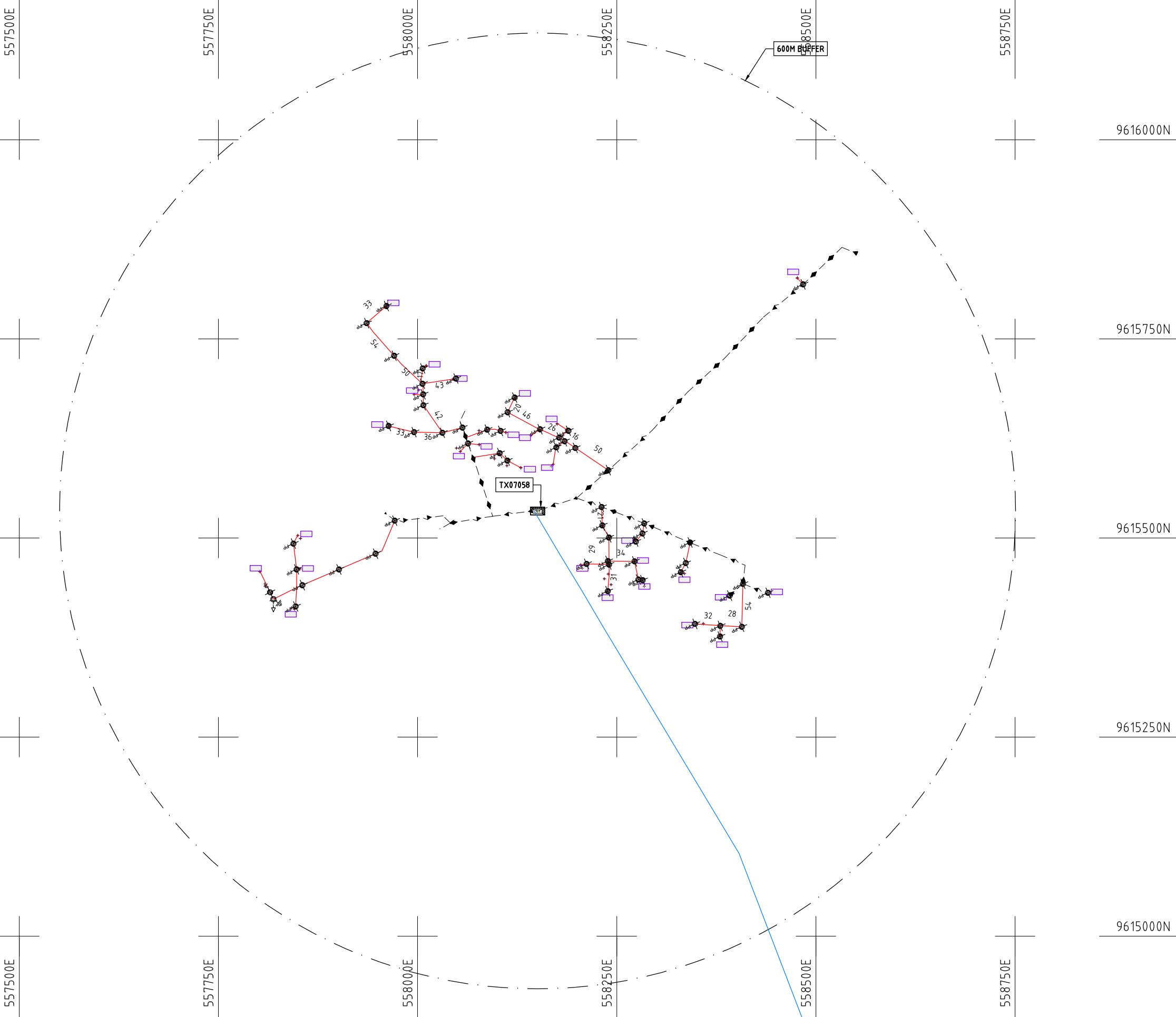
LEGEND

- HOUSEHOLDS / BUILDINGS
- PROPOSED 11kV
- PROPOSED 33kV
- PROPOSED DISTRIBUTION LINE
- EXISTING 11kV LINE
- EXISTING 33kV LINE
- EXISTING DISTRIBUTION LINE
- MAXIMISATION TRANSFORMER
- EXTENSION TRANSFORMER
- WOODEN ELECTRIC POLES
- CONCRETE ELECTRIC POLES 12M
- CONCRETE ELECTRIC POLES 11M
- LV-EARTH
- PME -PROTECTIVE MULTIPLE EARTHING
- STAY

NIPPON KOEI CO., LTD



NIPPON KOEI CO., LTD

**NOTES:**

- EXACT LOCATIONS OF POWER POLES TO BE DETERMINED ON SITE BY THE ENGINEER.
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- PME TO BE AFTER EVERY 200m INTERVAL OR AFTER 4 SPANS.

LEGEND

- [Hatched Box] HOUSEHOLDS / BUILDINGS
- [Yellow Line] PROPOSED 11kV
- [Green Line] PROPOSED 33kV
- [Red Line] PROPOSED DISTRIBUTION LINE
- [Pink Line] EXISTING 11kV LINE
- [Blue Line] EXISTING 33kV LINE
- [Black Line with Arrowheads] EXISTING DISTRIBUTION LINE
- [Transformer Icon] MAXIMISATION TRANSFORMER
- [Transformer Icon] EXTENSION TRANSFORMER
- [Wooden Pole Icon] WOODEN ELECTRIC POLES
- [Concrete Pole 12m Icon] CP CONCRETE ELECTRIC POLES 12M
- [Concrete Pole 11m Icon] CP CONCRETE ELECTRIC POLES 11M
- [Triangle with Line] LV-EARTH
- [Circle with Line] PME -PROTECTIVE MULTIPLE EARTHING
- [Square with Line] STAY

SCALE 1:5000 50 0 50 100 150 200 250m (A3)





572500E

572750E

573000E

573250E

573500E

573750E

574000E

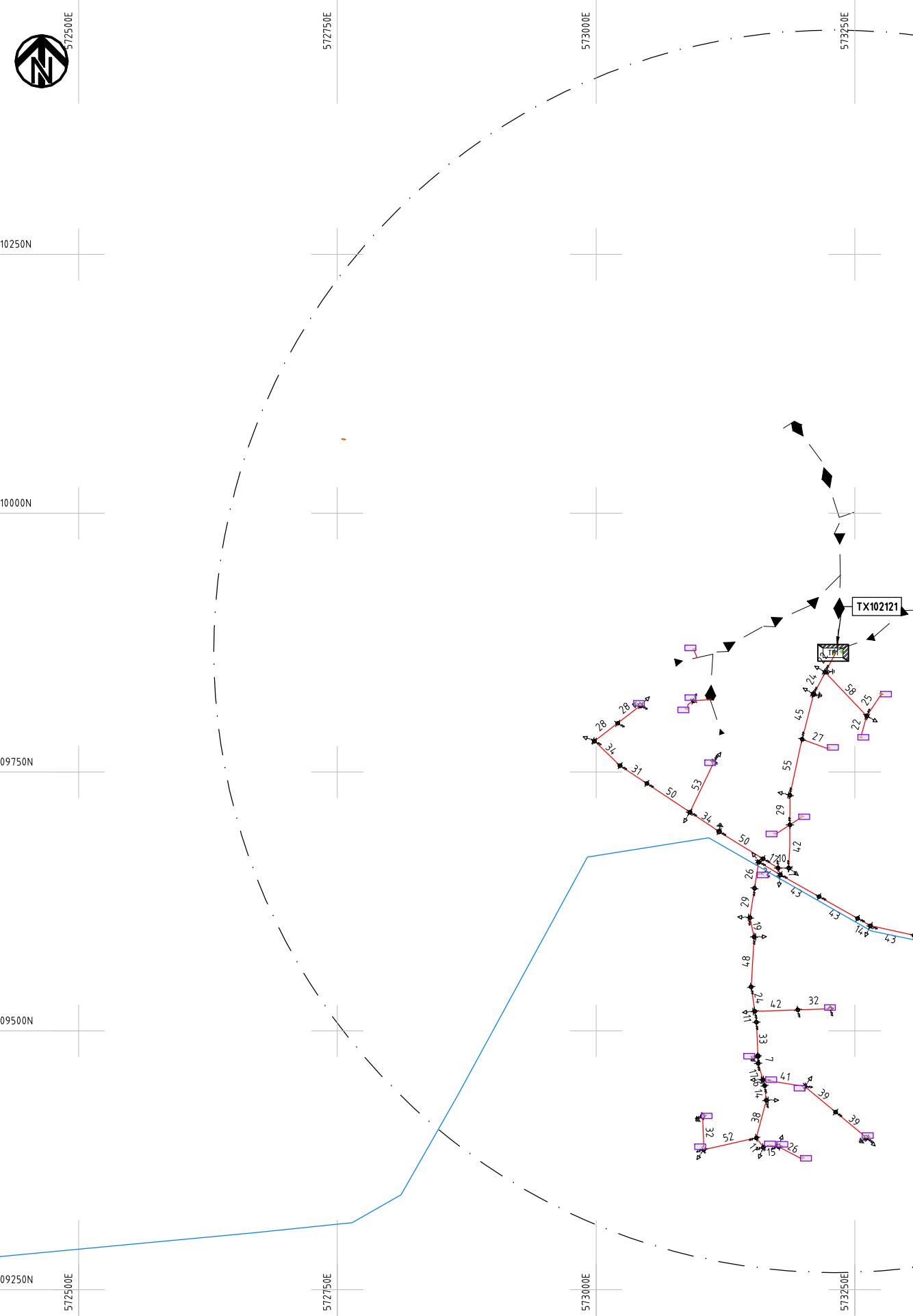
9610250N

9610000N

9609750N

9609500N

9609250N

**NOTES:**

1. EXACT LOCATIONS OF POWER POLES TO BE DETERMINED ON SITE BY THE ENGINEER.
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5. POLES NOT SHOWN WHERE PME OR LV EARTH INTERSECT FOR CLARITY.

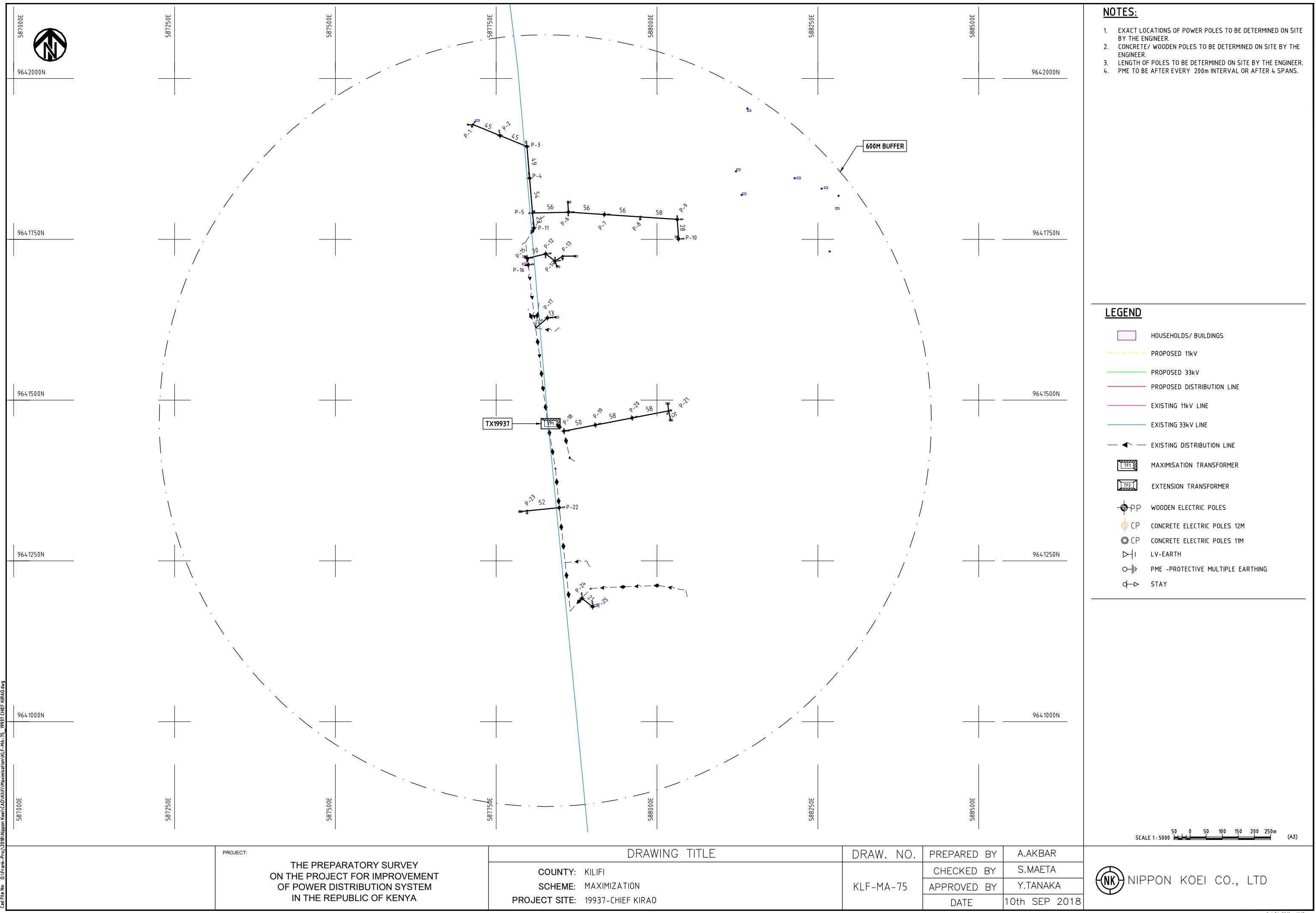
LEGEND

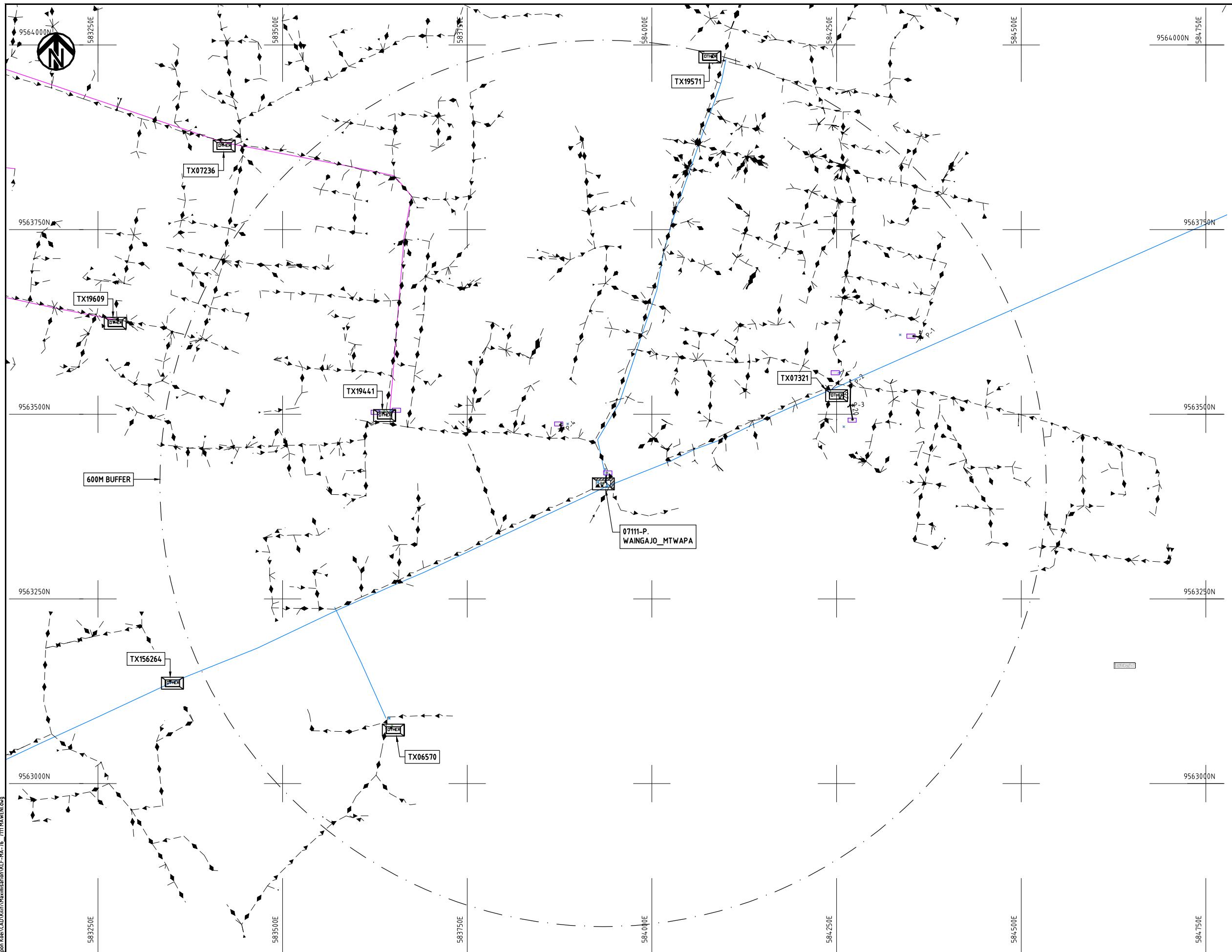
- HOUSEHOLDS/ BUILDINGS
- PROPOSED DISTRIBUTION LINE
- EXISTING 11kV LINE
- EXISTING 33kV LINE
- EXISTING DISTRIBUTION LINE
- MAXIMISATION TRANSFORMER
- EXTENSION TRANSFORMER
- OTHER EXISTING TRANSFORMER
- WOODEN ELECTRIC POLES
- CONCRETE ELECTRIC POLES
- LV-EARTH
- PME -PROTECTIVE MULTIPLE EARTHING
- STAY

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PROJECT:	D:\Frank-Proj\2018\Nippon KOEI\Kilifi\Maximization\KLF-MA-74_102121 Masemo Primary.dwg	DRAWING TITLE	DRAW. NO.	PREPARED BY	A.AKBAR
THE PREPARATORY SURVEY ON THE PROJECT FOR IMPROVEMENT OF POWER DISTRIBUTION SYSTEM IN THE REPUBLIC OF KENYA	COUNTY: KILIFI SCHEME: MAXIMIZATION PROJECT SITE: 102121 MASEMO PRIMARY		KLF-MA-74	CHECKED BY	S.MAETA
				APPROVED BY	Y.TANAKA
				DATE	10th SEP 2018

SCALE 1:5000 50 0 50 100 150 200 250m (A3)



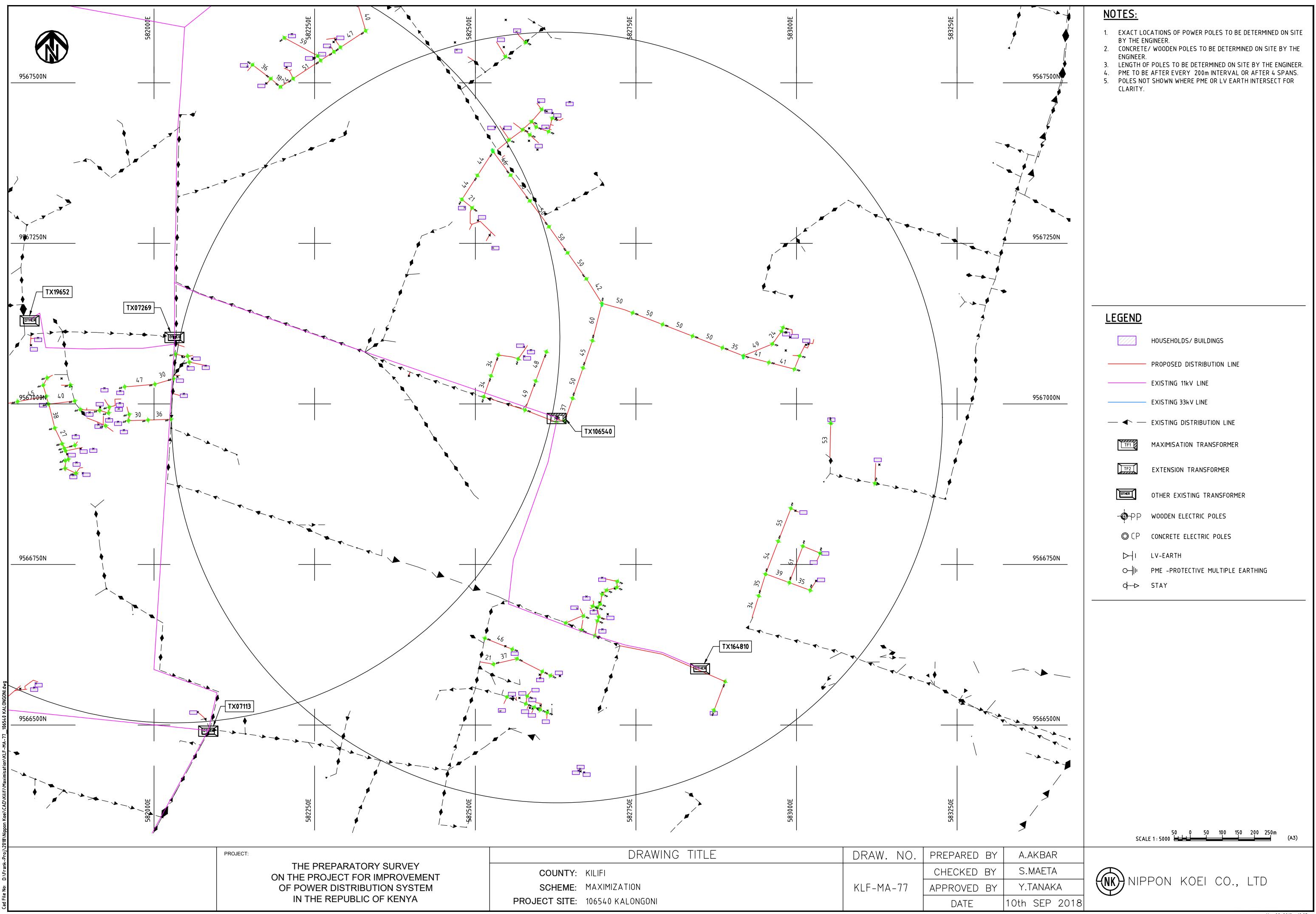


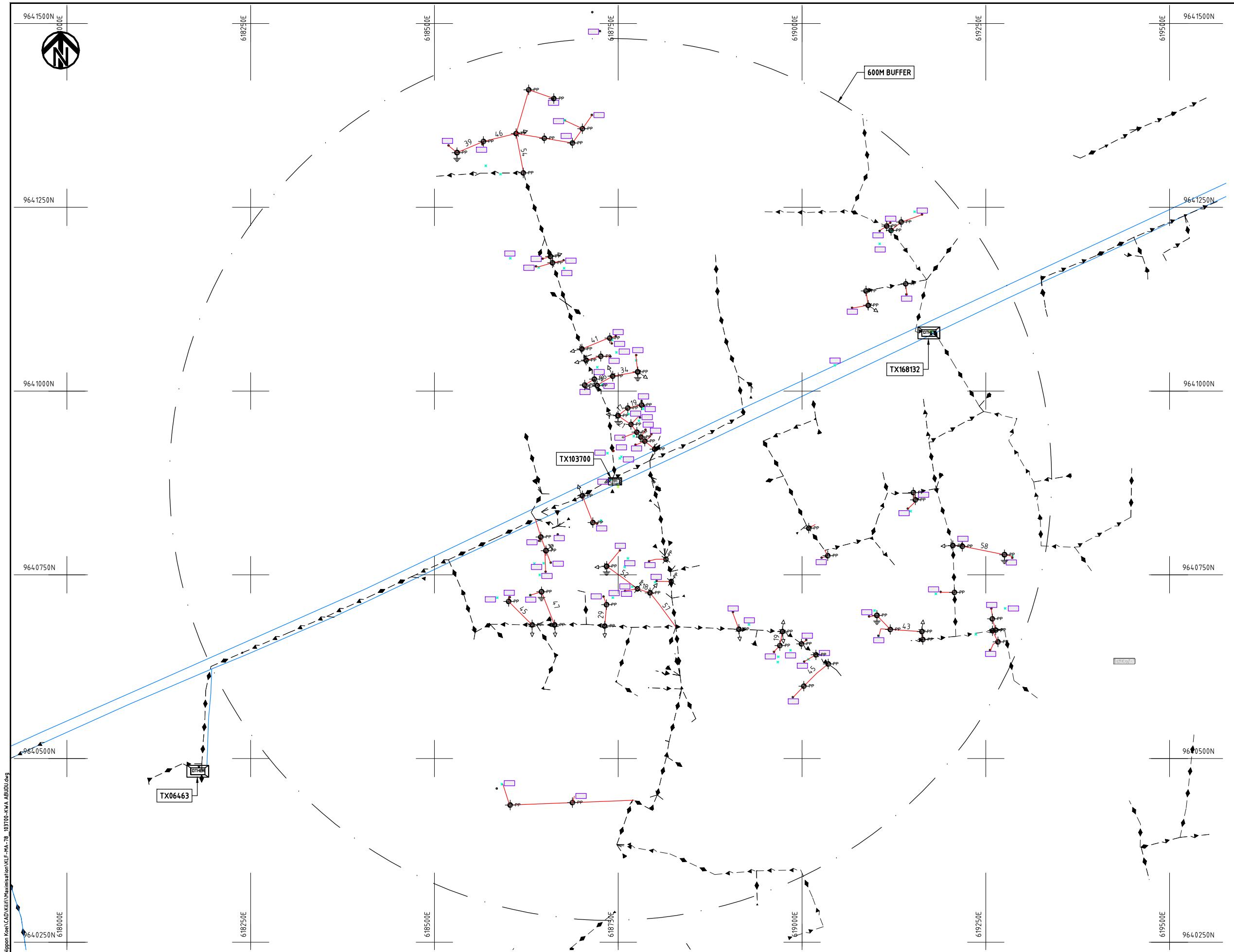
NOTES:

- EXACT LOCATIONS OF POWER POLES TO BE DETERMINED ON SITE BY THE ENGINEER.
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- LENGTH OF POLES TO BE DETERMINED ON SITE BY THE ENGINEER.
- PME TO BE AFTER EVERY 200m INTERVAL OR AFTER 4 SPANS.

LEGEND

- [Household icon] HOUSEHOLDS / BUILDINGS
- [Yellow dashed line] PROPOSED 11kV
- [Green solid line] PROPOSED 33kV
- [Red solid line] PROPOSED DISTRIBUTION LINE
- [Pink dashed line] EXISTING 11kV LINE
- [Blue solid line] EXISTING 33kV LINE
- [Black dashed line] EXISTING DISTRIBUTION LINE
- [Transformer icon] MAXIMISATION TRANSFORMER
- [Transformer icon] EXTENSION TRANSFORMER
- [Diamond symbol] WOODEN ELECTRIC POLES
- [Orange circle] CP CONCRETE ELECTRIC POLES 12M
- [Orange circle] CP CONCRETE ELECTRIC POLES 11M
- [Triangle symbol] LV-EARTH
- [Circle with vertical line] PME -PROTECTIVE MULTIPLE EARTHING
- [Square with diagonal line] STAY





NOTES:

1. EXACT LOCATIONS OF POWER POLES TO BE DETERMINED ON SITE BY THE ENGINEER.
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 3. LENGTH OF POLES TO BE DETERMINED ON SITE BY THE ENGINEER.
 4. PME TO BE AFTER EVERY 200m INTERVAL OR AFTER 4 SPANS.

LEGEND

The legend consists of two columns of symbols and their corresponding labels:

- HOUSEHOLDS/ BUILDINGS**: Represented by a purple rectangle.
- PROPOSED 11kV**: Represented by a yellow dashed line.
- PROPOSED 33kV**: Represented by a green solid line.
- PROPOSED DISTRIBUTION LINE**: Represented by a red solid line.
- EXISTING 11kV LINE**: Represented by a magenta solid line.
- EXISTING 33kV LINE**: Represented by a blue solid line.
- EXISTING DISTRIBUTION LINE**: Represented by a black line with a small triangle symbol.
- MAXIMISATION TRANSFORMER**: Represented by a box labeled "TF1".
- EXTENSION TRANSFORMER**: Represented by a box labeled "TF2".
- WOODEN ELECTRIC POLES**: Represented by a symbol with a circle and a cross.
- CP**: Represented by a symbol with a circle and a dot.
- CONCRETE ELECTRIC POLES 12M**: Represented by a symbol with a circle and a dot.
- CP**: Represented by a symbol with a circle and a dot.
- CONCRETE ELECTRIC POLES 11M**: Represented by a symbol with a circle and a dot.
- LV-EARTH**: Represented by a symbol with a triangle and a vertical line.
- PME -PROTECTIVE MULTIPLE EARTHING**: Represented by a symbol with a circle and a vertical line.
- STAY**: Represented by a symbol with a circle and a vertical line.

SCALE 1 : 5000 50 0 50 100 150 200 250m (A3)

This block contains a scale bar and reference point markings. The scale bar is labeled 'SCALE 1 : 5000' at the left end. It features major tick marks at 50m intervals from 0 to 250m. Above the scale bar, numerical labels are placed at each 50m mark: 50, 0, 50, 100, 150, 200, and 250m. To the right of the scale bar, the label '(A3)' is positioned.

PROJECT: THE PREPARATORY SURVEY
ON THE PROJECT FOR IMPROVEMENT
OF POWER DISTRIBUTION SYSTEM
IN THE REPUBLIC OF KENYA

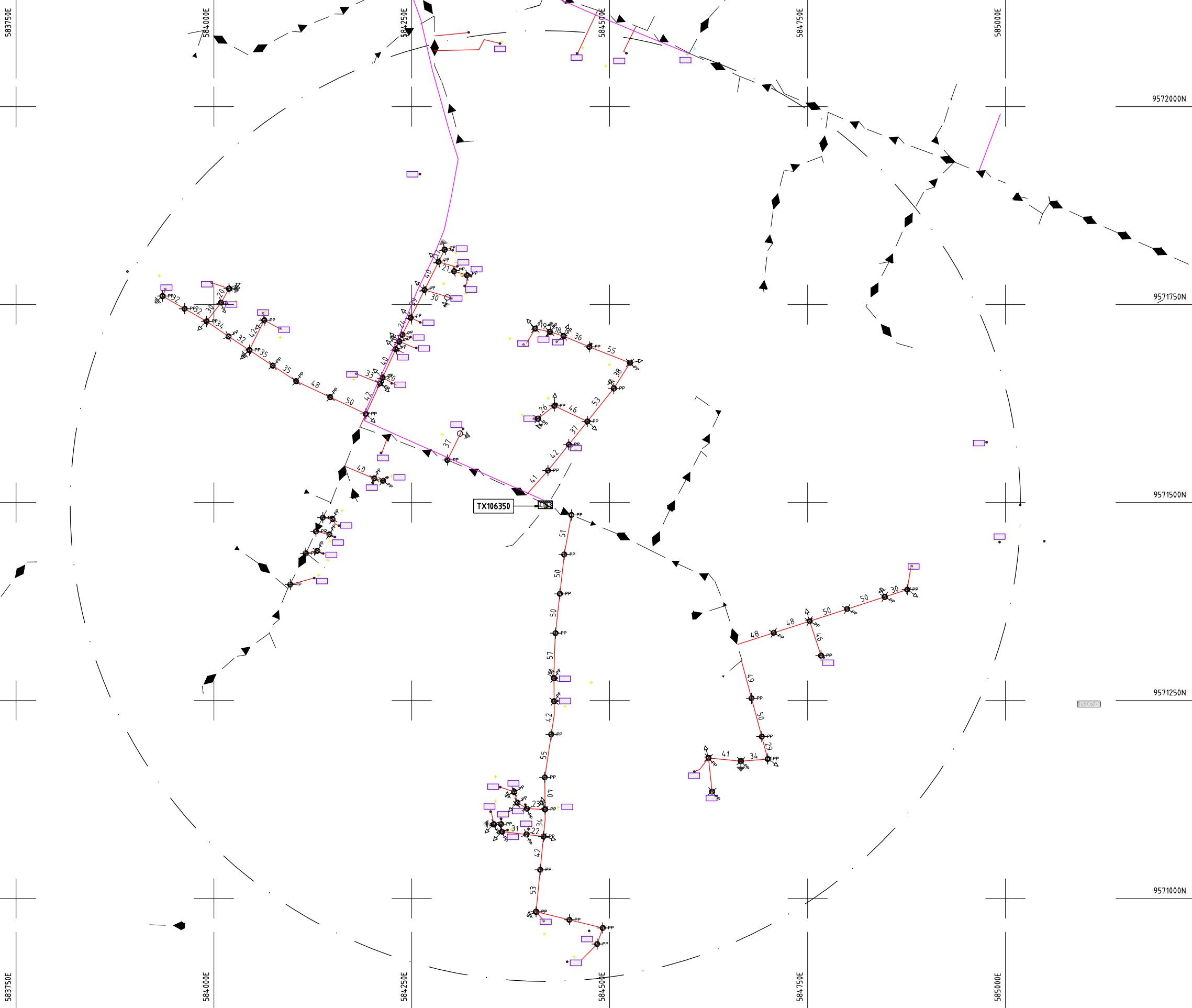
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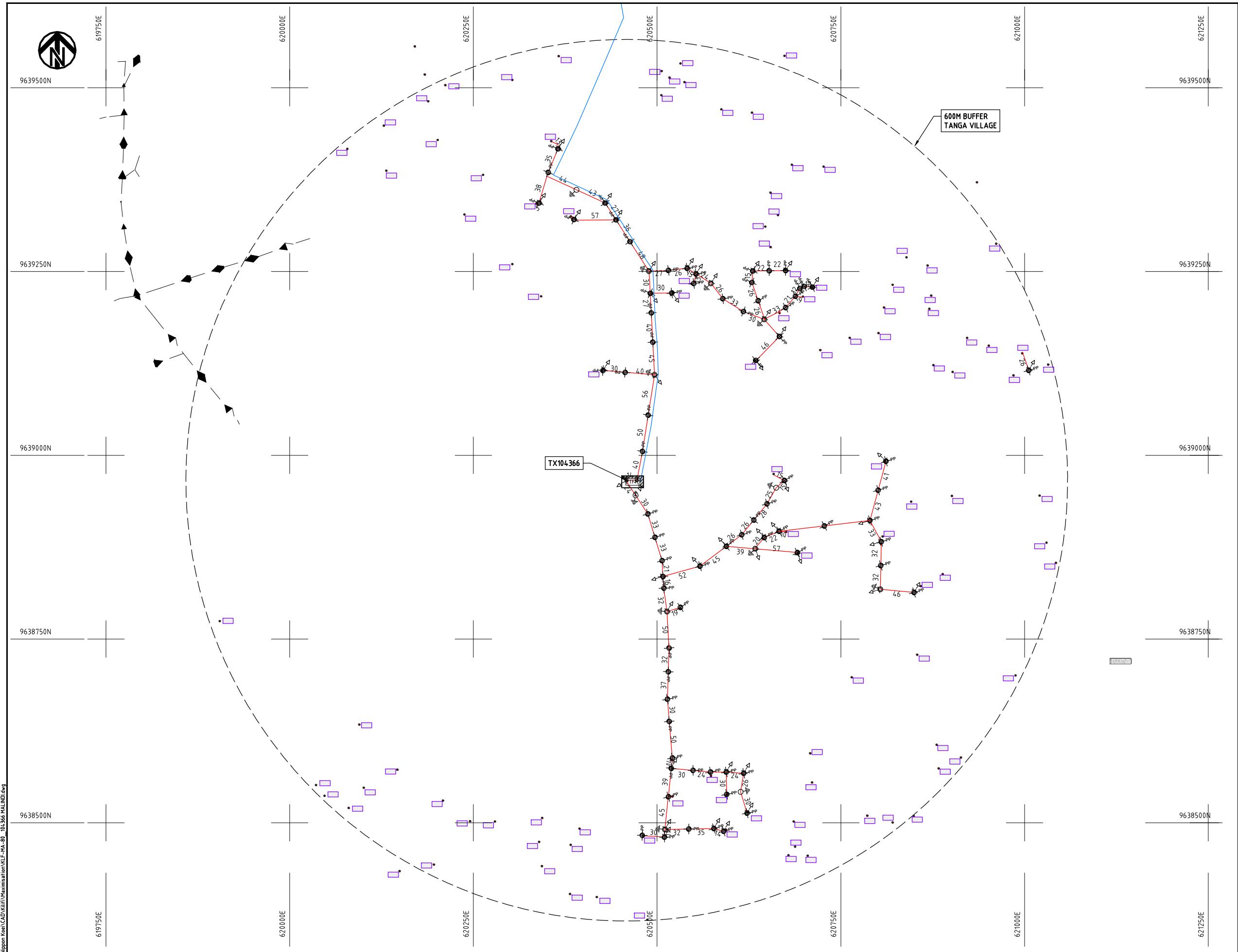
DRAW.
KLF-MA-

PREPARED BY	A.AKBAR
CHECKED BY	S.MAETA
APPROVED BY	Y.TANAKA
DATE	10th SEP 2018



 NIPPON KOEI CO., LTD





NOTES:

- EXACT LOCATIONS OF POWER POLES TO BE DETERMINED ON SITE BY THE ENGINEER.
 - CONCRETE/ WOODEN POLES TO BE DETERMINED ON SITE BY THE ENGINEER.
 - LENGTH OF POLES TO BE DETERMINED ON SITE BY THE ENGINEER.
 - PME TO BE AFTER EVERY 200m INTERVAL OR AFTER 4 SPANS.
 - POLES NOT SHOWN WHERE PME OR LV EARTH INTERSECT FOR CLARITY.

LEGEND

 HOUSEHOLDS/ BUILDINGS
 PROPOSED DISTRIBUTION LINE
 EXISTING 11kV LINE
 EXISTING 33kV LINE
 EXISTING DISTRIBUTION LINE

 MAXIMISATION TRANSFORMER
 EXTENSION TRANSFORMER
 OTHER EXISTING TRANSFORMER

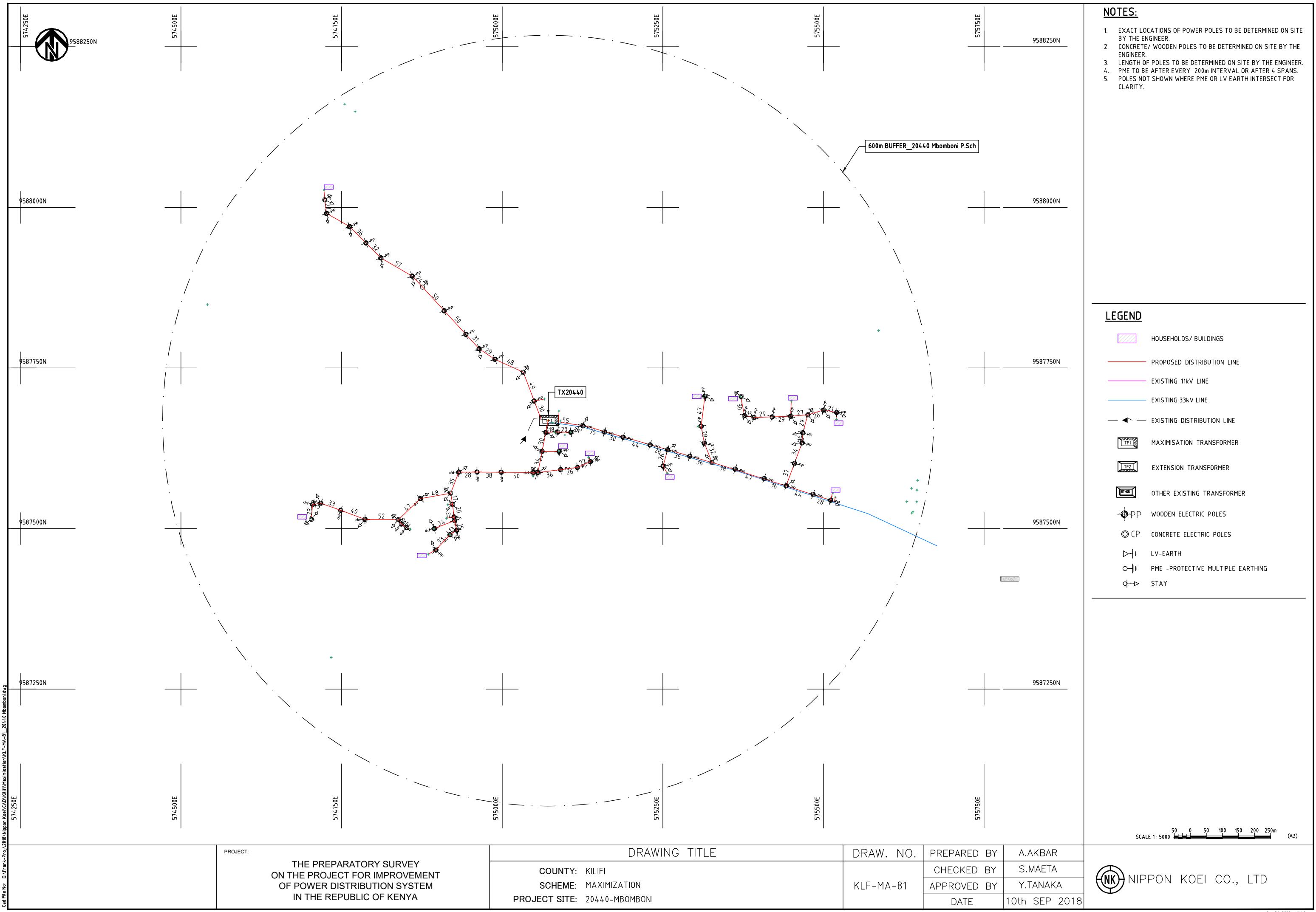
 WOODEN ELECTRIC POLES

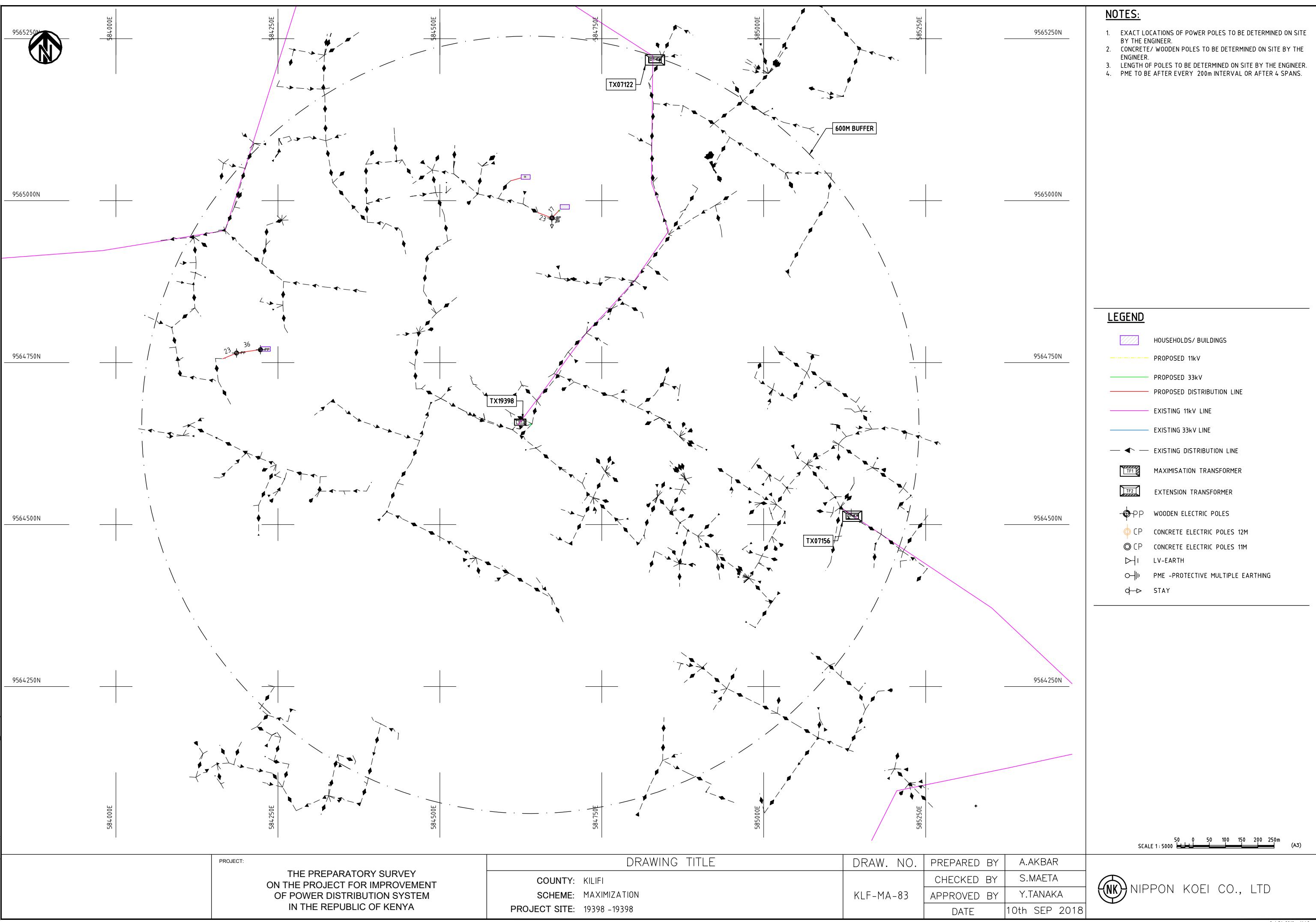
 CONCRETE ELECTRIC POLES

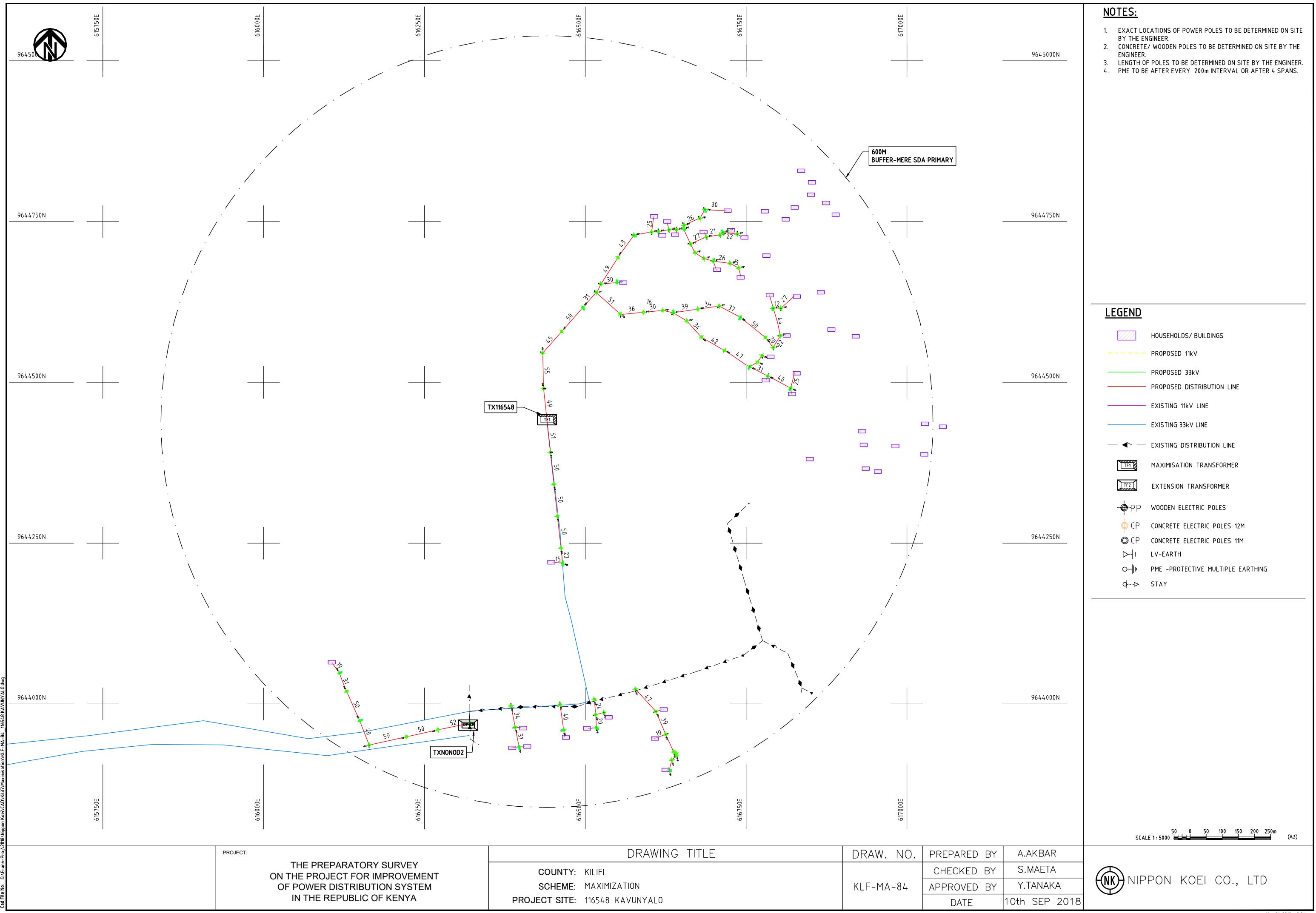
 LV-EARTH
 PME -PROTECTIVE MULTIPLE EARTHING
 STAY

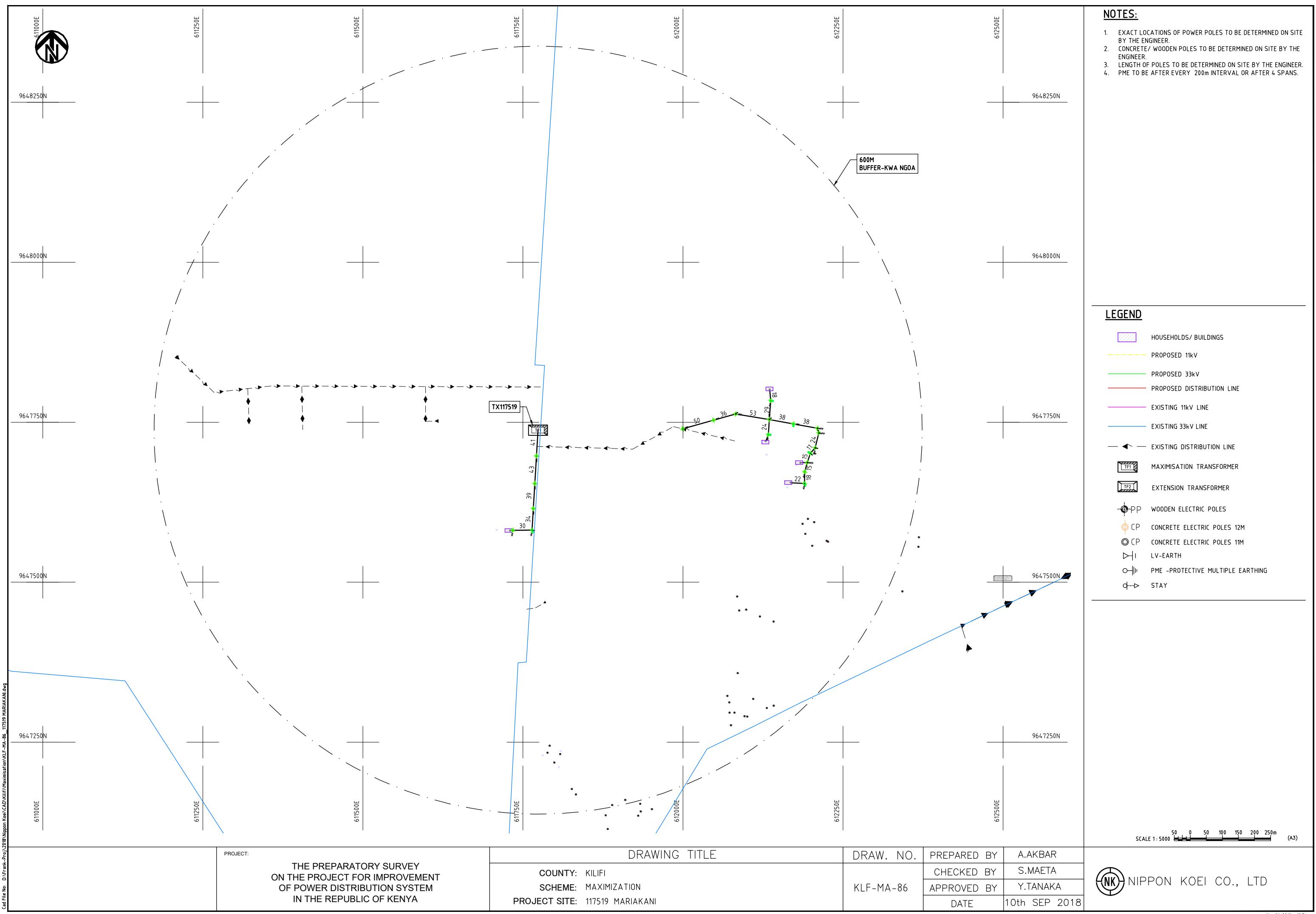
A scale bar at the bottom of the map shows distances from 0 to 250 meters. A north arrow is located to the left of the scale bar.

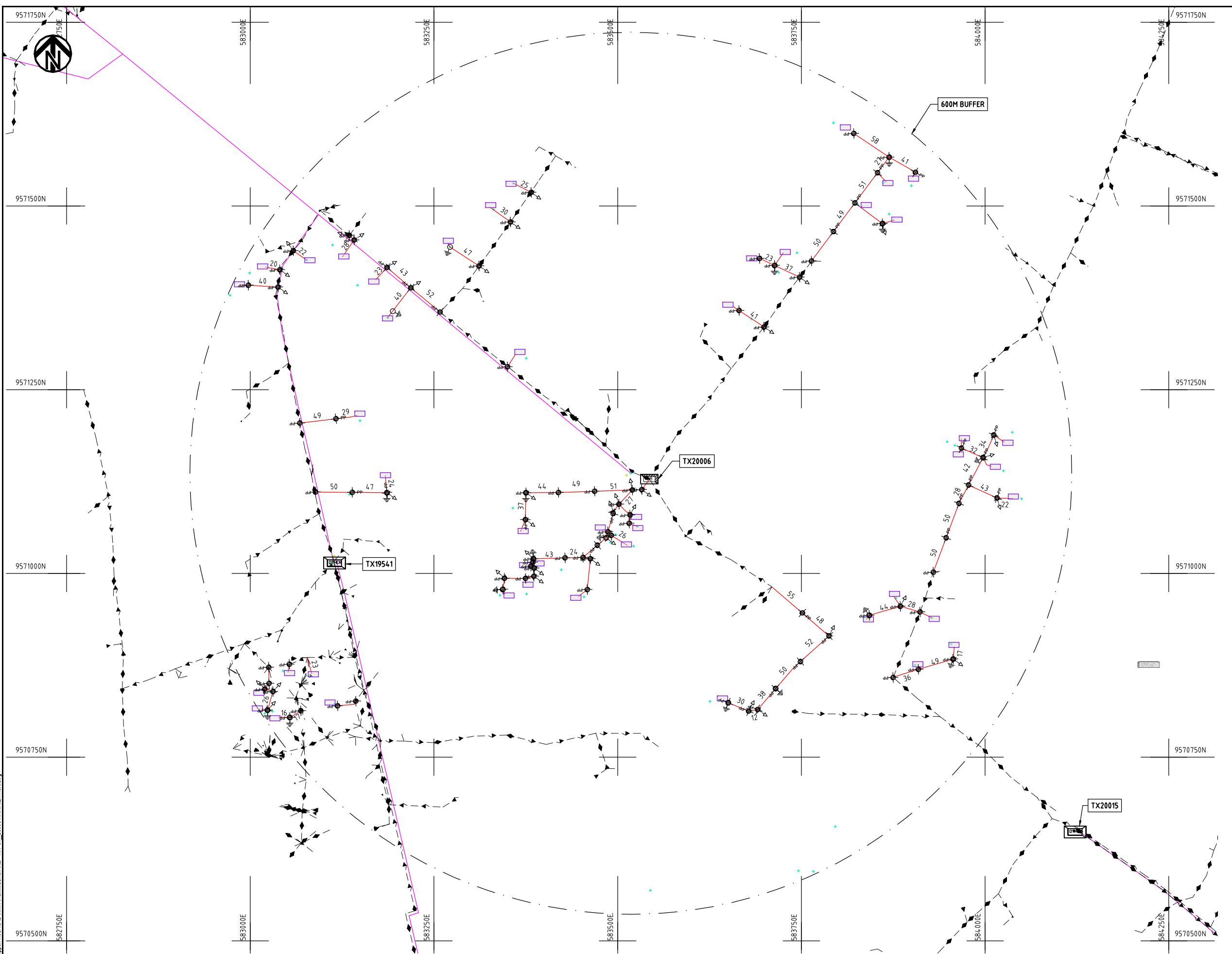
PROJECT:	THE PREPARATORY SURVEY ON THE PROJECT FOR IMPROVEMENT OF POWER DISTRIBUTION SYSTEM IN THE REPUBLIC OF KENYA	DRAWING TITLE	DRAW. NO.	PREPARED BY	A.AKBAR	
		COUNTY: KILIFI SCHEME: MAXIMIZATION PROJECT SITE: 104366 MALINDI	KLF-MA-80	CHECKED BY	S.MAETA	
				APPROVED BY	Y.TANAKA	
				DATE	10th SEP 2018	











NOTES:

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LEGEND

The legend consists of two columns of symbols and their corresponding labels. The first column contains icons representing different types of network components or features, while the second column provides a detailed description of each.

- HOUSEHOLDS/ BUILDINGS**: Represented by a purple rectangle.
- PROPOSED 11kV**: Represented by a yellow dashed line.
- PROPOSED 33kV**: Represented by a green solid line.
- PROPOSED DISTRIBUTION LINE**: Represented by a red solid line.
- EXISTING 11kV LINE**: Represented by a magenta solid line.
- EXISTING 33kV LINE**: Represented by a blue solid line.
- EXISTING DISTRIBUTION LINE**: Represented by a black line with a small triangle icon.
- MAXIMISATION TRANSFORMER**: Represented by a box containing the letters 'TF1'.
- EXTENSION TRANSFORMER**: Represented by a box containing the letters 'TF2'.
- WOODEN ELECTRIC POLES**: Represented by a symbol showing a circle with a cross inside and the letters 'OPP'.
- CONCRETE ELECTRIC POLES 12M**: Represented by a symbol showing a circle with a dot inside and the letters 'CP'.
- CONCRETE ELECTRIC POLES 11M**: Represented by a symbol showing a circle with a horizontal line inside and the letters 'CP'.
- LV-EARTH**: Represented by a symbol showing a triangle pointing right and the letters 'I'.
- PME -PROTECTIVE MULTIPLE EARTHING**: Represented by a symbol showing a circle with a vertical line inside and the letters 'PME'.
- STAY**: Represented by a symbol showing a circle with a diagonal line inside and the letters 'd'.

SCALE 1 : 5000

50 0 50 100 150 200 250m

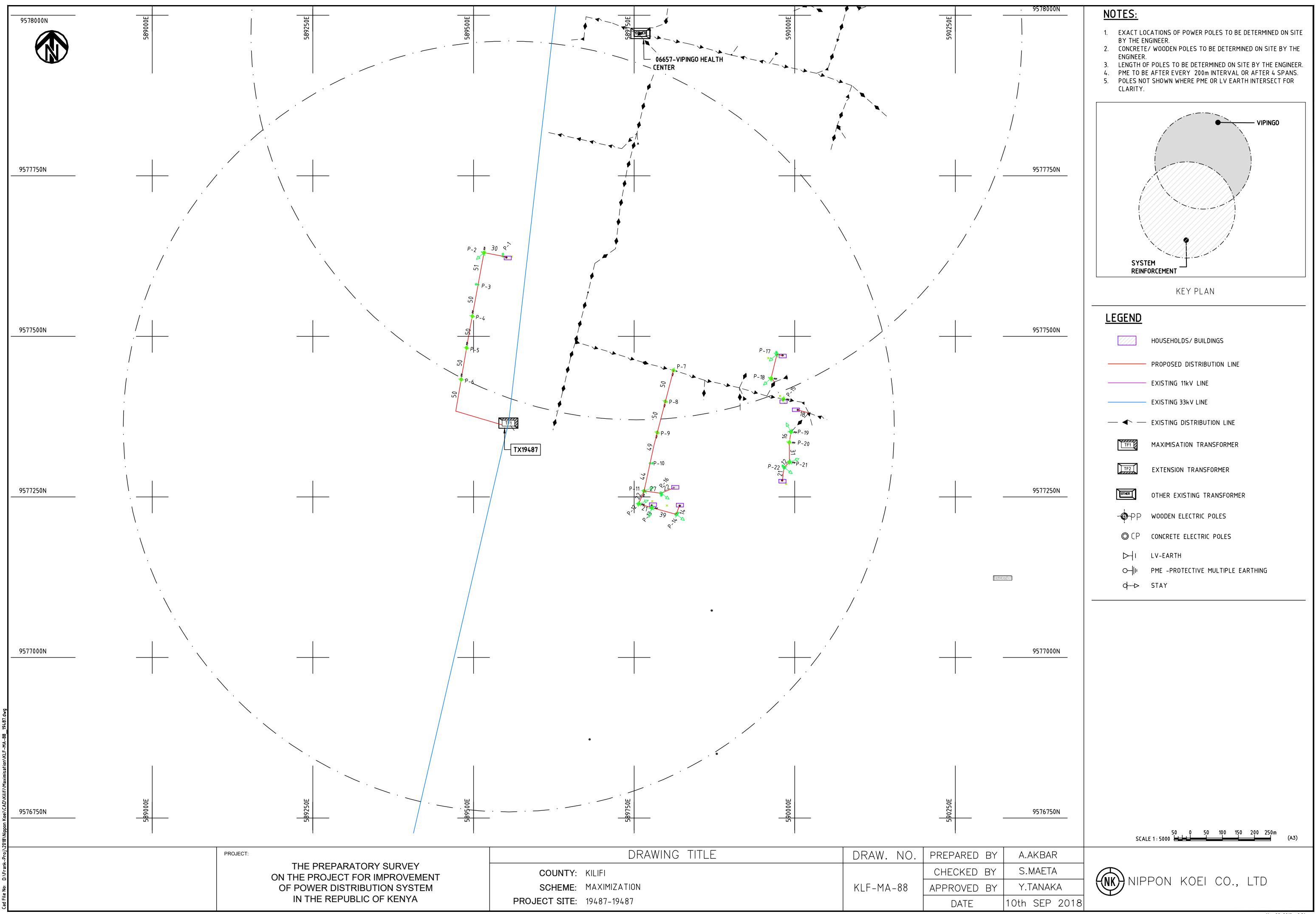
(A3)

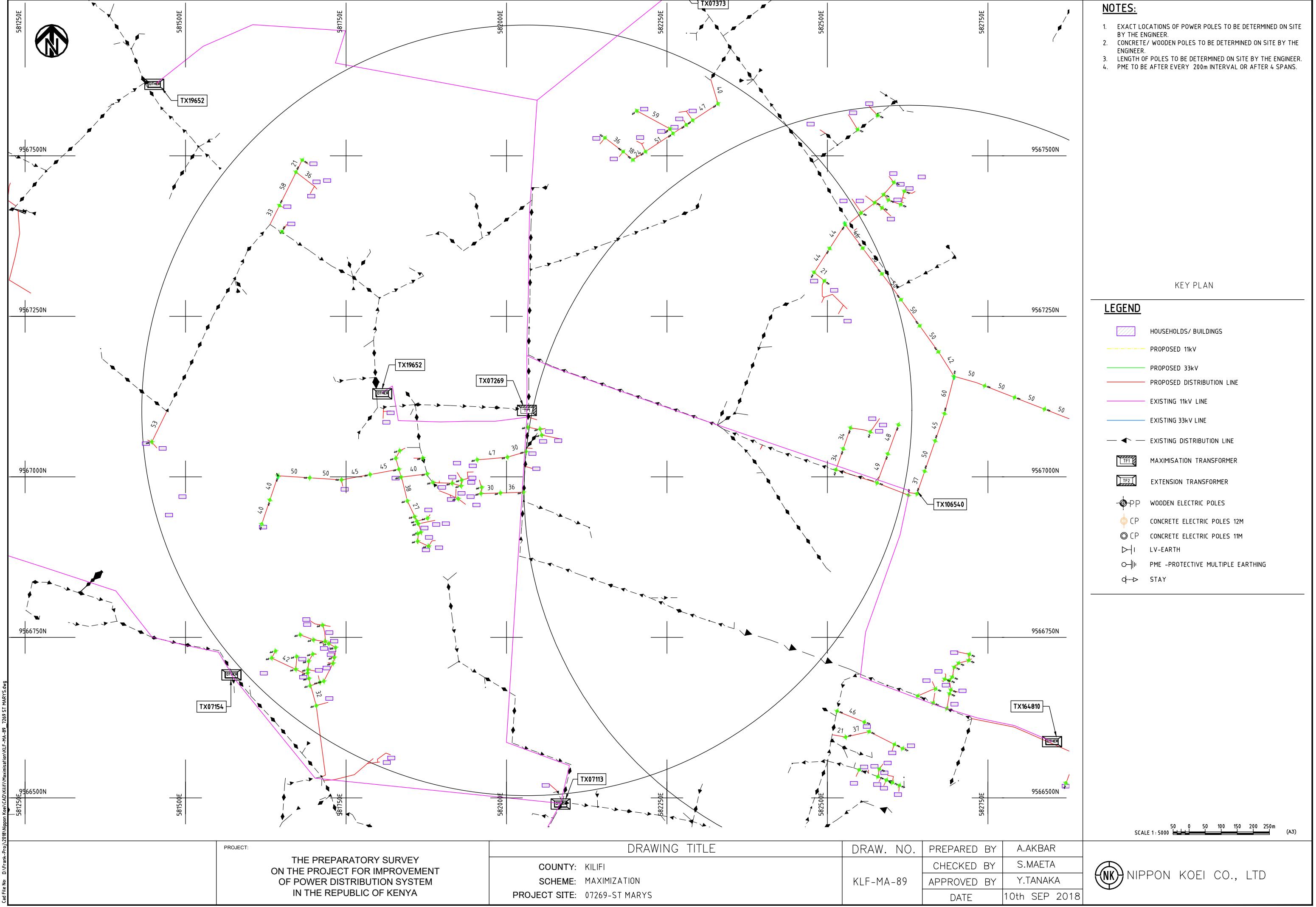
THE JOURNAL OF CLIMATE

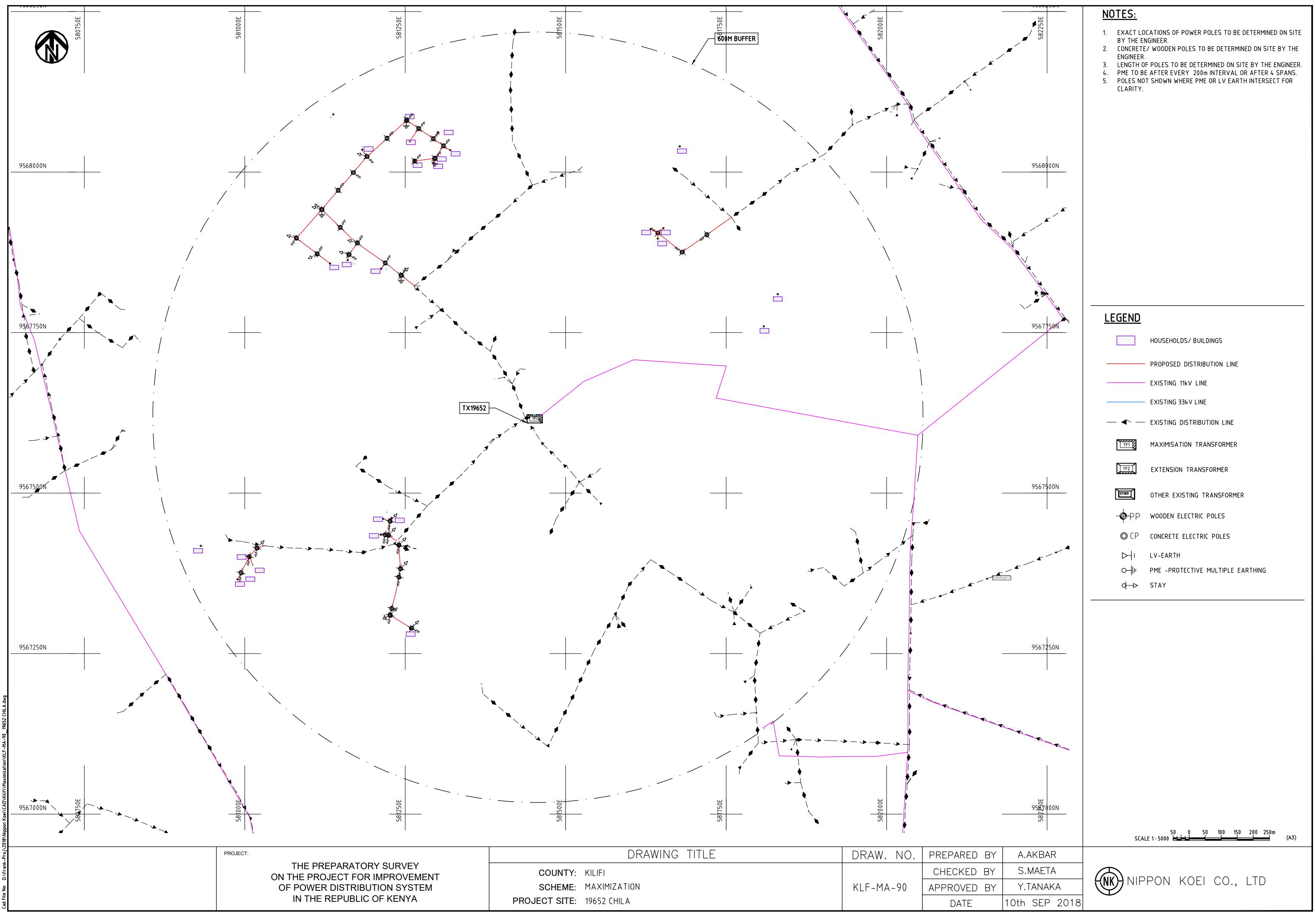
PROJECT:	THE PREPARATORY SURVEY ON THE PROJECT FOR IMPROVEMENT OF POWER DISTRIBUTION SYSTEM IN THE REPUBLIC OF KENYA	DRAWING TITLE	DRAW. NO.	PREPARED BY	A.AKBAR
		COUNTY: KILIFI SCHEME: MAXIMIZATION PROJECT SITE: 20006 MAXIMIZATION	KLF-MA-87	CHECKED BY	S.MAETA
PROJECT:	THE PREPARATORY SURVEY ON THE PROJECT FOR IMPROVEMENT OF POWER DISTRIBUTION SYSTEM IN THE REPUBLIC OF KENYA	COUNTY: KILIFI SCHEME: MAXIMIZATION PROJECT SITE: 20006 MAXIMIZATION	DRAW. NO. KLF-MA-87	APPROVED BY	Y.TANAKA
				DATE	10th SEP 2018

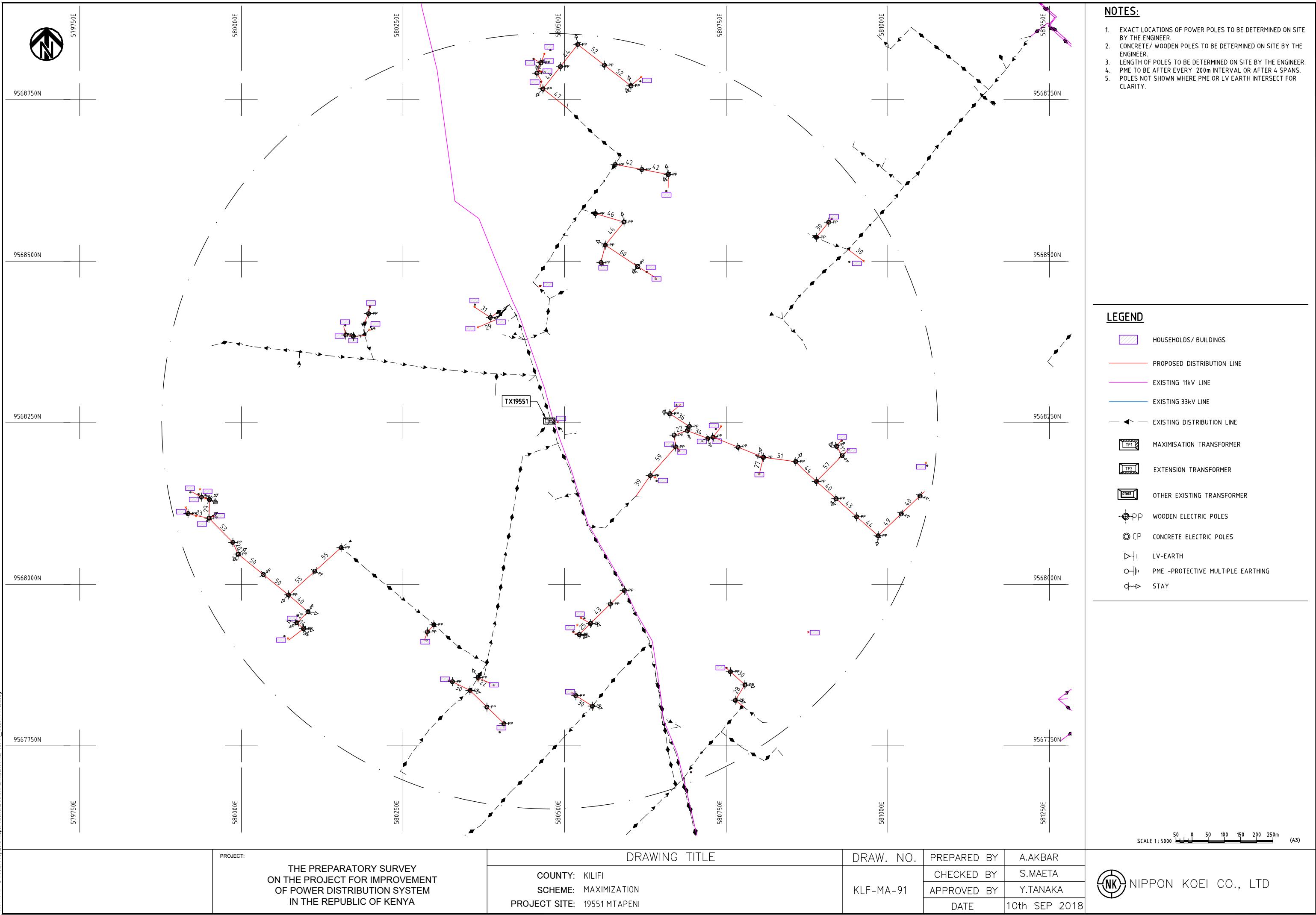


 NIPPON KOEI CO., LTD









NOTES:

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 3. LENGTH OF POLES TO BE DETERMINED ON SITE BY THE ENGINEER.
 4. PME TO BE AFTER EVERY 200m INTERVAL OR AFTER 4 SPANS.
 5. POLES NOT SHOWN WHERE PME OR LV EARTH INTERSECT FOR CLARITY.

LEGEND

 HOUSEHOLDS/ BUILDINGS

 PROPOSED DISTRIBUTION LINE

 EXISTING 11kV LINE

 EXISTING 33kV LINE

 EXISTING DISTRIBUTION LINE

 MAXIMISATION TRANSFORMER

 EXTENSION TRANSFORMER

 OTHER EXISTING TRANSFORMER

 WOODEN ELECTRIC POLES

 CONCRETE ELECTRIC POLES

 LV-EARTH

 PME -PROTECTIVE MULTIPLE EARTHING

 STAY

SCALE 1 : 5000 50 0 50 100 150 200 250m (A3)

PROJECT: THE PREPARATORY SURVEY
ON THE PROJECT FOR IMPROVEMENT
OF POWER DISTRIBUTION SYSTEM
IN THE REPUBLIC OF KENYA

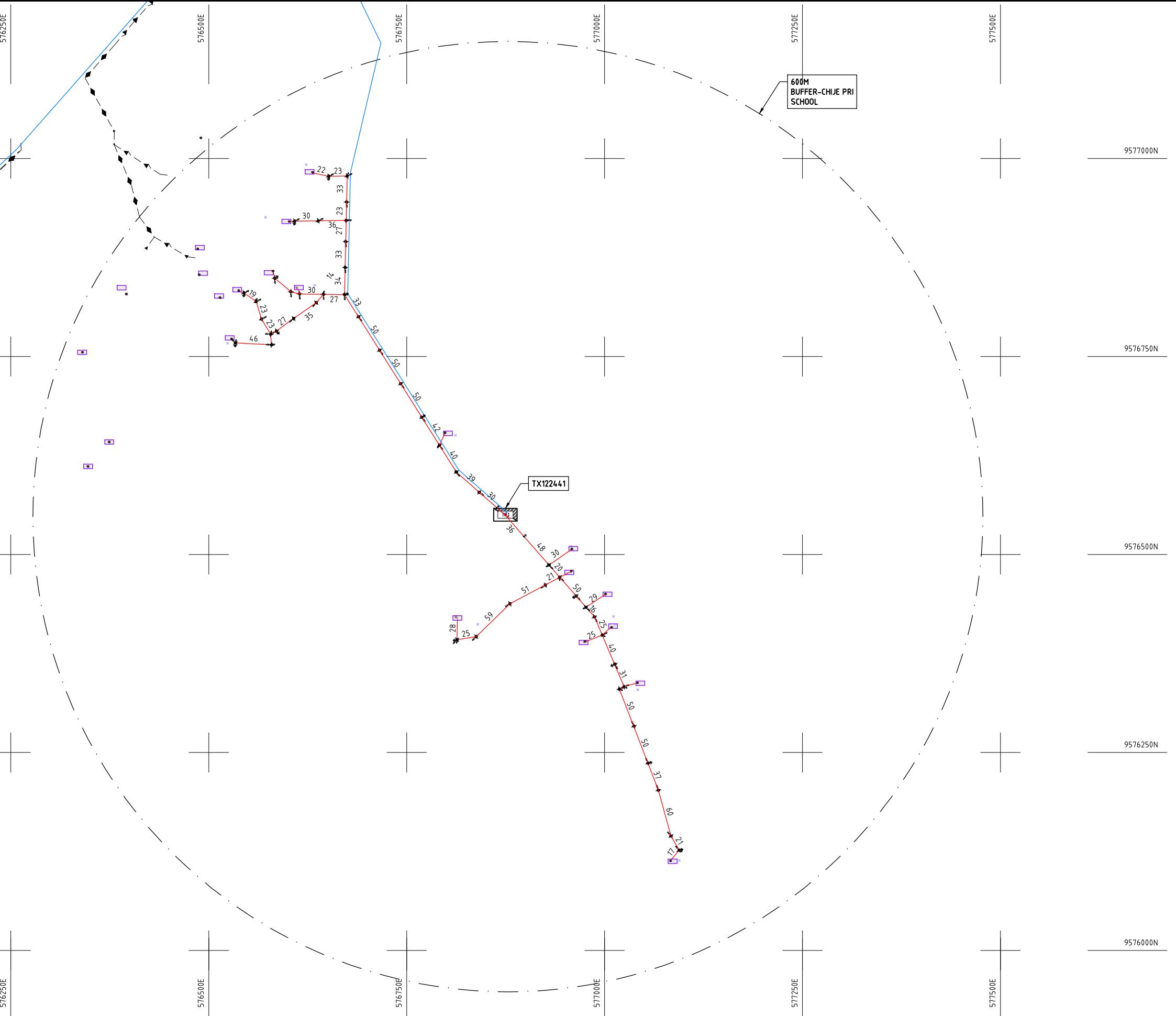
DR

DRAW.
KLF-MA-

O.	PREPARED BY	A.AKBAR
	CHECKED BY	S.MAETA
	APPROVED BY	Y.TANAKA
	DATE	10th SEP 2018



 NIPPON KOEI CO., LTD

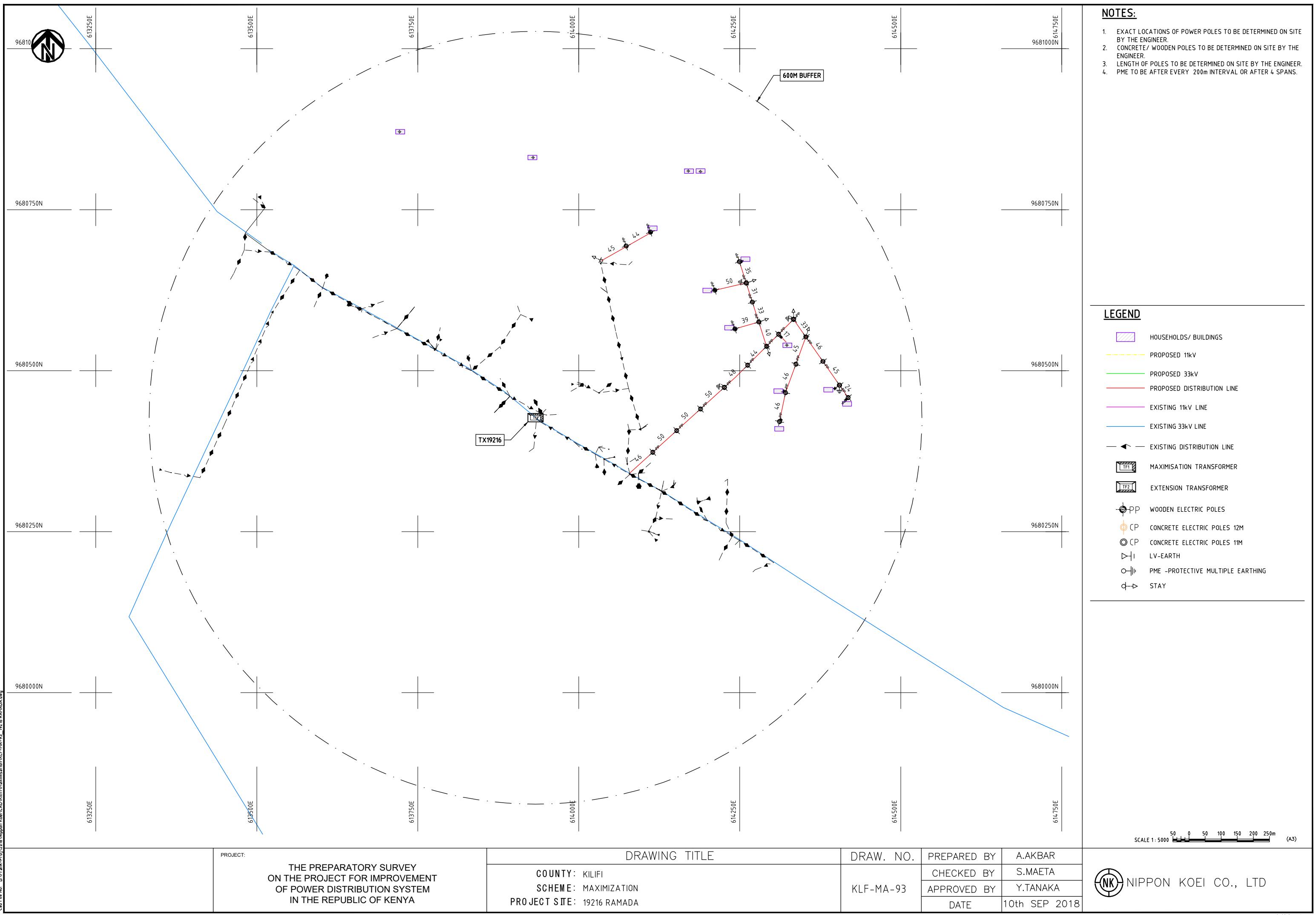
**NOTES:**

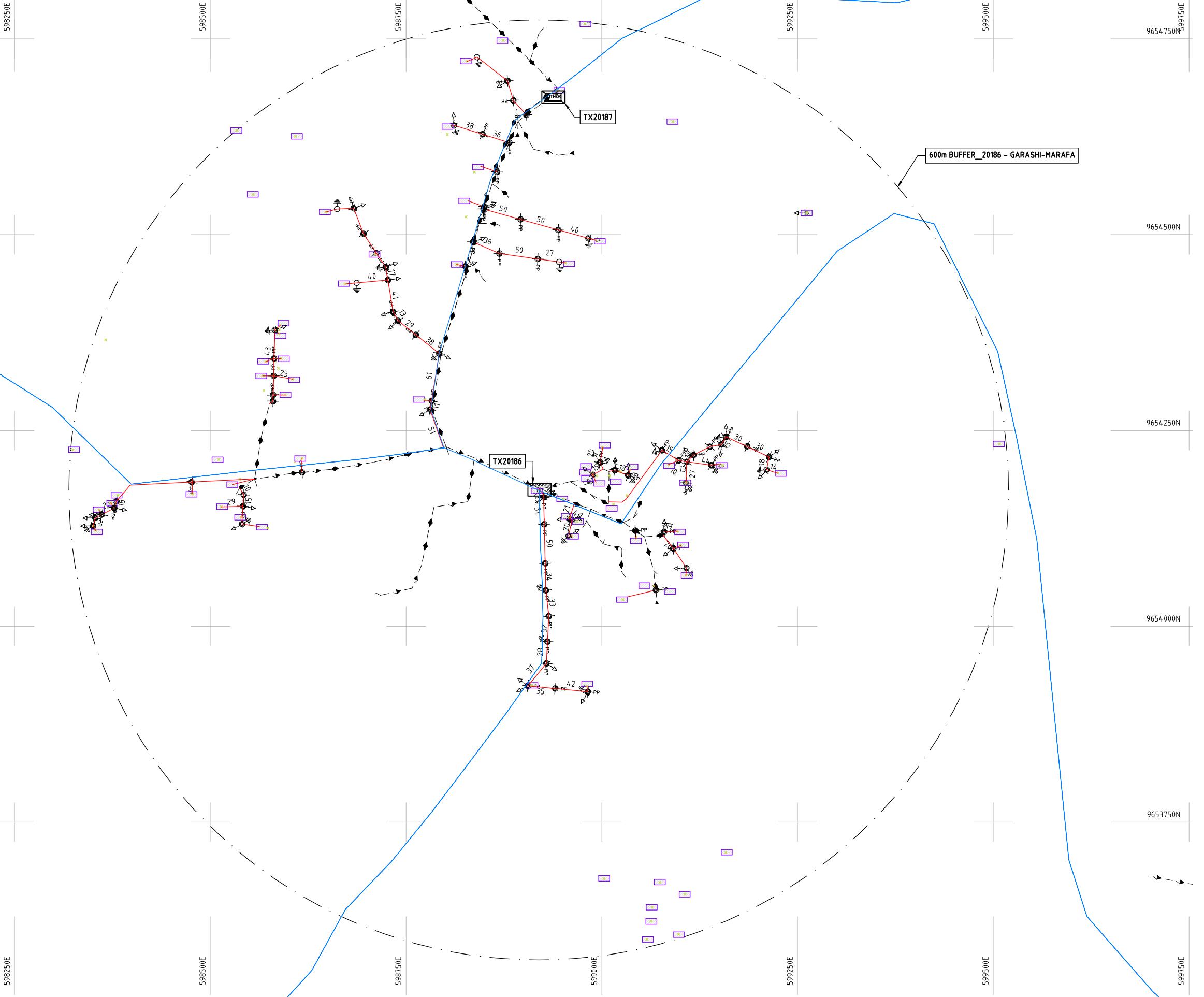
- EXACT LOCATIONS OF POWER POLES TO BE DETERMINED ON SITE BY THE ENGINEER.
- CONCRETE/ WOODEN POLES TO BE DETERMINED ON SITE BY THE ENGINEER.
- LENGTH OF POLES TO BE DETERMINED ON SITE BY THE ENGINEER.
- PME TO BE AFTER EVERY 200m INTERVAL OR AFTER 4 SPANS.

LEGEND

- HOUSEHOLDS / BUILDINGS
- PROPOSED 11kV
- PROPOSED 33kV
- PROPOSED DISTRIBUTION LINE
- EXISTING 11kV LINE
- EXISTING 33kV LINE
- EXISTING DISTRIBUTION LINE
- TF1 MAXIMISATION TRANSFORMER
- TF2 EXTENSION TRANSFORMER
- PP WOODEN ELECTRIC POLES
- CP CONCRETE ELECTRIC POLES 12M
- ◎ CP CONCRETE ELECTRIC POLES 11M
- △ I LV-EARTH
- II PME -PROTECTIVE MULTIPLE EARTHING
- ▷ STAY

NIPPON KOEI CO., LTD





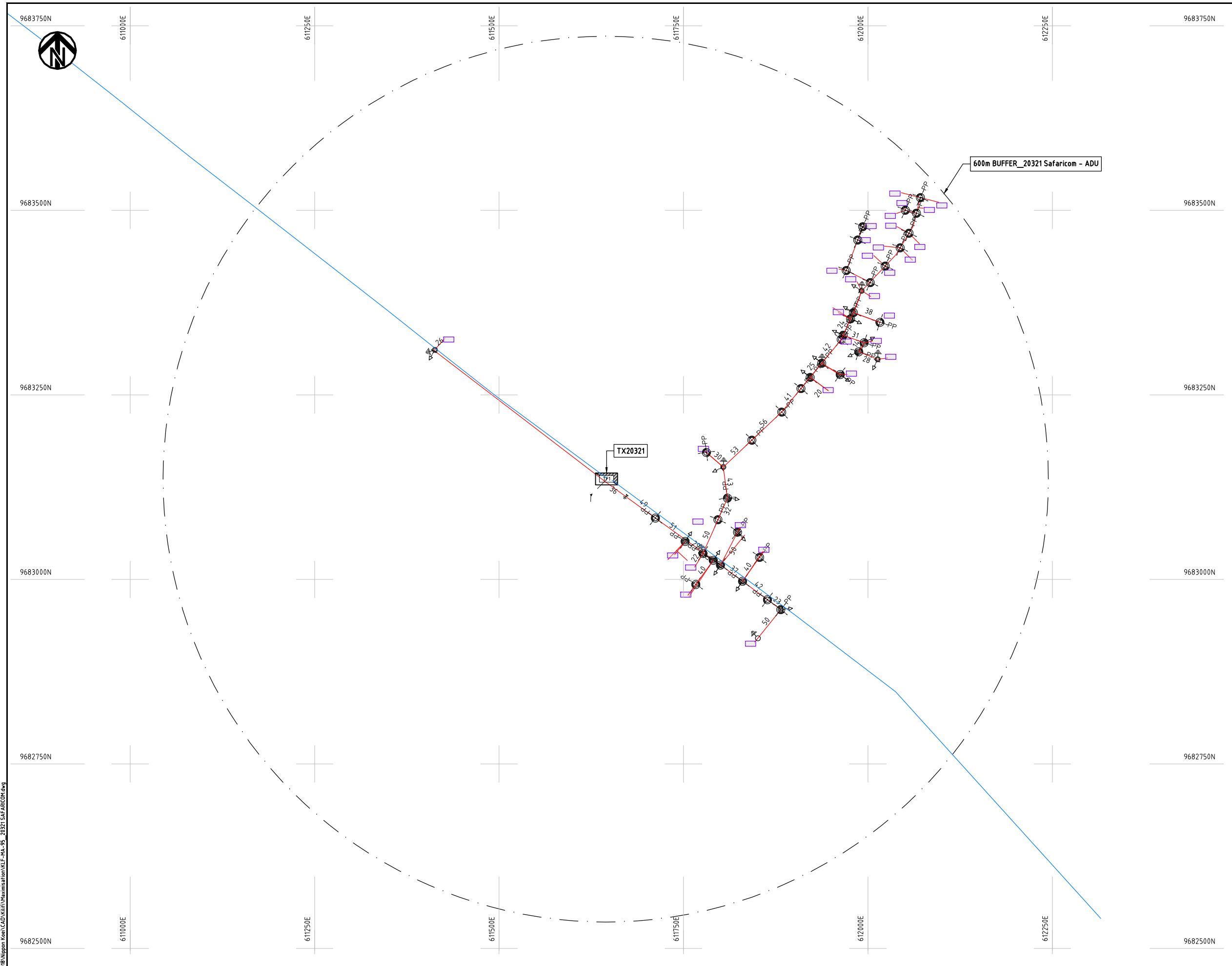
NOTES:

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LEGEND

- HOUSEHOLDS/ BUILDINGS
- PROPOSED DISTRIBUTION LINE
- EXISTING 11kV LINE
- EXISTING 33kV LINE
- EXISTING DISTRIBUTION LINE
- MAXIMISATION TRANSFORMER
- EXTENSION TRANSFORMER
- OTHER EXISTING TRANSFORMER
- WOODEN ELECTRIC POLES
- CONCRETE ELECTRIC POLES
- LV-EARTH
- PME -PROTECTIVE MULTIPLE EARTHING
- STAY

NIPPON KOEI CO., LTD



PROJECT: THE PREPARATORY SURVEY ON THE PROJECT FOR IMPROVEMENT OF POWER DISTRIBUTION SYSTEM IN THE REPUBLIC OF KENYA	DRAWING TITLE COUNTY: KILIFI SCHEME: MAXIMIZATION PROJECT SITE: 20321-SAFARICOM	DRAW. NO.	PREPARED BY	A.AKBAR
		KLF-MA-95	CHECKED BY	S.MAETA
			APPROVED BY	Y.TANAKA
			DATE	10th SEP 2018

NOTES:

1. EXACT LOCATIONS OF POWER POLES TO BE DETERMINED ON SITE BY THE ENGINEER.
 2. CONCRETE/ WOODEN POLES TO BE DETERMINED ON SITE BY THE ENGINEER.
 3. LENGTH OF POLES TO BE DETERMINED ON SITE BY THE ENGINEER.
 4. PME TO BE AFTER EVERY 200m INTERVAL OR AFTER 4 SPANS.
 5. POLES NOT SHOWN WHERE PME OR LV EARTH INTERSECT FOR CLARITY.

LEGEND

-  HOUSEHOLDS/ BUILDINGS
 PROPOSED DISTRIBUTION LINE
 EXISTING 11kV LINE
 EXISTING 33kV LINE
 EXISTING DISTRIBUTION LINE

 MAXIMISATION TRANSFORMER

 EXTENSION TRANSFORMER

 OTHER EXISTING TRANSFORMER

 WOODEN ELECTRIC POLES

 CONCRETE ELECTRIC POLES

 LV-EARTH
 PME -PROTECTIVE MULTIPLE EARTHING
 STAY

 NIPPON KOEI CO., LTD



9658500N

613500E

613750E

614000E

614250E

614500E

614750E

9658500N

9658250N

9658250N

9658000N

9658000N

9657750N

9657750N

9657500N

9657500N

613500E

613750E

614000E

614500E

614750E

NOTES:

- EXACT LOCATIONS OF POWER POLES TO BE DETERMINED ON SITE BY THE ENGINEER.
- CONCRETE/ WOODEN POLES TO BE DETERMINED ON SITE BY THE ENGINEER.
- LENGTH OF POLES TO BE DETERMINED ON SITE BY THE ENGINEER.
- PME TO BE AFTER EVERY 200m INTERVAL OR AFTER 4 SPANS.

LEGEND

- HOUSEHOLDS / BUILDINGS
- PROPOSED 11kV
- PROPOSED 33kV
- PROPOSED DISTRIBUTION LINE
- EXISTING 11kV LINE
- EXISTING 33kV LINE
- > EXISTING DISTRIBUTION LINE
- TF1 MAXIMISATION TRANSFORMER
- TF2 EXTENSION TRANSFORMER
- PP WOODEN ELECTRIC POLES
- CP CONCRETE ELECTRIC POLES 12M
- ◎ CP CONCRETE ELECTRIC POLES 11M
- △ I LV-EARTH
- II PME -PROTECTIVE MULTIPLE EARTHING
- ▷ STAY

SCALE 1:5000 50 0 50 100 150 200 250m (A3)

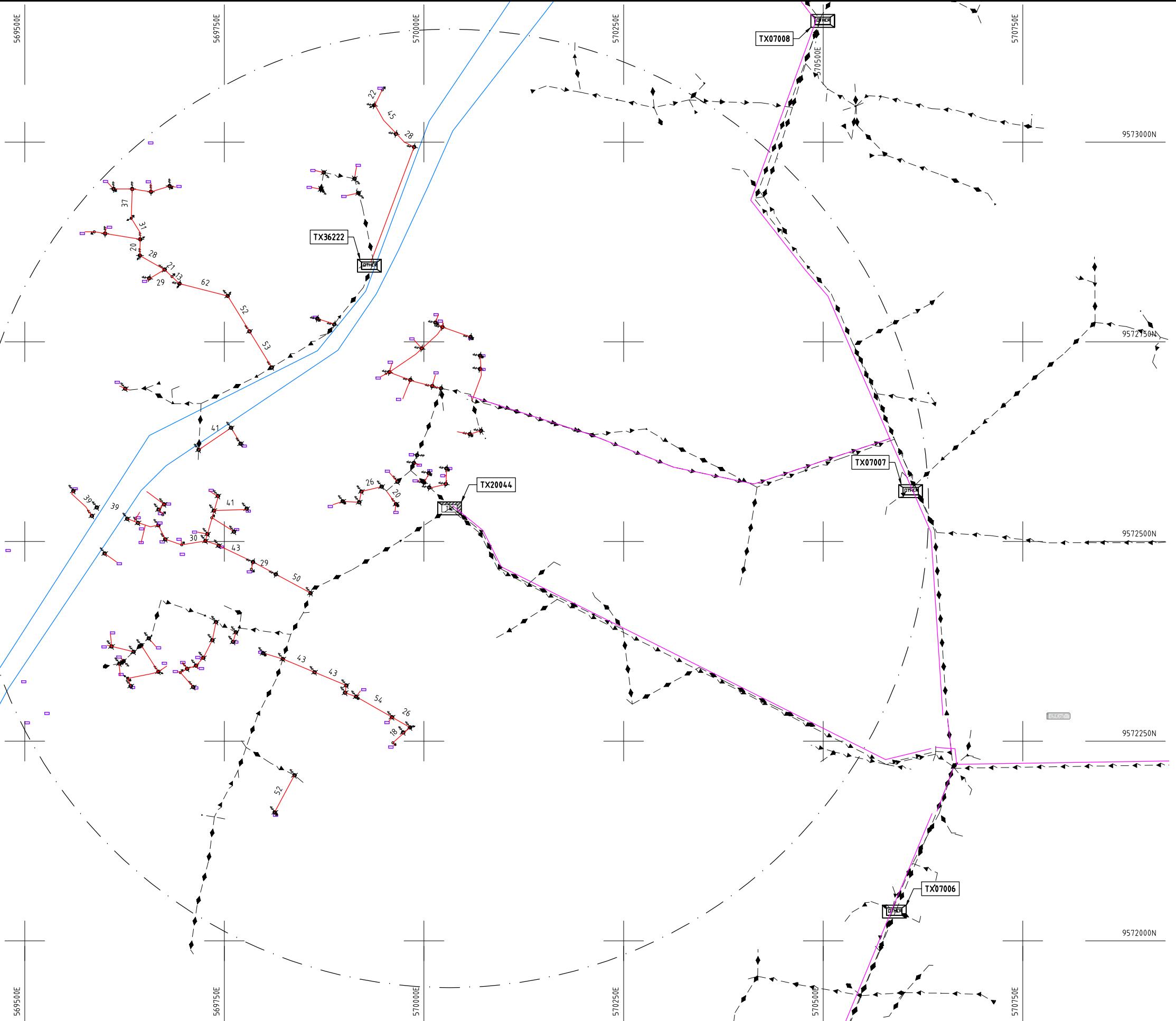
PROJECT:
THE PREPARATORY SURVEY
ON THE PROJECT FOR IMPROVEMENT
OF POWER DISTRIBUTION SYSTEM
IN THE REPUBLIC OF KENYA

DRAWING TITLE
COUNTY: KILIFI
SCHEME: MAXIMIZATION
PROJECT SITE: 19977-KADZIFITSENI

DRAW. NO. KLF-MA-96
PREPARED BY A.AKBAR
CHECKED BY S.MAETA
APPROVED BY Y.TANAKA
DATE 10th SEP 2018

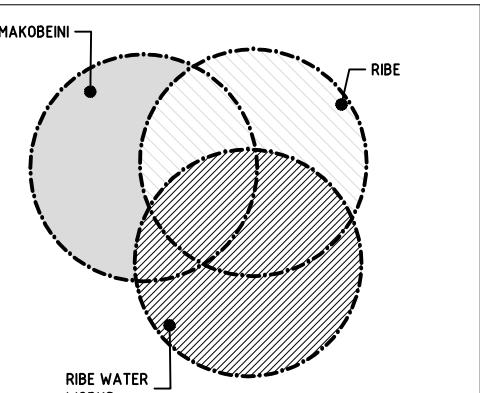


NIPPON KOEI CO., LTD



NOTES:

- EXACT LOCATIONS OF POWER POLES TO BE DETERMINED ON SITE BY THE ENGINEER.
- CONCRETE/ WOODEN POLES TO BE DETERMINED ON SITE BY THE ENGINEER.
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- PME TO BE AFTER EVERY 200m INTERVAL OR AFTER 4 SPANS.
- POLES NOT SHOWN WHERE PME OR LV EARTH INTERSECT FOR CLARITY.

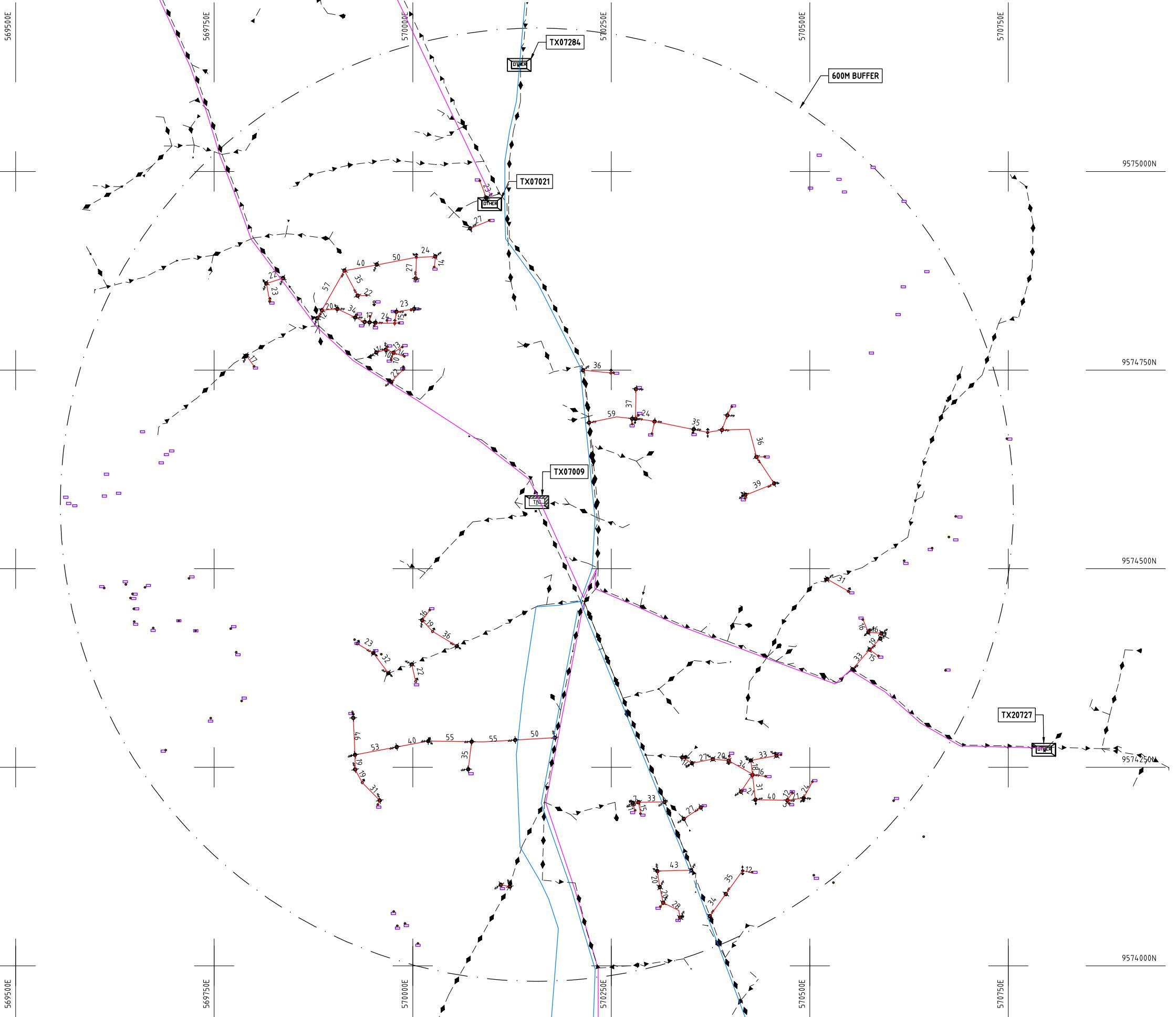


LEGEND

- HOUSEHOLDS/ BUILDINGS
- PROPOSED DISTRIBUTION LINE
- EXISTING 11kV LINE
- EXISTING 33kV LINE
- EXISTING DISTRIBUTION LINE
- MAXIMISATION TRANSFORMER
- EXTENSION TRANSFORMER
- OTHER EXISTING TRANSFORMER
- WOODEN ELECTRIC POLES
- CONCRETE ELECTRIC POLES
- LV-EARTH
- PME -PROTECTIVE MULTIPLE EARTHING
- STAY

NIPPON KOEI CO., LTD



**NOTES:**

1. EXACT LOCATIONS OF POWER POLES TO BE DETERMINED ON SITE BY THE ENGINEER.
2. CONCRETE/ WOODEN POLES TO BE DETERMINED ON SITE BY THE ENGINEER.
3. LENGTH OF POLES TO BE DETERMINED ON SITE BY THE ENGINEER.
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5. POLES NOT SHOWN WHERE PME OR LV EARTH INTERSECT FOR CLARITY.

LEGEND

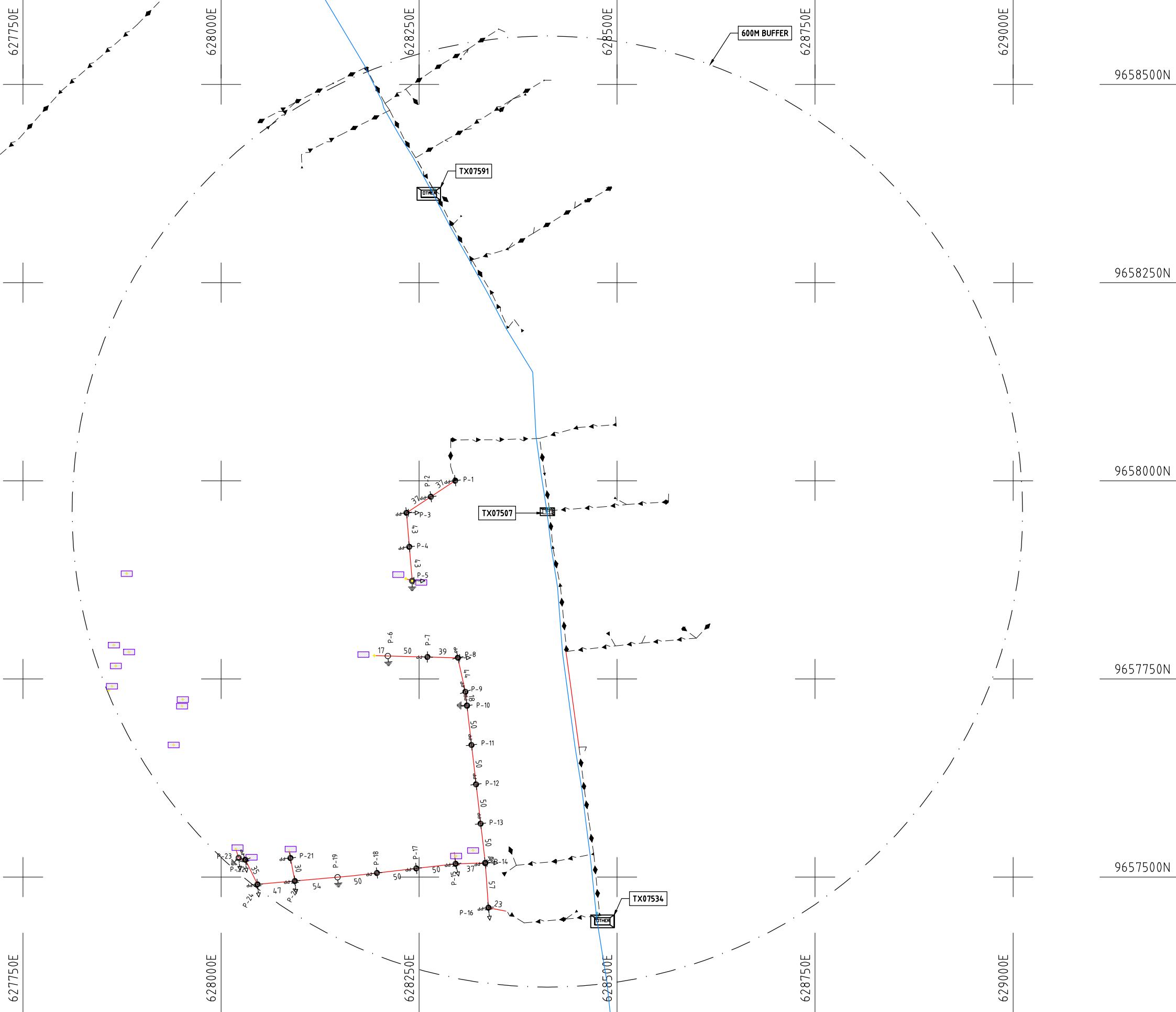
- HOUSEHOLDS/ BUILDINGS
- PROPOSED DISTRIBUTION LINE
- EXISTING 11kV LINE
- EXISTING 33kV LINE
- EXISTING DISTRIBUTION LINE
- TF1 MAXIMISATION TRANSFORMER
- TF2 EXTENSION TRANSFORMER
- OTHER OTHER EXISTING TRANSFORMER
- PP WOODEN ELECTRIC POLES
- CP CONCRETE ELECTRIC POLES
- △ I LV-EARTH
- II PME -PROTECTIVE MULTIPLE EARTHING
- ▷ STAY

SCALE 1:5000 50 0 50 100 150 200 250m (A3)





9658500N

**NOTES:**

- EXACT LOCATIONS OF POWER POLES TO BE DETERMINED ON SITE BY THE ENGINEER.
- CONCRETE/ WOODEN POLES TO BE DETERMINED ON SITE BY THE ENGINEER.
- LENGTH OF POLES TO BE DETERMINED ON SITE BY THE ENGINEER.
- PME TO BE AFTER EVERY 200m INTERVAL OR AFTER 4 SPANS.

LEGEND

- HOUSEHOLDS / BUILDINGS
- PROPOSED 11kV
- PROPOSED 33kV
- PROPOSED DISTRIBUTION LINE
- EXISTING 11kV LINE
- EXISTING 33kV LINE
- > EXISTING DISTRIBUTION LINE
- MAXIMISATION TRANSFORMER
- EXTENSION TRANSFORMER
- PP WOODEN ELECTRIC POLES
- CP CONCRETE ELECTRIC POLES 12M
- ◎ CP CONCRETE ELECTRIC POLES 11M
- △ LV-EARTH
- PME -PROTECTIVE MULTIPLE EARTHING
- STAY

SCALE 1:5000 50 0 50 100 150 200 250m (A3)

PROJECT:
THE PREPARATORY SURVEY
ON THE PROJECT FOR IMPROVEMENT
OF POWER DISTRIBUTION SYSTEM
IN THE REPUBLIC OF KENYA

DRAWING TITLE
COUNTY: KILIFI
SCHEME: MAXIMIZATION
PROJECT SITE: 07507_D_RICCI

DRAW. NO.
KLF-MA-99

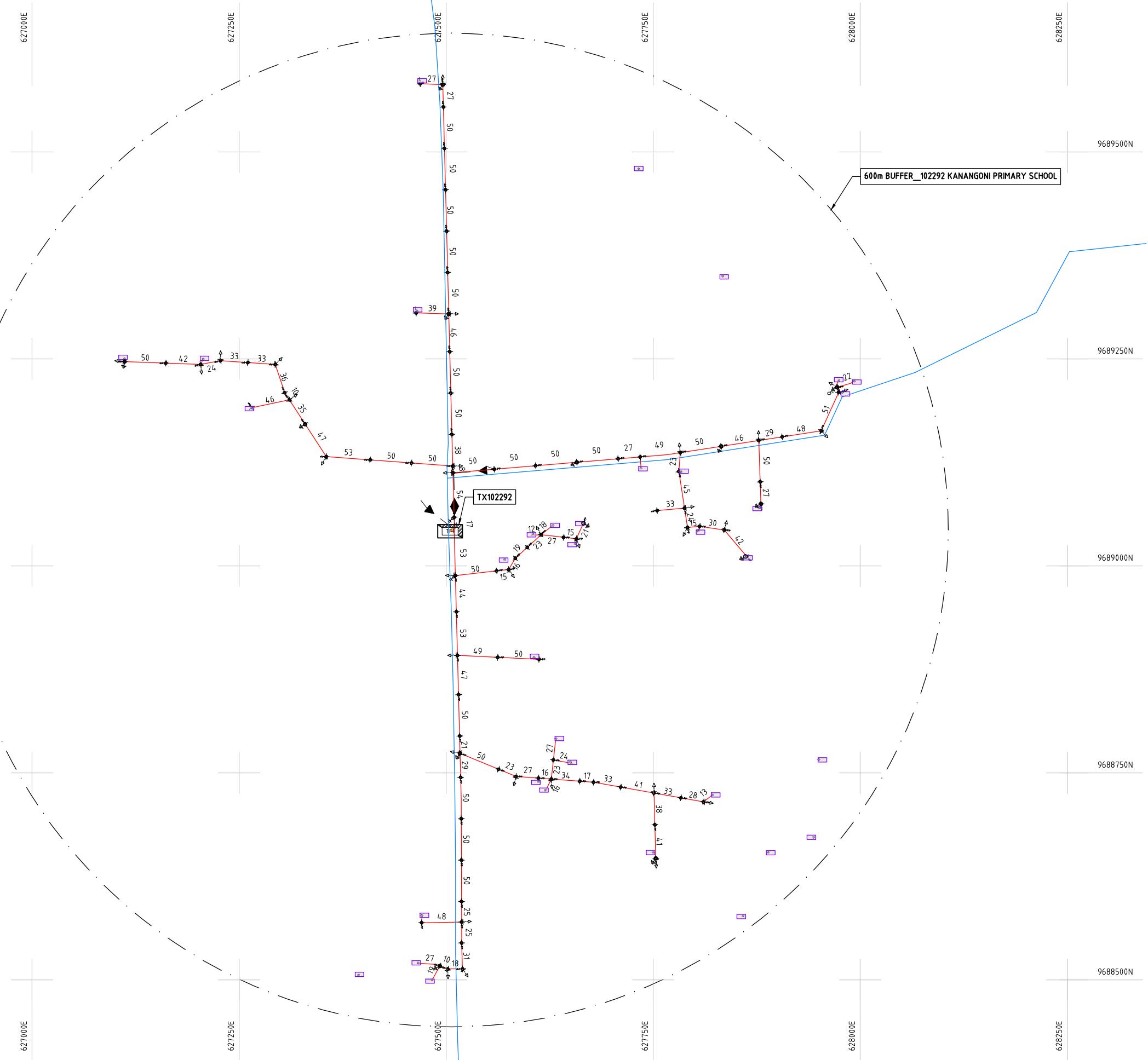
PREPARED BY
A.AKBAR
CHECKED BY
S.MAETA
APPROVED BY
Y.TANAKA
DATE
10th SEP 2018



NIPPON KOEI CO., LTD



ad File No: D:\Frank-Proj\2018\Nippon Koei\CAD\Klifit\Maximisation\KLF-MA-100_102292 Kanangoni.dwg



NOTES:

1. EXACT LOCATIONS OF POWER POLES TO BE DETERMINED ON SITE BY THE ENGINEER.
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LEGEND

 HOUSEHOLDS/ BUILDINGS

 PROPOSED DISTRIBUTION LINE

 EXISTING 11kV LINE

 EXISTING 33kV LINE

 EXISTING DISTRIBUTION LINE

 MAXIMISATION TRANSFORMER

 EXTENSION TRANSFORMER

 OTHER EXISTING TRANSFORMER

 WOODEN ELECTRIC POLES

 CP CONCRETE ELECTRIC POLES

 LV-EARTH

 PME -PROTECTIVE MULTIPLE EARTHING

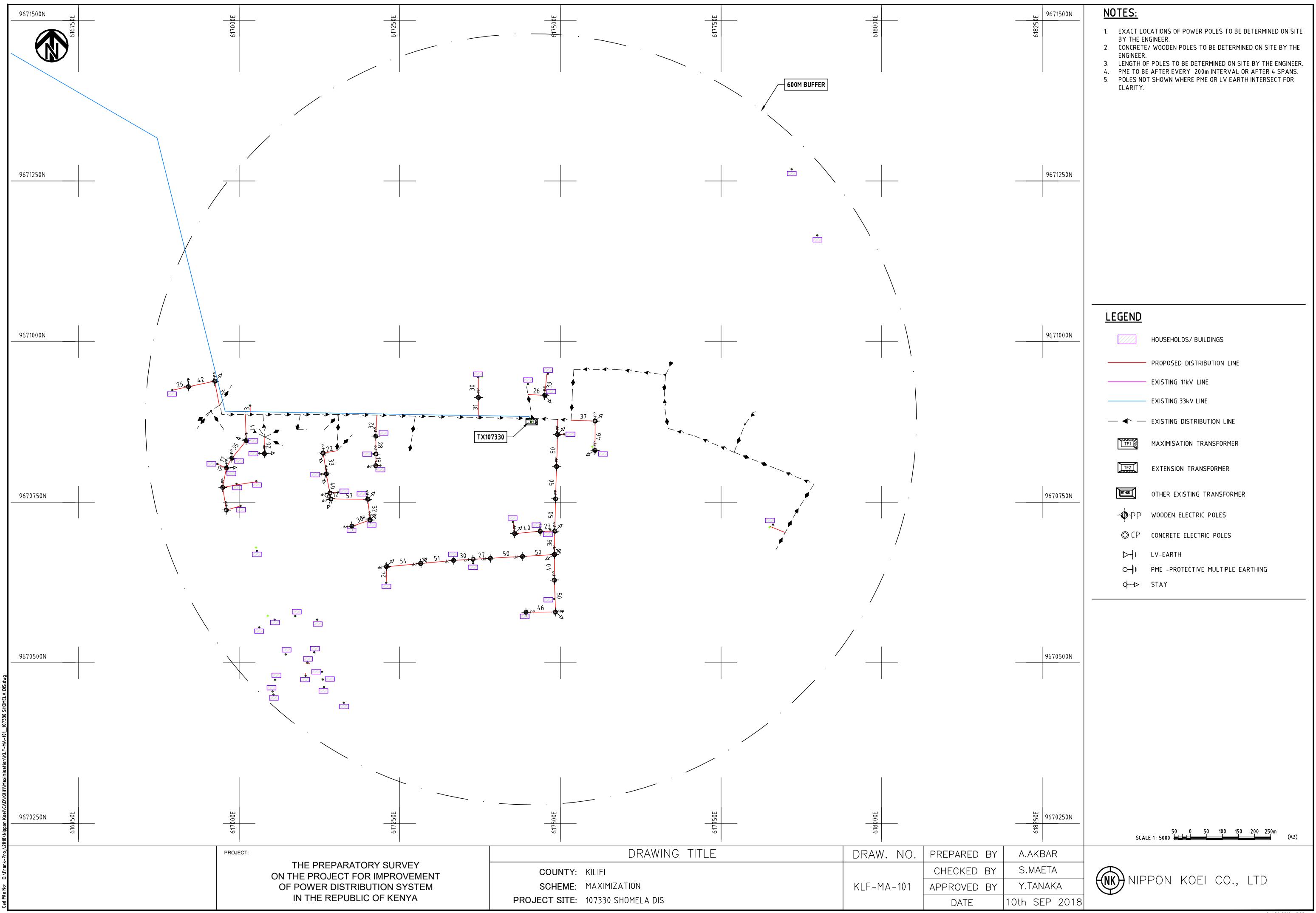
 STAY

SCALE 1 : 5000

PROJECT: THE PREPARATORY SURVEY ON THE PROJECT FOR IMPROVEMENT OF POWER DISTRIBUTION SYSTEM IN THE REPUBLIC OF KENYA	DRAWING TITLE	DRAW. NO.	PREPARED BY	A.AKBAR
	COUNTY: KILIFI	KLF-MA-100	CHECKED BY	S.MAETA
	SCHEME: MAXIMIZATION		APPROVED BY	Y.TANAKA
	PROJECT SITE: 102292 KANANGONI		DATE	10th SEP 2018

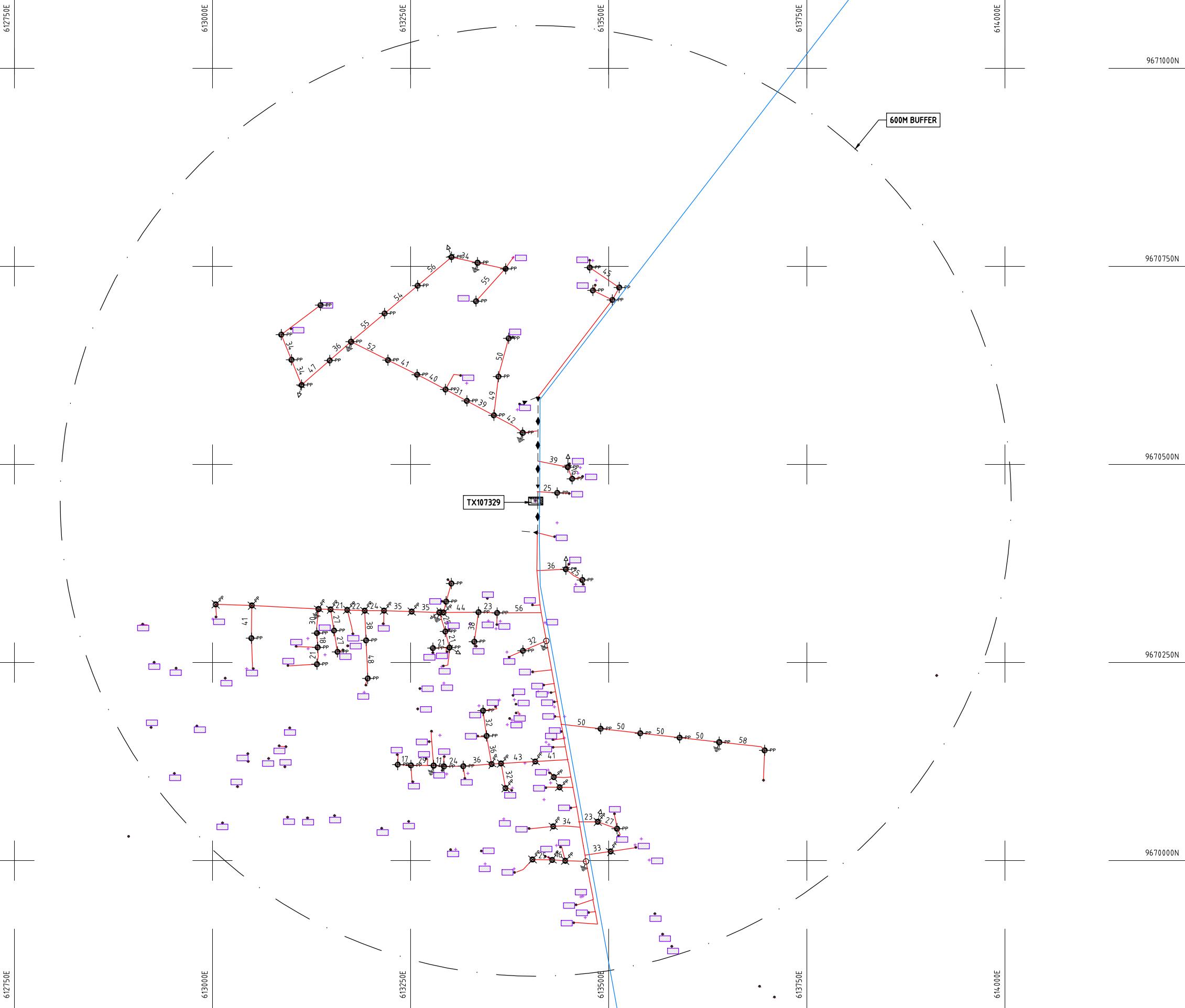


 NIPPON KOEI CO., LTD





9671000N

**NOTES:**

1. EXACT LOCATIONS OF POWER POLES TO BE DETERMINED ON SITE BY THE ENGINEER.
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3. LENGTH OF POLES TO BE DETERMINED ON SITE BY THE ENGINEER.
4. PME TO BE AFTER EVERY 200m INTERVAL OR AFTER 4 SPANS.

LEGEND

	HOUSEHOLDS / BUILDINGS
	PROPOSED 11kV
	PROPOSED 33kV
	PROPOSED DISTRIBUTION LINE
	EXISTING 11kV LINE
	EXISTING 33kV LINE
	EXISTING DISTRIBUTION LINE
	MAXIMISATION TRANSFORMER
	EXTENSION TRANSFORMER
	WOODEN ELECTRIC POLES
	CONCRETE ELECTRIC POLES 12M
	CONCRETE ELECTRIC POLES 11M
	LV-EARTH
	PME -PROTECTIVE MULTIPLE EARTHING
	STAY

SCALE 1:5000 50 0 50 100 150 200 250m (A3)

PROJECT:
THE PREPARATORY SURVEY
ON THE PROJECT FOR IMPROVEMENT
OF POWER DISTRIBUTION SYSTEM
IN THE REPUBLIC OF KENYA

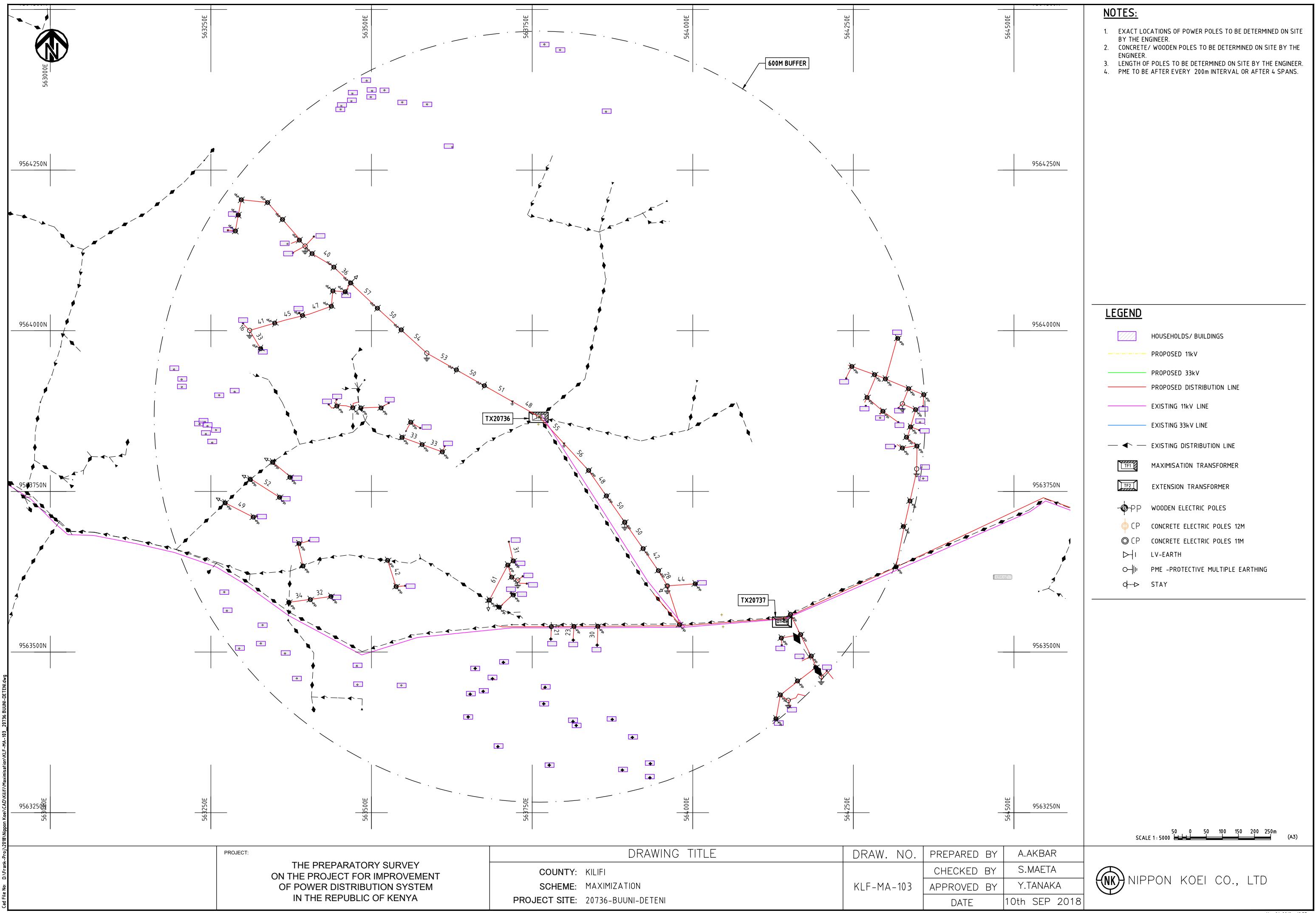
DRAWING TITLE
COUNTY: KILIFI
SCHEME: MAXIMIZATION
PROJECT SITE: 107329 KABIBUNI PRY

DRAW. NO.
KLF-MA-102

PREPARED BY	A.AKBAR
CHECKED BY	S.MAETA
APPROVED BY	Y.TANAKA
DATE	10th SEP 2018



NIPPON KOEI CO., LTD





9570250N

563750E

564000E

564250E

564500E

564750E

565000E

9570250N

957000N

9569750N

9569500N

9569250N

TX19930

600m BUFFER_19930 -Bofu Sec School,Rabai

NOTES:

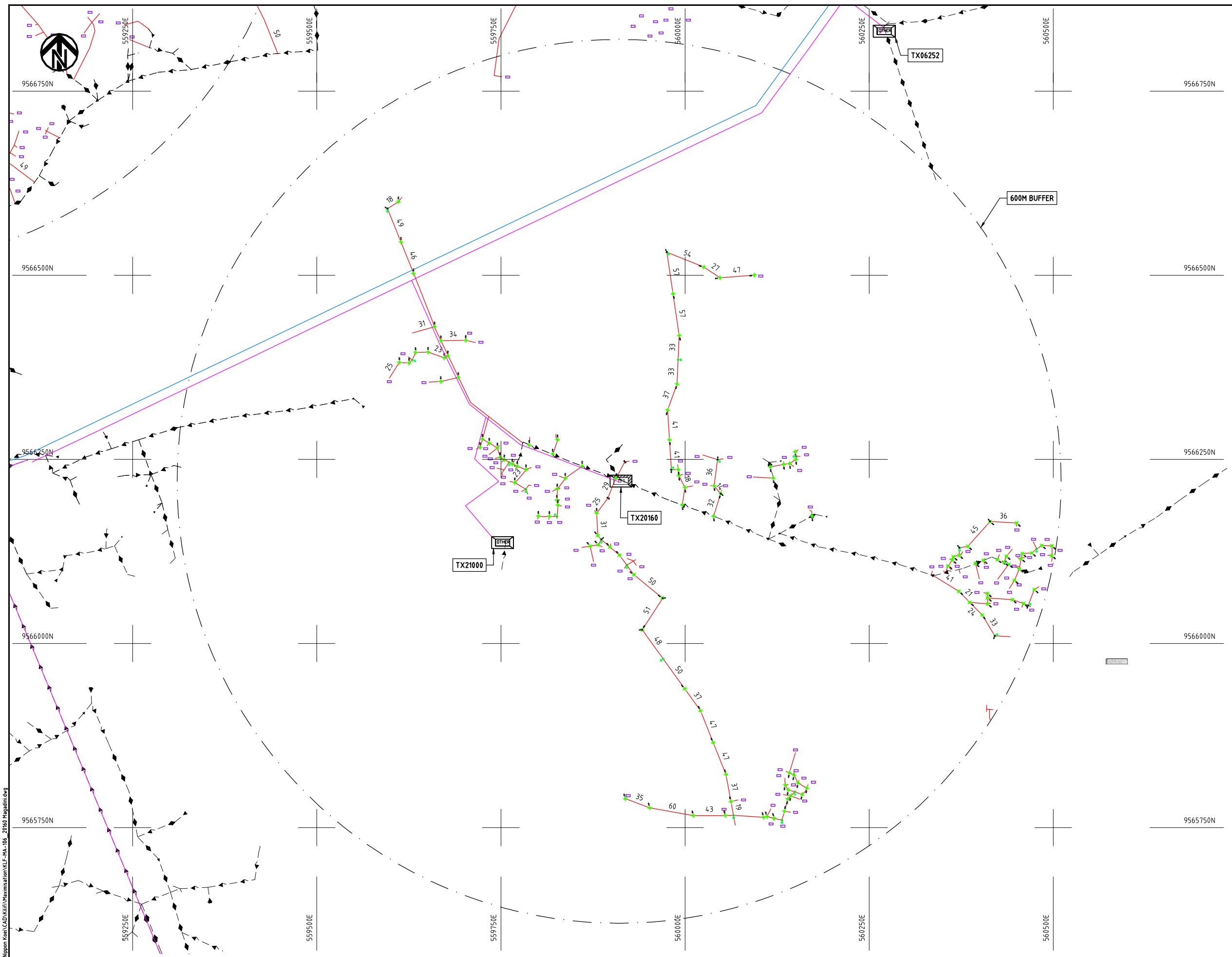
1. EXACT LOCATIONS OF POWER POLES TO BE DETERMINED ON SITE BY THE ENGINEER.
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5. POLES NOT SHOWN WHERE PME OR LV EARTH INTERSECT FOR CLARITY.

LEGEND

- HOUSEHOLDS/ BUILDINGS
- PROPOSED DISTRIBUTION LINE
- EXISTING 11kV LINE
- EXISTING 33kV LINE
- > EXISTING DISTRIBUTION LINE
- TF1 MAXIMISATION TRANSFORMER
- TF2 EXTENSION TRANSFORMER
- OTHER OTHER EXISTING TRANSFORMER
- PP WOODEN ELECTRIC POLES
- CP CONCRETE ELECTRIC POLES
- △ I LV-EARTH
- II PME -PROTECTIVE MULTIPLE EARTHING
- ▷ STAY

SCALE 1:5000 50 0 50 100 150 200 250m (A3)







956200N

560500E

560750E

561000E

561250E

561500E

561750E

956200N

9561750N

9561750N

9561500N

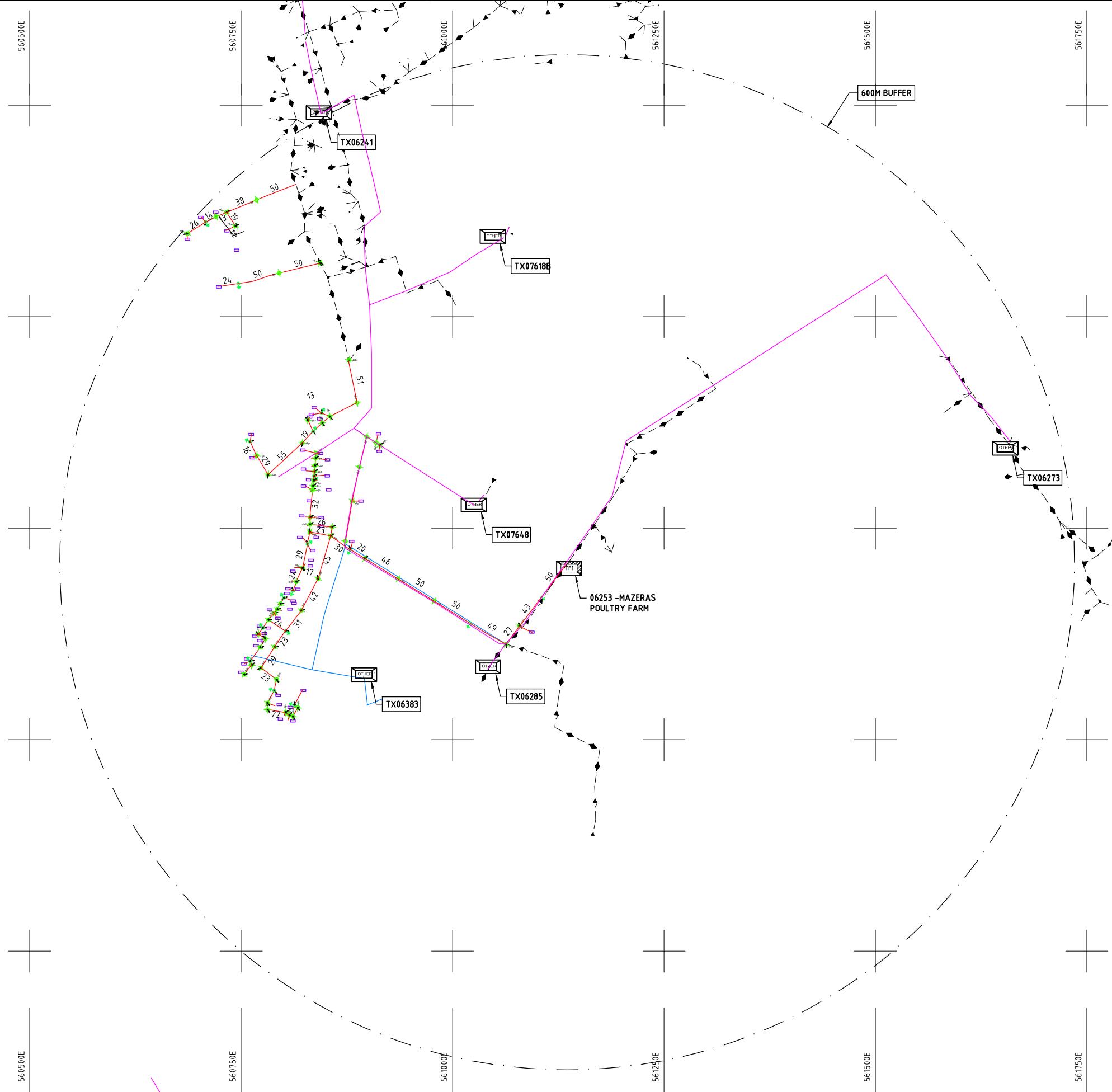
9561500N

9561250N

9561250N

9561000N

9561000N

**NOTES:**

- EXACT LOCATIONS OF POWER POLES TO BE DETERMINED ON SITE BY THE ENGINEER.
- CONCRETE/ WOODEN POLES TO BE DETERMINED ON SITE BY THE ENGINEER.
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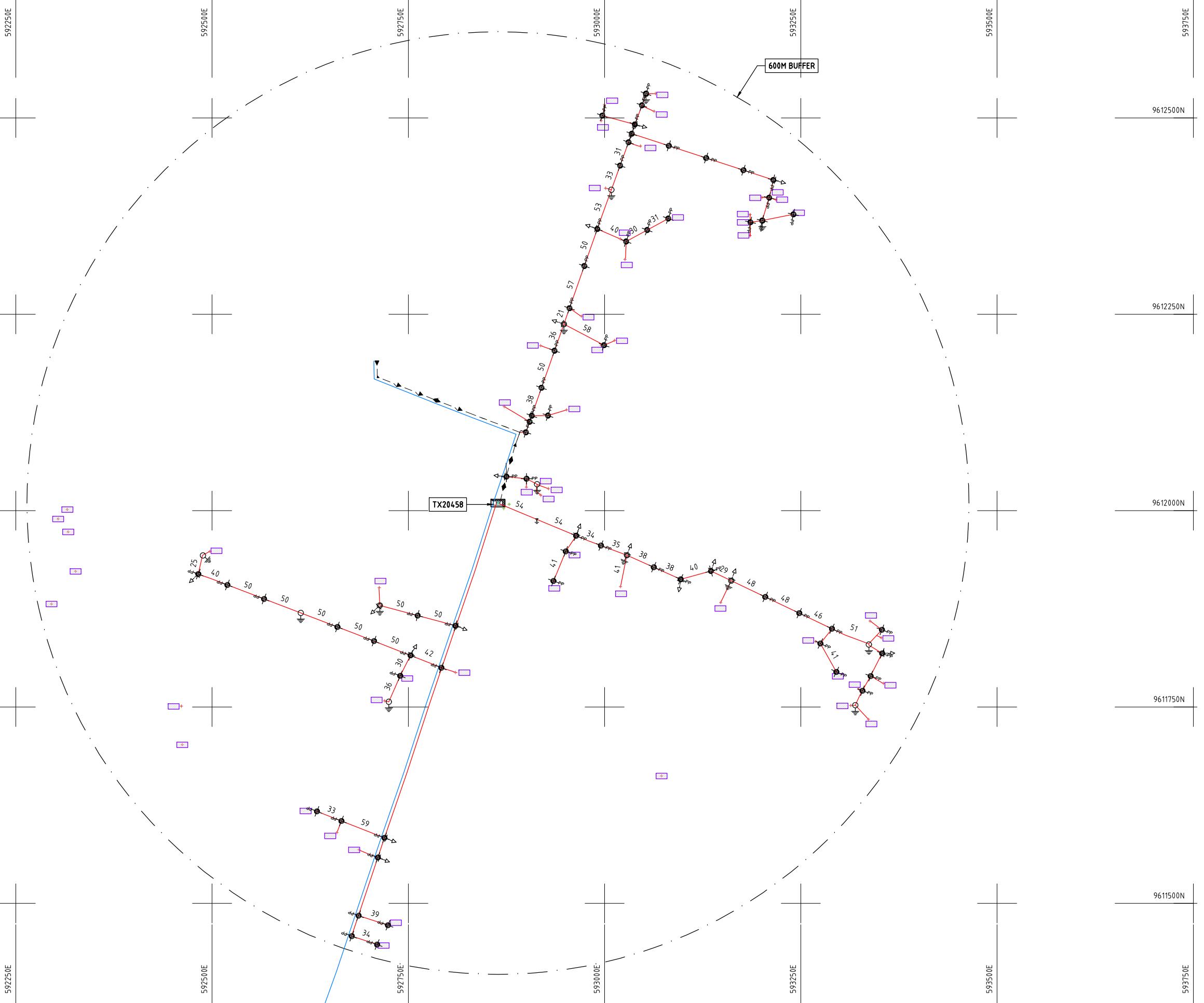
LEGEND

- HOUSEHOLDS/ BUILDINGS
- PROPOSED DISTRIBUTION LINE
- EXISTING 11kV LINE
- EXISTING 33kV LINE
- EXISTING DISTRIBUTION LINE
- MAXIMISATION TRANSFORMER
- EXTENSION TRANSFORMER
- OTHER EXISTING TRANSFORMER
- WOODEN ELECTRIC POLES
- CONCRETE ELECTRIC POLES
- LV-EARTH
- PME -PROTECTIVE MULTIPLE EARTHING
- STAY

SCALE 1:5000 50 0 50 100 150 200 250m (A3)



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610250E

610500E

610750E

611000E

611250E

611500E

9632250N

9632250N

9632000N

9632000N

9631750N

9631750N

9631500N

9631500N

9631250N

9631250N

PROJECT:
THE PREPARATORY SURVEY
ON THE PROJECT FOR IMPROVEMENT
OF POWER DISTRIBUTION SYSTEM
IN THE REPUBLIC OF KENYA

DRAWING TITLE
COUNTY: KILIFI
SCHEME: MAXIMIZATION
PROJECT SITE: 103923-DABASO

DRAW. NO.
KLF-MA-109

PREPARED BY
A.AKBAR
CHECKED BY
S.MAETA
APPROVED BY
Y.TANAKA
DATE
10th SEP 2018



NIPPON KOEI CO., LTD

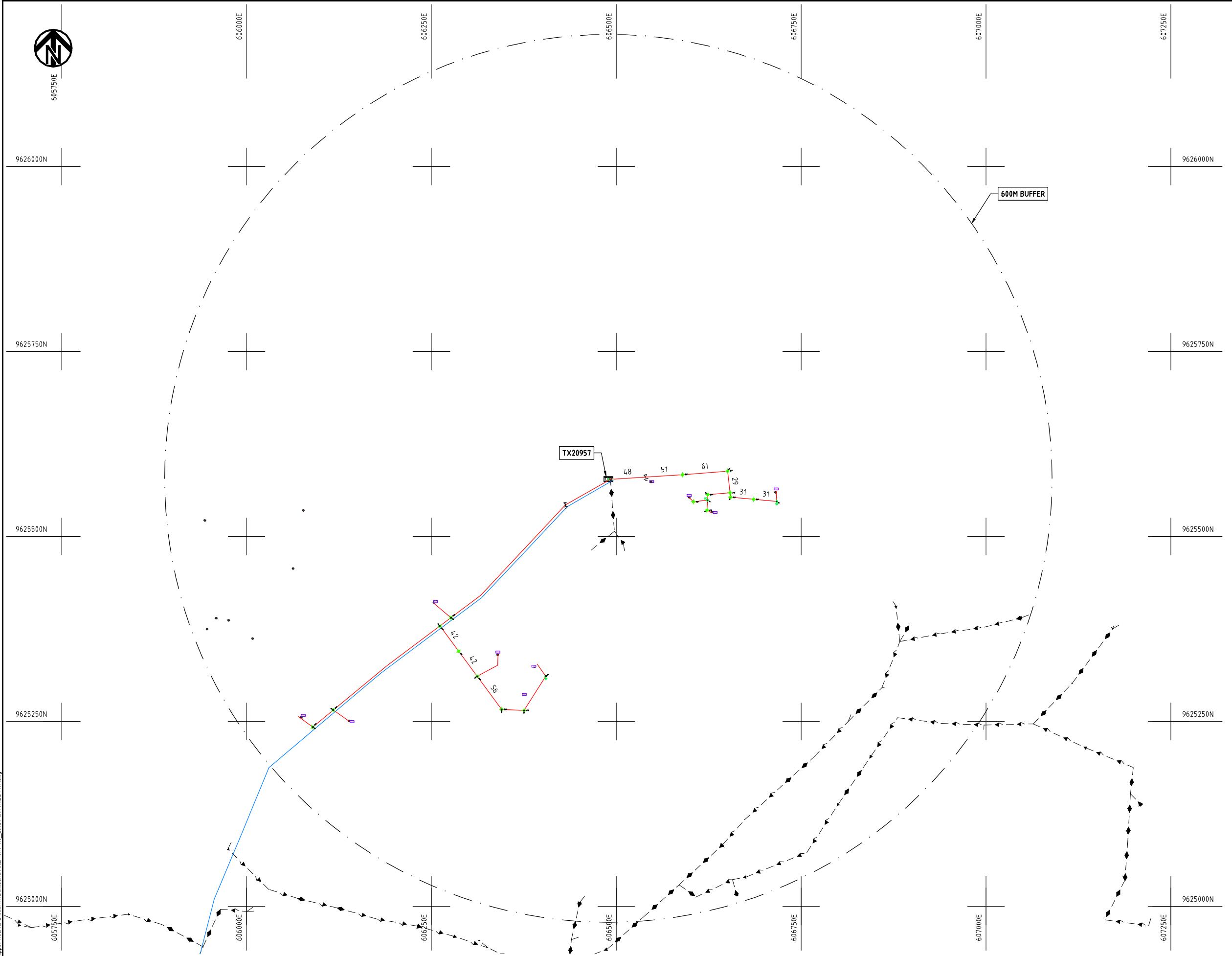
NOTES:

- EXACT LOCATIONS OF POWER POLES TO BE DETERMINED ON SITE BY THE ENGINEER.
- CONCRETE/ WOODEN POLES TO BE DETERMINED ON SITE BY THE ENGINEER.
- LENGTH OF POLES TO BE DETERMINED ON SITE BY THE ENGINEER.
- PME TO BE AFTER EVERY 200m INTERVAL OR AFTER 4 SPANS.

LEGEND

- HOUSEHOLDS/ BUILDINGS
- PROPOSED 11kV
- PROPOSED 33kV
- PROPOSED DISTRIBUTION LINE
- EXISTING 11kV LINE
- EXISTING 33kV LINE
- EXISTING DISTRIBUTION LINE
- MAXIMISATION TRANSFORMER
- EXTENSION TRANSFORMER
- WOODEN ELECTRIC POLES
- CONCRETE ELECTRIC POLES 12M
- CONCRETE ELECTRIC POLES 11M
- LV-EARTH
- PME -PROTECTIVE MULTIPLE EARTHING
- STAY

SCALE 1:5000 50 0 50 100 150 200 250m (A3)

**NOTES:**

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- LENGTH OF POLES TO BE DETERMINED ON SITE BY THE ENGINEER.
- PME TO BE AFTER EVERY 200m INTERVAL OR AFTER 4 SPANS.

LEGEND

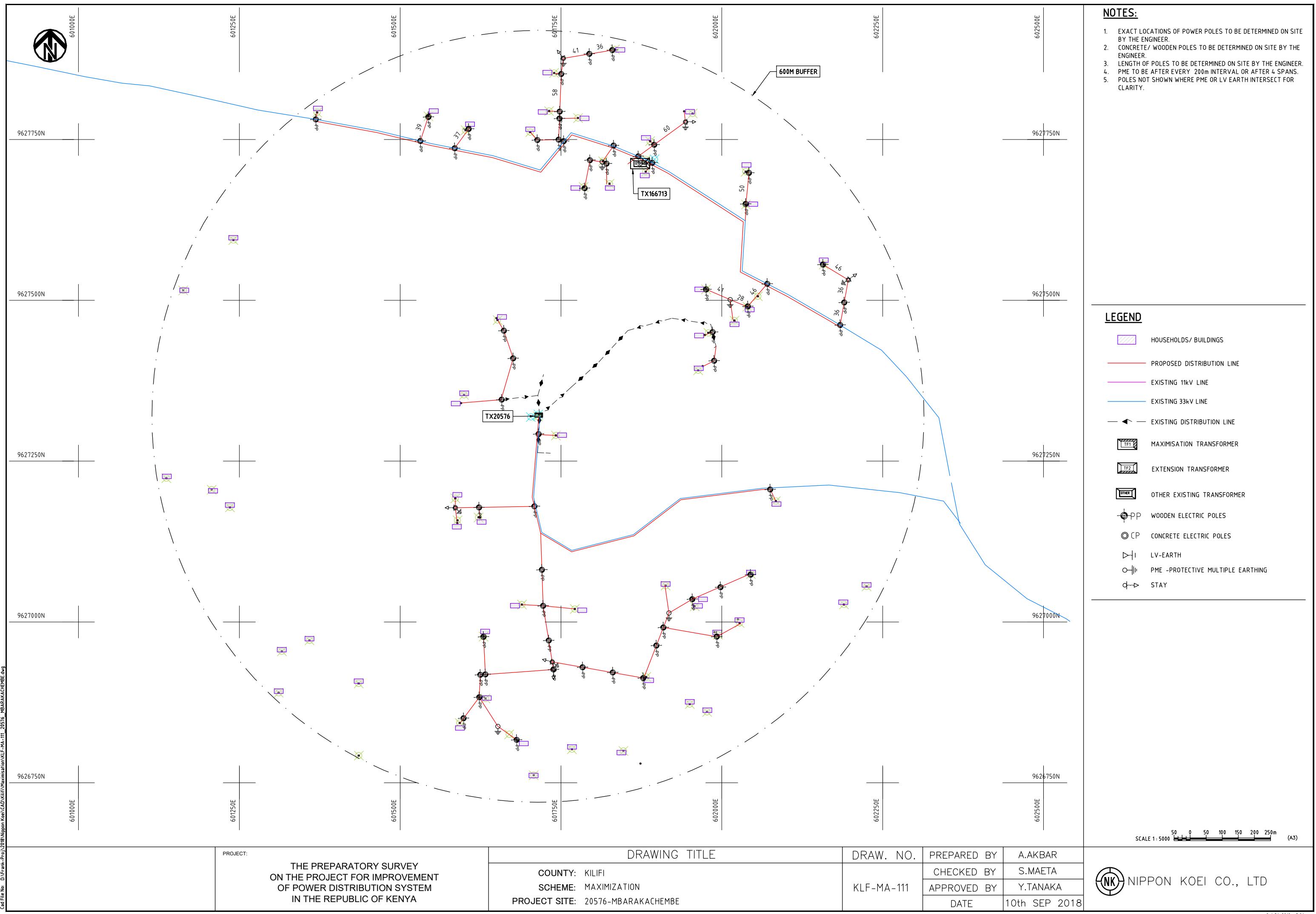
- HOUSEHOLDS / BUILDINGS
- PROPOSED 11kV
- PROPOSED 33kV
- PROPOSED DISTRIBUTION LINE
- EXISTING 11kV LINE
- EXISTING 33kV LINE
- > EXISTING DISTRIBUTION LINE
- TF1 MAXIMISATION TRANSFORMER
- TF2 EXTENSION TRANSFORMER
- PP WOODEN ELECTRIC POLES
- CP CONCRETE ELECTRIC POLES 12M
- CP CONCRETE ELECTRIC POLES 11M
- △ I LV-EARTH
- II PME -PROTECTIVE MULTIPLE EARTHING
- ▷ STAY

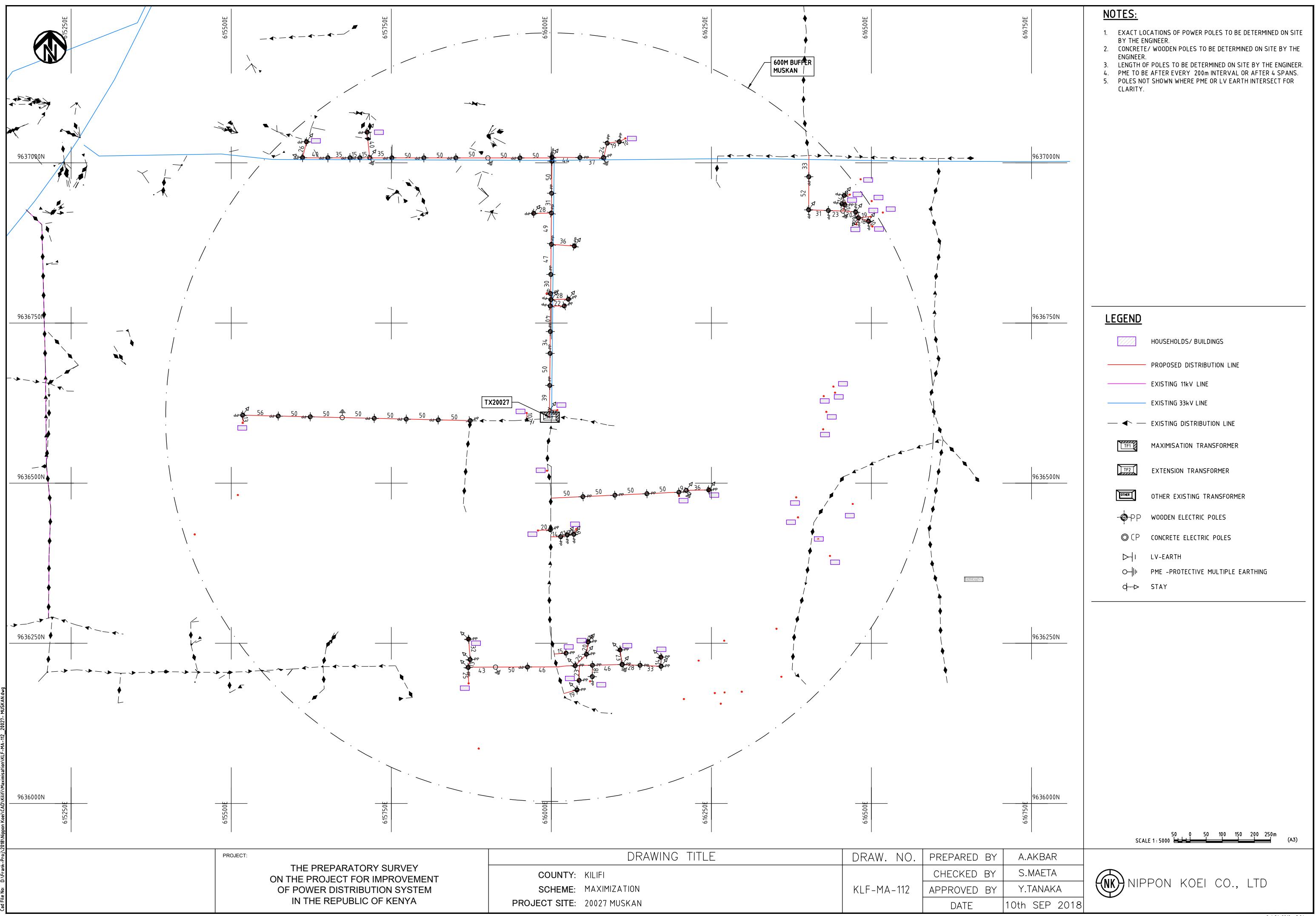
NIPON KOEI CO., LTD

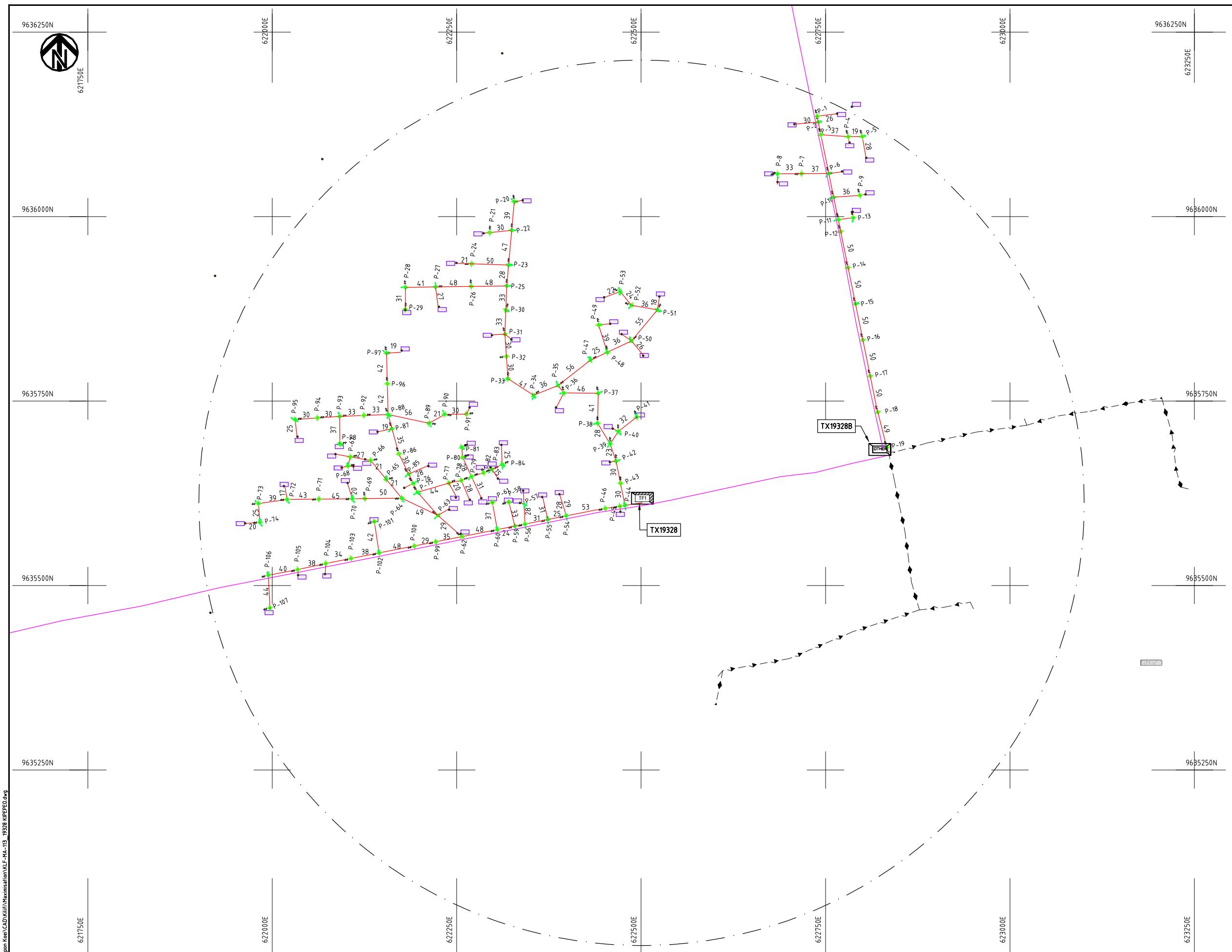
PROJECT:
THE PREPARATORY SURVEY
ON THE PROJECT FOR IMPROVEMENT
OF POWER DISTRIBUTION SYSTEM
IN THE REPUBLIC OF KENYA

DRAWING TITLE
COUNTY: KILIFI
SCHEME: MAXIMIZATION
PROJECT SITE: 20957-CHIPANDE PRI SCHOOL

DRAW. NO. KLF-MA-110
PREPARED BY A.AKBAR
CHECKED BY S.MAETA
APPROVED BY Y.TANAKA
DATE 10th SEP 2018

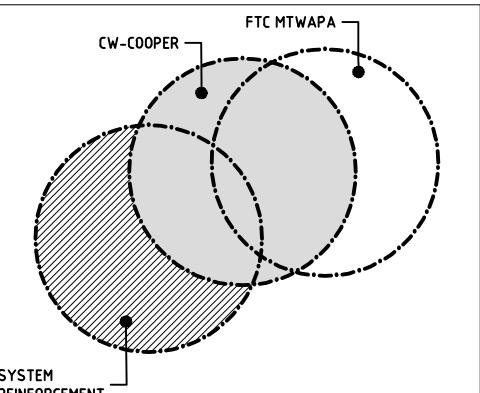






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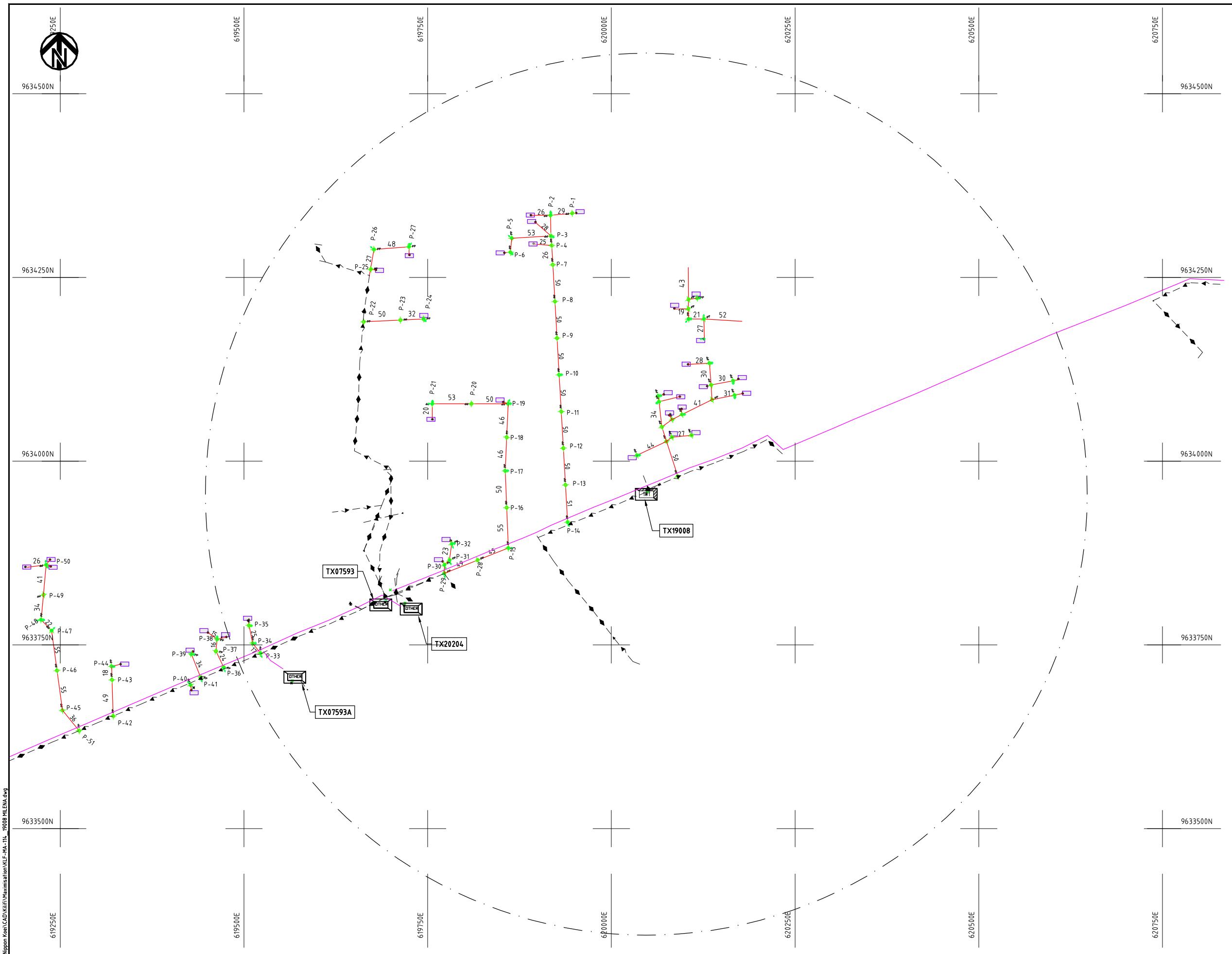
- EXACT LOCATIONS OF POWER POLES TO BE DETERMINED ON SITE BY THE ENGINEER.
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- PME TO BE AFTER EVERY 200m INTERVAL OR AFTER 4 SPANS.
- POLES NOT SHOWN WHERE PME OR LV EARTH INTERSECT FOR CLARITY.



LEGEND

- [Purple square] HOUSEHOLDS/ BUILDINGS
- [Red line] PROPOSED DISTRIBUTION LINE
- [Pink line] EXISTING 11kV LINE
- [Blue line] EXISTING 33kV LINE
- [Dashed grey line] EXISTING DISTRIBUTION LINE
- [Transformer icon] MAXIMISATION TRANSFORMER
- [Transformer icon] EXTENSION TRANSFORMER
- [Transformer icon] OTHER EXISTING TRANSFORMER
- [Wooden pole icon] WOODEN ELECTRIC POLES
- [Concrete pole icon] CONCRETE ELECTRIC POLES
- [Triangle symbol] LV-EARTH
- [Circle symbol] PME -PROTECTIVE MULTIPLE EARTHING
- [Square with arrow] STAY

NIPPON KOEI CO., LTD



NOTES:

1. EXACT LOCATIONS OF POWER POLES TO BE DETERMINED ON SITE BY THE ENGINEER.
2. CONCRETE/ WOODEN POLES TO BE DETERMINED ON SITE BY THE ENGINEER.
3. LENGTH OF POLES TO BE DETERMINED ON SITE BY THE ENGINEER.
4. PME TO BE AFTER EVERY 200m INTERVAL OR AFTER 4 SPANS.
5. POLES NOT SHOWN WHERE PME OR LV EARTH INTERSECT FOR CLARITY.

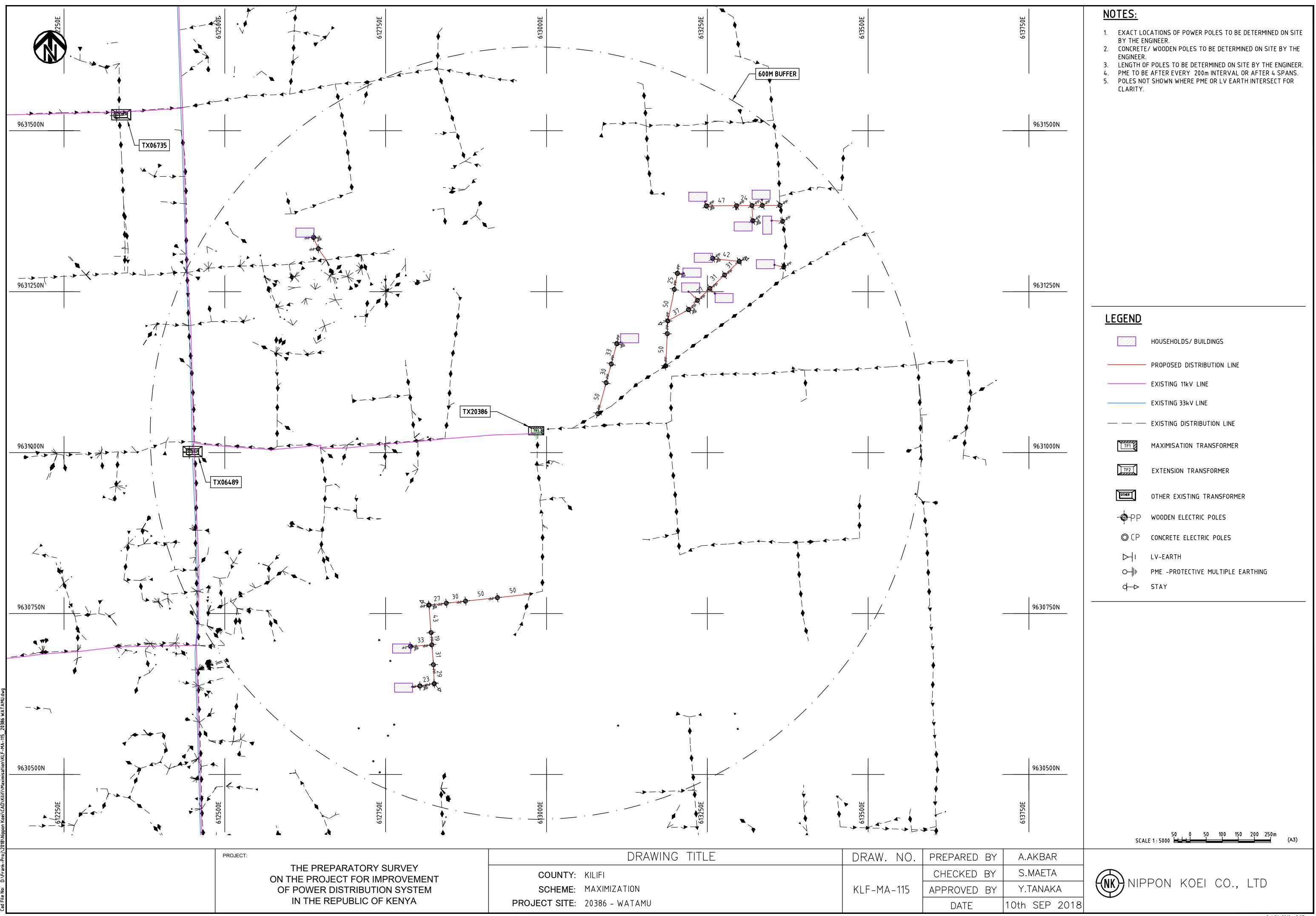
KEY PLAN

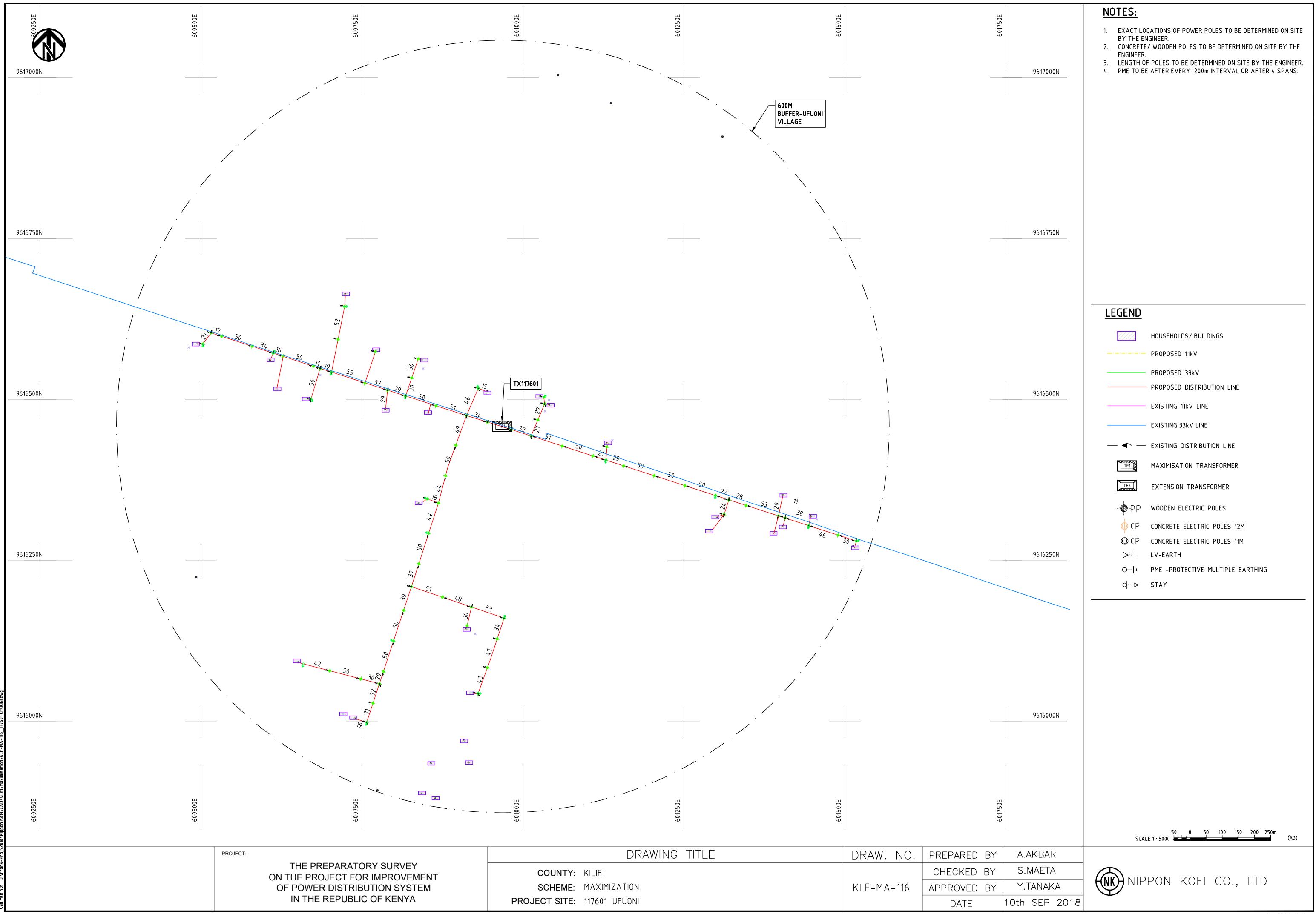
LEGEND

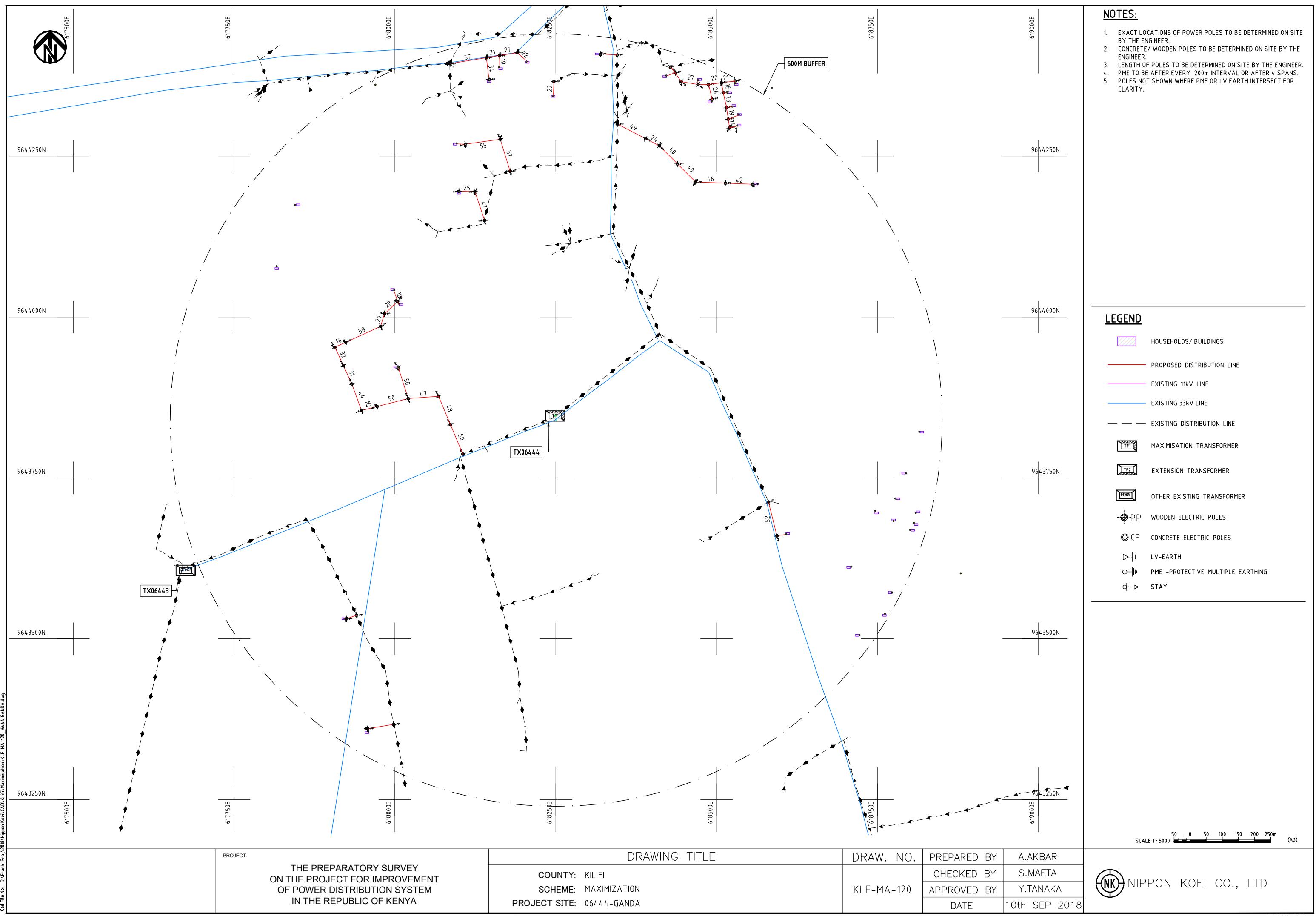
- HOUSEHOLDS/ BUILDINGS
- PROPOSED DISTRIBUTION LINE
- EXISTING 11kV LINE
- EXISTING 33kV LINE
- EXISTING DISTRIBUTION LINE
- MAXIMISATION TRANSFORMER
- EXTENSION TRANSFORMER
- OTHER EXISTING TRANSFORMER
- WOODEN ELECTRIC POLES
- CONCRETE ELECTRIC POLES
- LV-EARTH
- PME -PROTECTIVE MULTIPLE EARTHING
- STAY

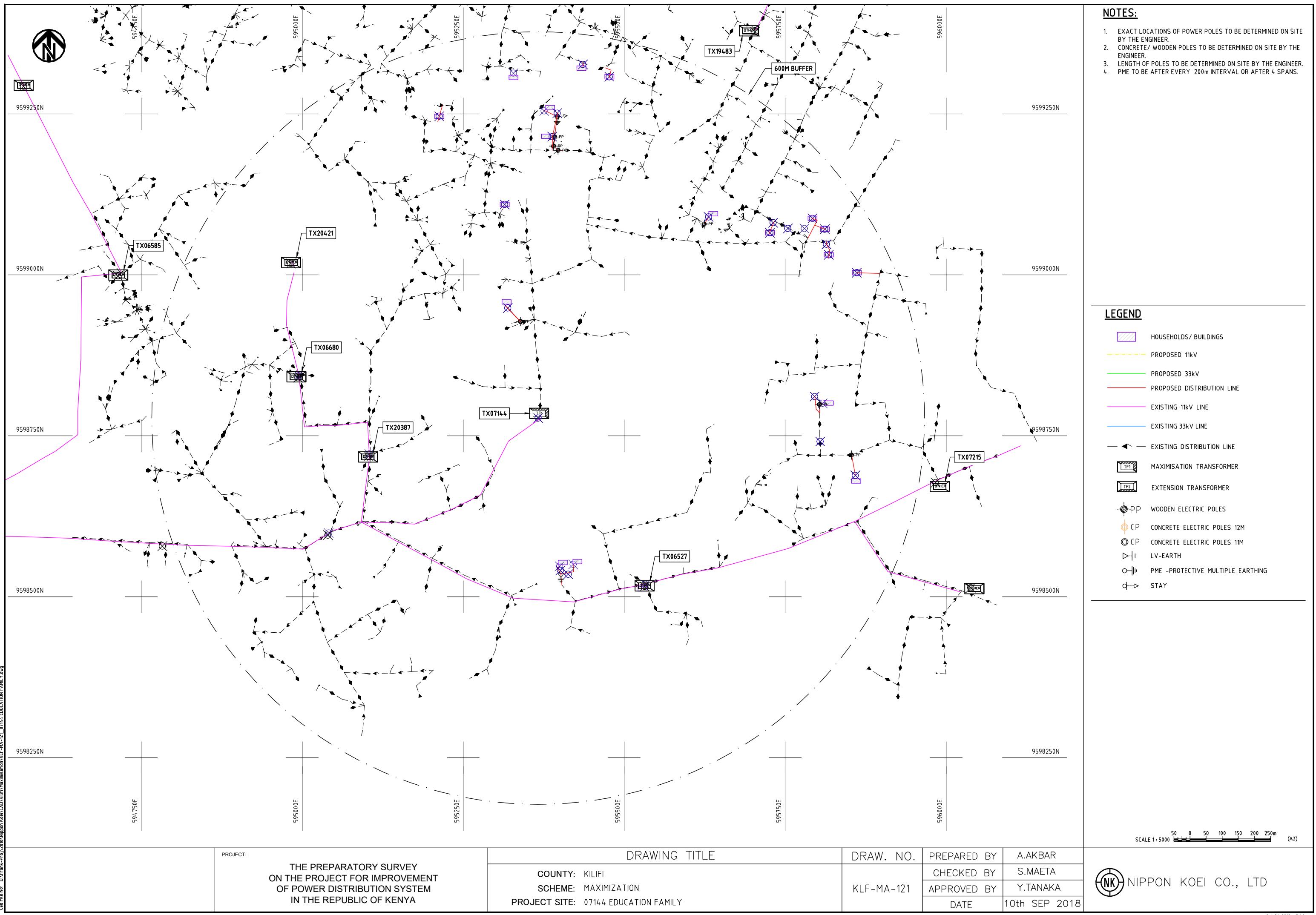
SCALE 1:5000 50 0 50 100 150 200 250m (A3)

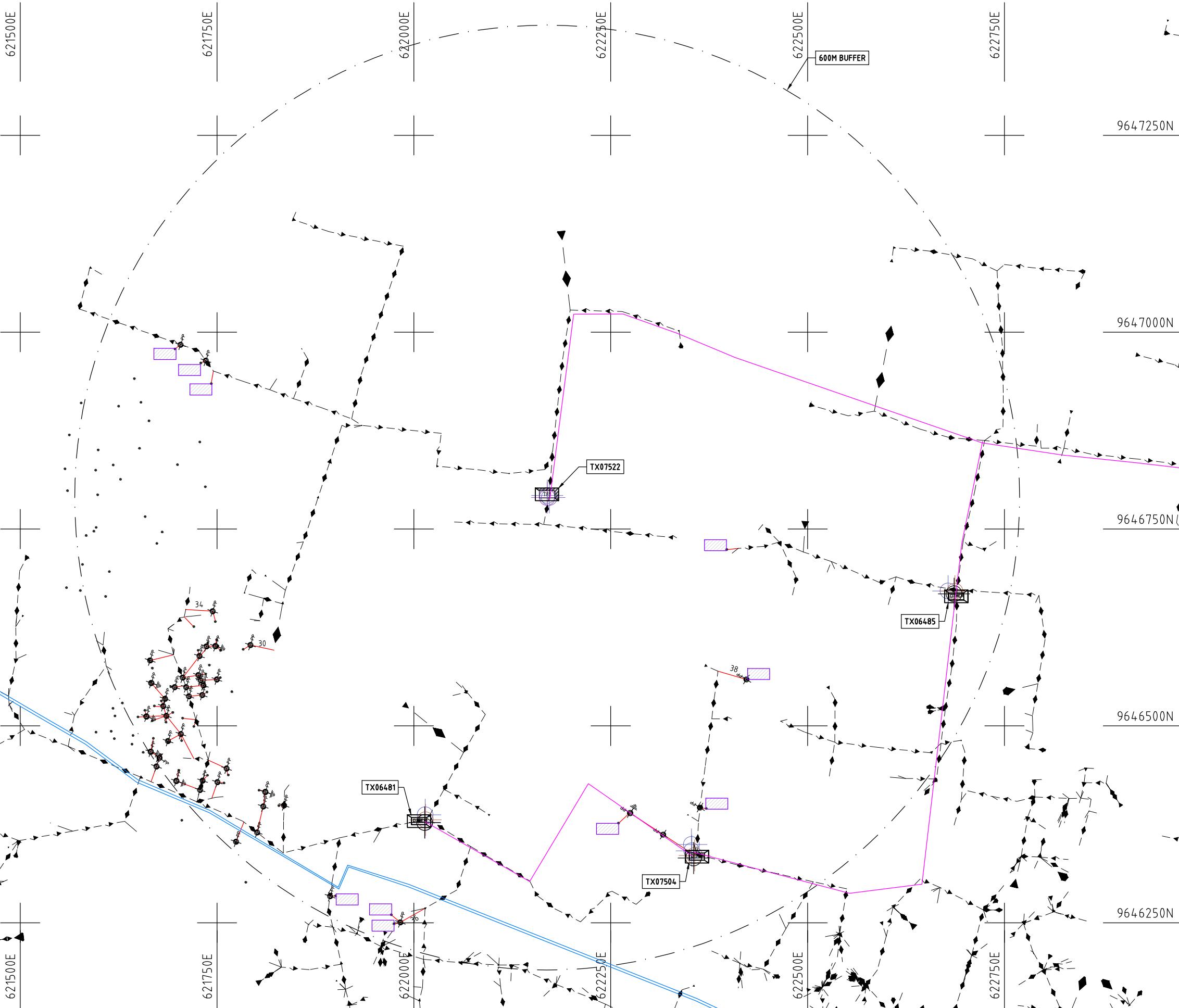












NIPON KOEI CO., LTD



9639250N

615500E

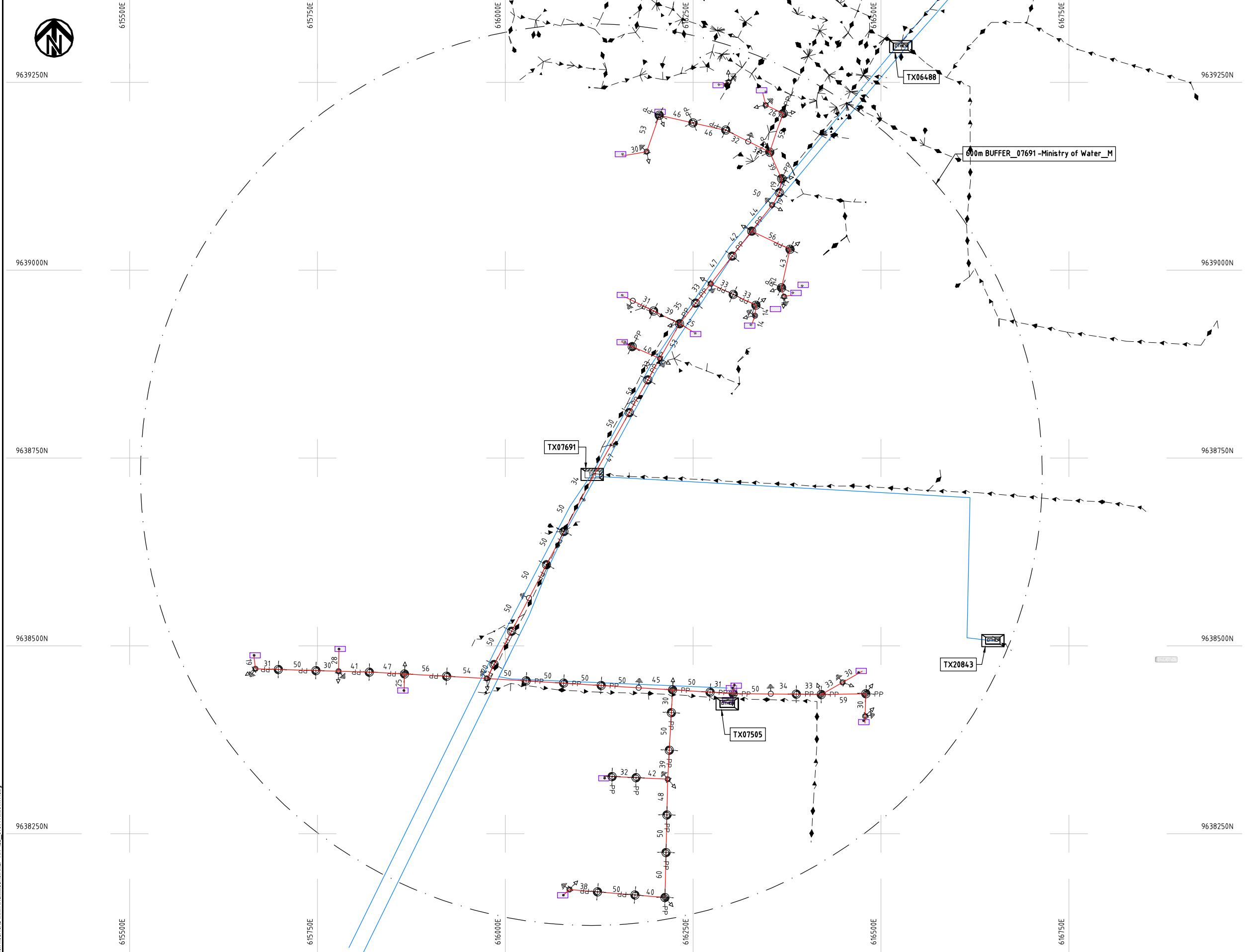
615750E

616000E

616250E

616500E

616750E

**NOTES:**

- EXACT LOCATIONS OF POWER POLES TO BE DETERMINED ON SITE BY THE ENGINEER.
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LEGEND

- HOUSEHOLDS/ BUILDINGS
- PROPOSED DISTRIBUTION LINE
- EXISTING 11kV LINE
- EXISTING 33kV LINE
- EXISTING DISTRIBUTION LINE
- MAXIMISATION TRANSFORMER
- EXTENSION TRANSFORMER
- OTHER EXISTING TRANSFORMER
- WOODEN ELECTRIC POLES
- CONCRETE ELECTRIC POLES
- LV-EARTH
- PME -PROTECTIVE MULTIPLE EARTHING
- STAY

SCALE 1:5000 50 0 50 100 150 200 250m (A3)

PROJECT:
THE PREPARATORY SURVEY
ON THE PROJECT FOR IMPROVEMENT
OF POWER DISTRIBUTION SYSTEM
IN THE REPUBLIC OF KENYA

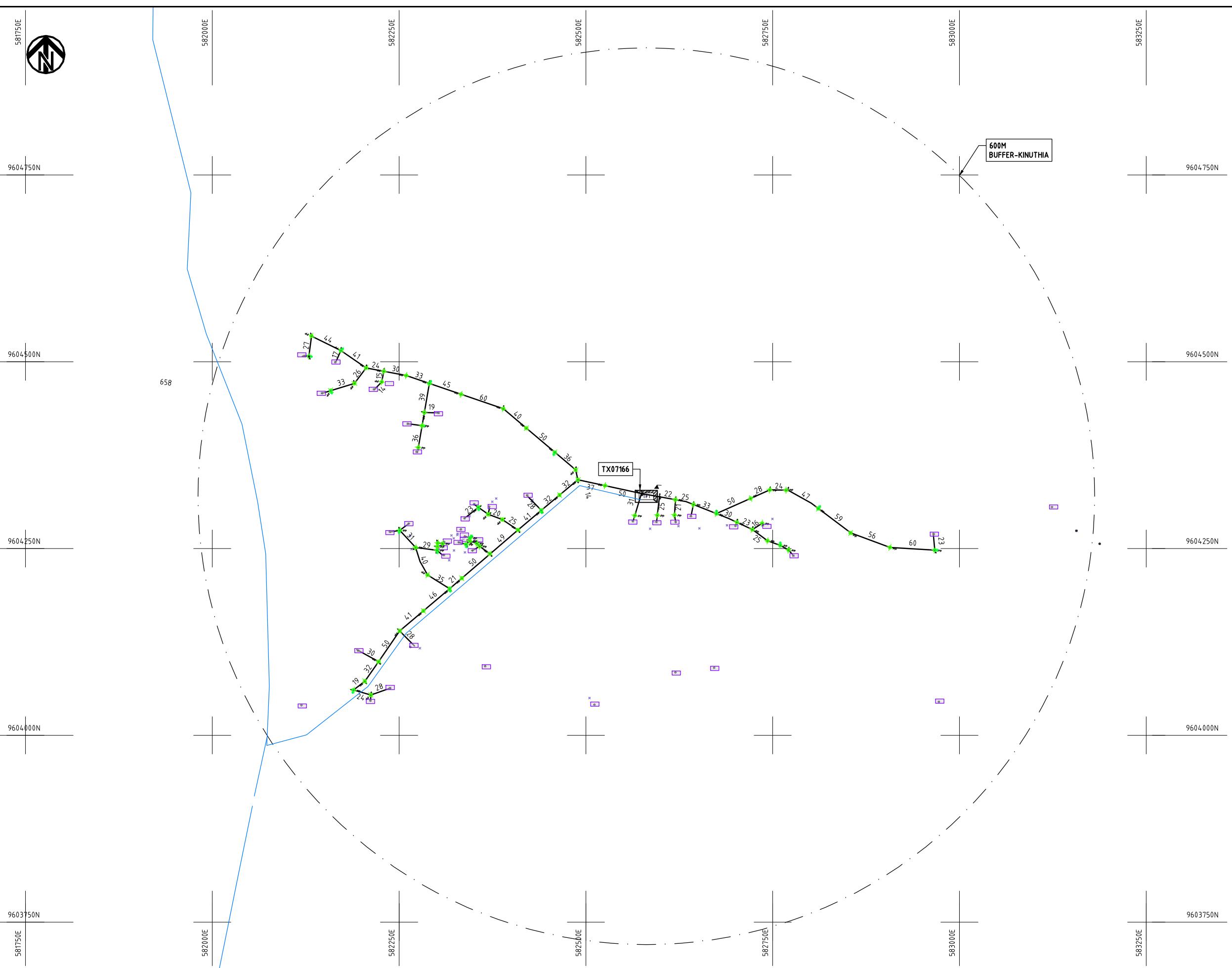
DRAWING TITLE
COUNTY: KILIFI
SCHEME: MAXIMIZATION
PROJECT SITE: 07691 MINISTRY

DRAW. NO.
KLF-MA-123

PREPARED BY
A.AKBAR
CHECKED BY
S.MAETA
APPROVED BY
Y.TANAKA
DATE
10th SEP 2018



NIPPON KOEI CO., LTD

**NOTES:**

- EXACT LOCATIONS OF POWER POLES TO BE DETERMINED ON SITE BY THE ENGINEER.
- CONCRETE/ WOODEN POLES TO BE DETERMINED ON SITE BY THE ENGINEER.
- LENGTH OF POLES TO BE DETERMINED ON SITE BY THE ENGINEER.
- PME TO BE AFTER EVERY 200m INTERVAL OR AFTER 4 SPANS.

LEGEND

- HOUSEHOLDS/ BUILDINGS
- PROPOSED 11kV
- PROPOSED 33kV
- PROPOSED DISTRIBUTION LINE
- EXISTING 11kV LINE
- EXISTING 33kV LINE
- EXISTING DISTRIBUTION LINE
- MAXIMISATION TRANSFORMER
- EXTENSION TRANSFORMER
- WOODEN ELECTRIC POLES
- CP CONCRETE ELECTRIC POLES 12M
- CP CONCRETE ELECTRIC POLES 11M
- LV-EARTH
- PME -PROTECTIVE MULTIPLE EARTHING
- STAY

NIPON KOEI CO., LTD
 NIPON KOEI CO., LTD

PROJECT:
THE PREPARATORY SURVEY
ON THE PROJECT FOR IMPROVEMENT
OF POWER DISTRIBUTION SYSTEM
IN THE REPUBLIC OF KENYA

DRAWING TITLE
COUNTY: KILIFI
SCHEME: MAXIMIZATION
PROJECT SITE: 116595 MAGOGOGNI PRIMARY

DRAW. NO.
KLF-MA-124

PREPARED BY	A.AKBAR
CHECKED BY	S.MAETA
APPROVED BY	Y.TANAKA
DATE	10th SEP 2018

SCALE 1:5000 50 0 50 100 150 200 250m (A3)



577250E

577500E

577750E

578000E

578250E

578500E

578750E

9600750N

9600500N

9600250N

9600000N

9599750N

577500E

577750E

578000E

578250E

578500E

578750E

NOTES:

- EXACT LOCATIONS OF POWER POLES TO BE DETERMINED ON SITE BY THE ENGINEER.
- CONCRETE/ WOODEN POLES TO BE DETERMINED ON SITE BY THE ENGINEER.
- LENGTH OF POLES TO BE DETERMINED ON SITE BY THE ENGINEER.
- PME TO BE AFTER EVERY 200m INTERVAL OR AFTER 4 SPANS.

LEGEND

- HOUSEHOLDS / BUILDINGS
- PROPOSED 11kV
- PROPOSED 33kV
- PROPOSED DISTRIBUTION LINE
- EXISTING 11kV LINE
- EXISTING 33kV LINE
- EXISTING DISTRIBUTION LINE
- TF1 MAXIMISATION TRANSFORMER
- TF2 EXTENSION TRANSFORMER
- PP WOODEN ELECTRIC POLES
- CP CONCRETE ELECTRIC POLES 12M
- ◎ CP CONCRETE ELECTRIC POLES 11M
- △ LV-EARTH
- PME -PROTECTIVE MULTIPLE EARTHING
- STAY

NIPPON KOEI CO., LTD

SCALE 1:5000 50 0 50 100 150 200 250m (A3)

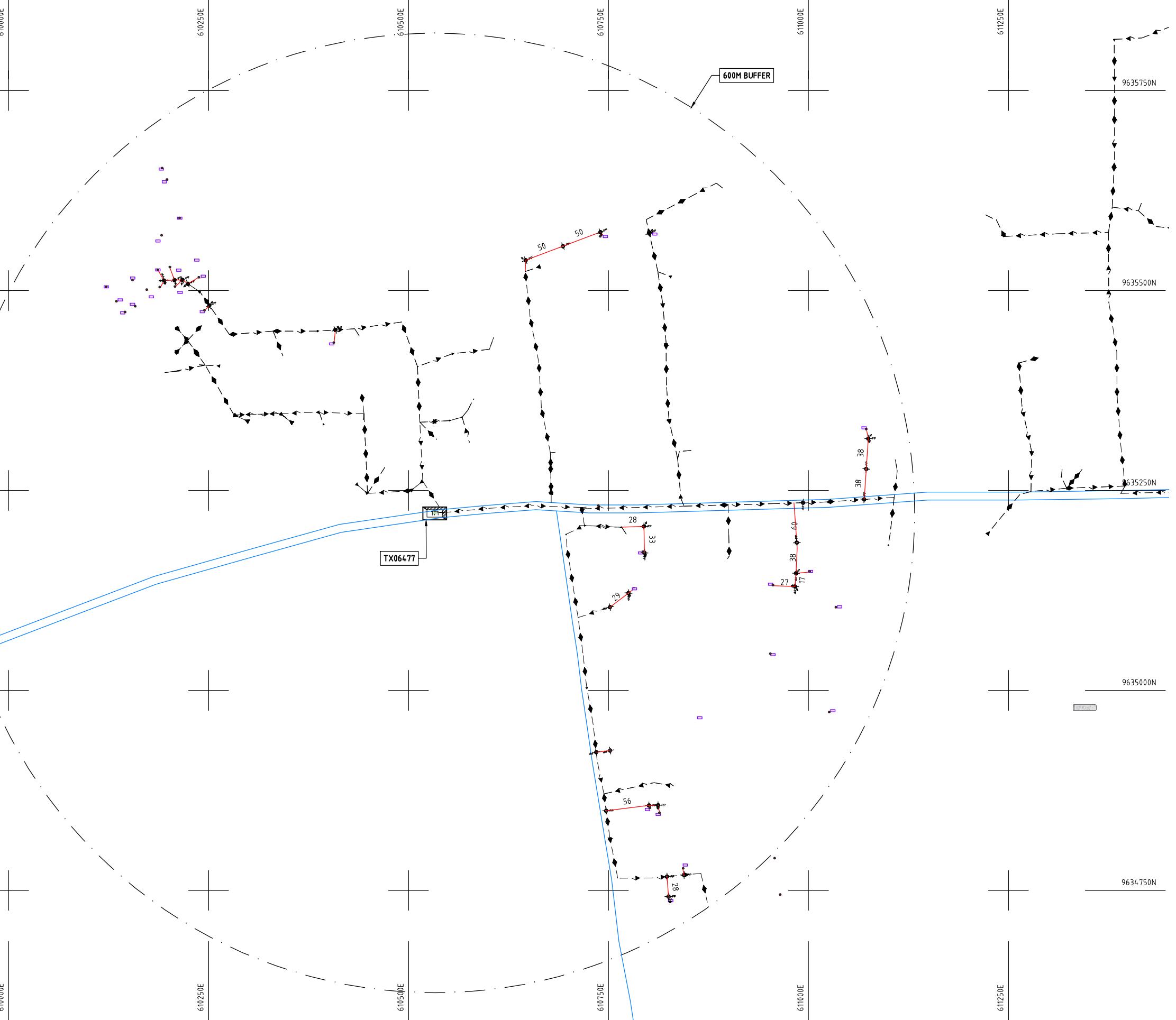
PROJECT:
**THE PREPARATORY SURVEY
 ON THE PROJECT FOR IMPROVEMENT
 OF POWER DISTRIBUTION SYSTEM
 IN THE REPUBLIC OF KENYA**

DRAWING TITLE
 COUNTY: KILIFI
 SCHEME: MAXIMIZATION
 PROJECT SITE: 116598 -116598

DRAW. NO. KLF-MA-125
 PREPARED BY A.AKBAR
 CHECKED BY S.MAETA
 APPROVED BY Y.TANAKA
 DATE 10th SEP 2018



9635750N

**NOTES:**

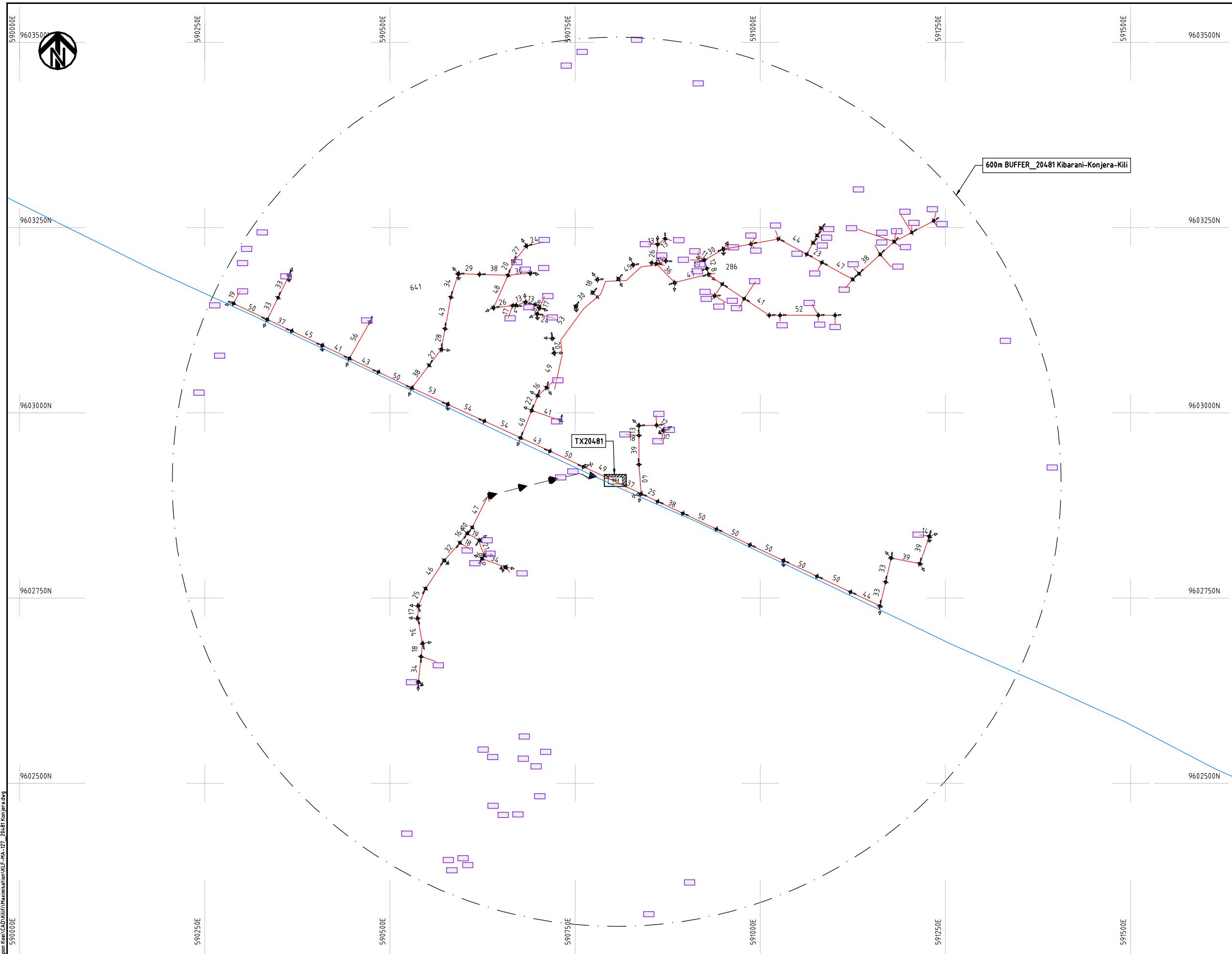
- EXACT LOCATIONS OF POWER POLES TO BE DETERMINED ON SITE BY THE ENGINEER.
- CONCRETE/ WOODEN POLES TO BE DETERMINED ON SITE BY THE ENGINEER.
- LENGTH OF POLES TO BE DETERMINED ON SITE BY THE ENGINEER.
- PME TO BE AFTER EVERY 200m INTERVAL OR AFTER 4 SPANS.
- POLES NOT SHOWN WHERE PME OR LV EARTH INTERSECT FOR CLARITY.

LEGEND

- HOUSEHOLDS/ BUILDINGS
- PROPOSED DISTRIBUTION LINE
- EXISTING 11kV LINE
- EXISTING 33kV LINE
- EXISTING DISTRIBUTION LINE
- MAXIMISATION TRANSFORMER
- EXTENSION TRANSFORMER
- OTHER EXISTING TRANSFORMER
- WOODEN ELECTRIC POLES
- CONCRETE ELECTRIC POLES
- LV-EARTH
- PME -PROTECTIVE MULTIPLE EARTHING
- STAY

SCALE 1:5000 50 0 50 100 150 200 250m (A3)





NOTES:

1. EXACT LOCATIONS OF POWER POLES TO BE DETERMINED ON SITE BY THE ENGINEER.
 2. CONCRETE/ WOODEN POLES TO BE DETERMINED ON SITE BY THE ENGINEER.
 3. LENGTH OF POLES TO BE DETERMINED ON SITE BY THE ENGINEER.
 4. PME TO BE AFTER EVERY 200m INTERVAL OR AFTER 4 SPANS.
 5. POLES NOT SHOWN WHERE PME OR LV EARTH INTERSECT FOR CLARITY.

LEGEND

 HOUSEHOLDS/ BUILDINGS

 PROPOSED DISTRIBUTION LINE

 EXISTING 11kV LINE

 EXISTING 33kV LINE

 EXISTING DISTRIBUTION LINE

 MAXIMISATION TRANSFORMER

 EXTENSION TRANSFORMER

 OTHER EXISTING TRANSFORMER

 WOODEN ELECTRIC POLES

 CONCRETE ELECTRIC POLES

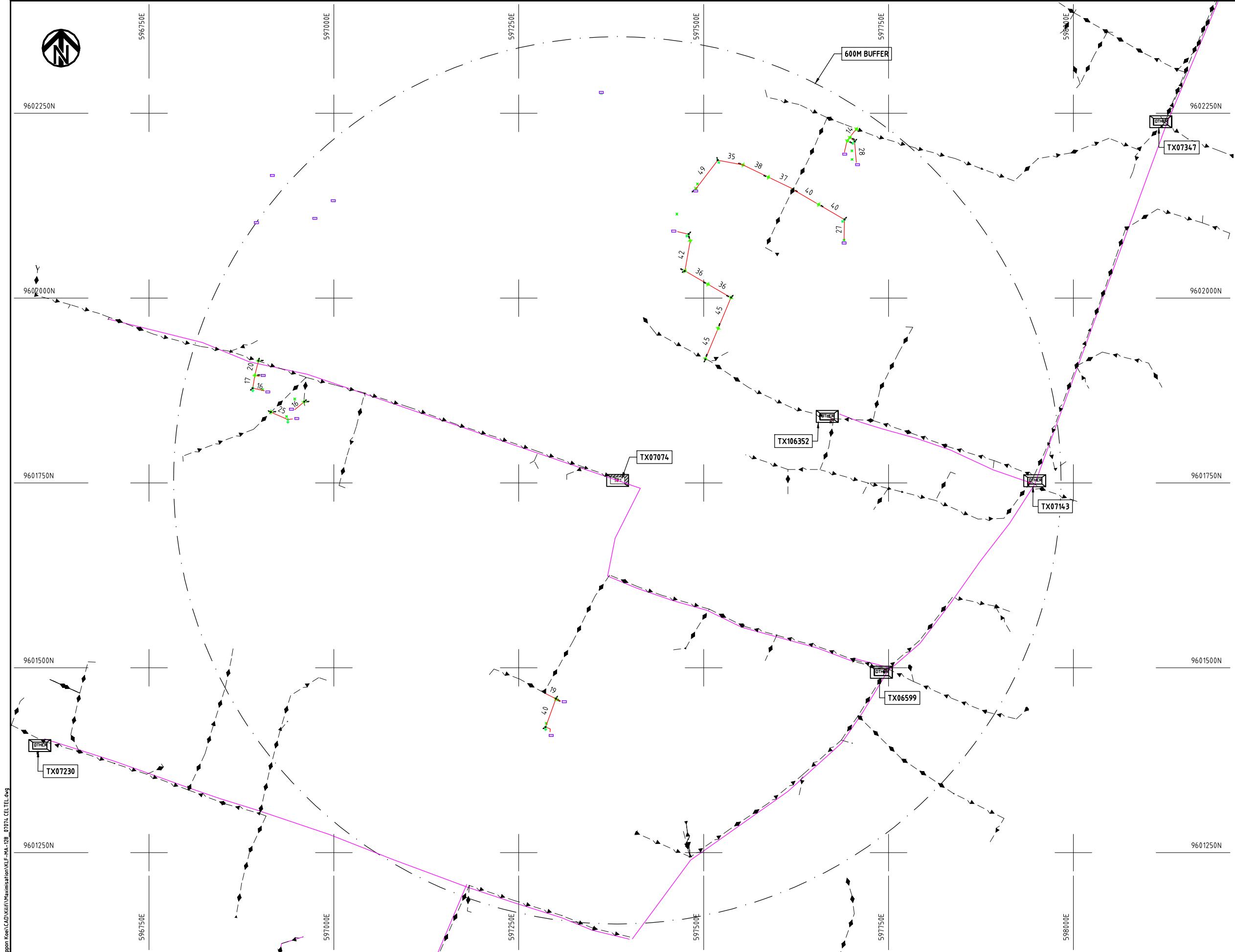
 LV-EARTH

 PME -PROTECTIVE MULTIPLE EARTHING

 STAY

SCALE 1 : 5000 50 0 50 100 150 200 250m (A3)

PROJECT:	DRAWING TITLE	DRAW. NO.	PREPARED BY	A.AKBAR
			CHECKED BY	S.MAETA
THE PREPARATORY SURVEY ON THE PROJECT FOR IMPROVEMENT OF POWER DISTRIBUTION SYSTEM IN THE REPUBLIC OF KENYA	COUNTY: KILIFI	KLF-MA-127	APPROVED BY	Y.TANAKA
	SCHEME: MAXIMIZATION		DATE	10th SEP 2018
	PROJECT SITE: 20481 KONJERA			

**NOTES:**

- EXACT LOCATIONS OF POWER POLES TO BE DETERMINED ON SITE BY THE ENGINEER.
- CONCRETE/ WOODEN POLES TO BE DETERMINED ON SITE BY THE ENGINEER.
- LENGTH OF POLES TO BE DETERMINED ON SITE BY THE ENGINEER.
- PME TO BE AFTER EVERY 200m INTERVAL OR AFTER 4 SPANS.

LEGEND

- | | |
|--|-----------------------------------|
| | HOUSEHOLDS / BUILDINGS |
| | PROPOSED 11kV |
| | PROPOSED 33kV |
| | EXISTING 11kV LINE |
| | EXISTING 33kV LINE |
| | EXISTING DISTRIBUTION LINE |
| | MAXIMISATION TRANSFORMER |
| | EXTENSION TRANSFORMER |
| | WOODEN ELECTRIC POLES |
| | CONCRETE ELECTRIC POLES 12M |
| | CONCRETE ELECTRIC POLES 11M |
| | LV-EARTH |
| | PME -PROTECTIVE MULTIPLE EARTHING |
| | STAY |

SCALE 1:5000 50 0 50 100 150 200 250m (A3)

PROJECT:
THE PREPARATORY SURVEY
ON THE PROJECT FOR IMPROVEMENT
OF POWER DISTRIBUTION SYSTEM
IN THE REPUBLIC OF KENYA

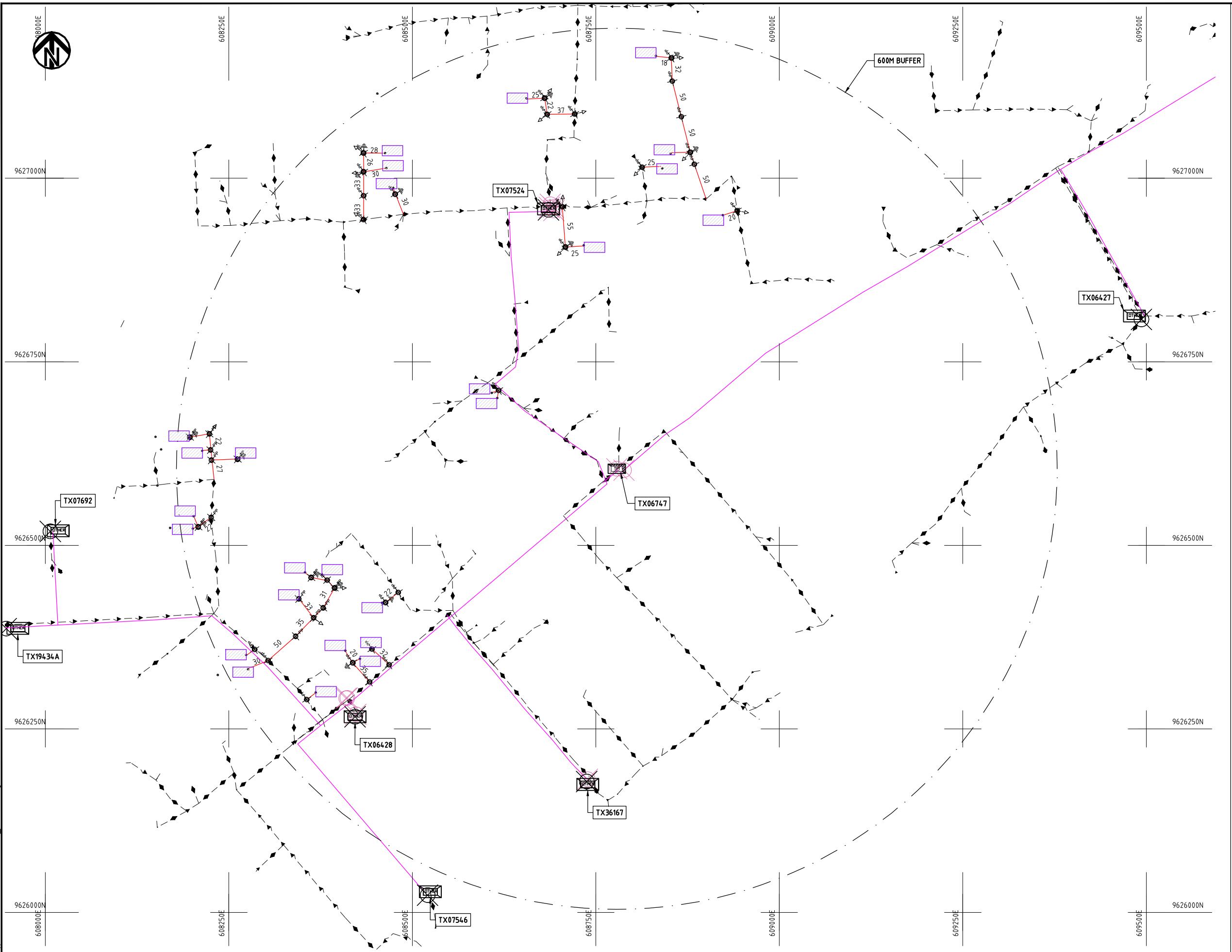
DRAWING TITLE
COUNTY: KILIFI
SCHEME: MAXIMIZATION
PROJECT SITE: 07074-CELTTEL

DRAW. NO.
KLF-MA-128

PREPARED BY	A.AKBAR
CHECKED BY	S.MAETA
APPROVED BY	Y.TANAKA
DATE	10th SEP 2018



NIPPON KOEI CO., LTD



NOTES:

1. EXACT LOCATIONS OF POWER POLES TO BE DETERMINED ON SITE BY THE ENGINEER.
 2. CONCRETE/ WOODEN POLES TO BE DETERMINED ON SITE BY THE ENGINEER.
 3. LENGTH OF POLES TO BE DETERMINED ON SITE BY THE ENGINEER.
 4. PME TO BE AFTER EVERY 200m INTERVAL OR AFTER 4 SPANS.
 5. POLES NOT SHOWN WHERE PME OR LV EARTH INTERSECT FOR CLARITY.

LEGEND

- [diagonal hatching] HOUSEHOLDS/ BUILDINGS
- [red line] PROPOSED DISTRIBUTION LINE
- [pink line] EXISTING 11kV LINE
- [blue line] EXISTING 33kV LINE
- [three horizontal dashes] EXISTING DISTRIBUTION LINE
- [TF1 icon] MAXIMISATION TRANSFORMER
- [TF2 icon] EXTENSION TRANSFORMER
- [OTHER icon] OTHER EXISTING TRANSFORMER
- [wooden post icon] WOODEN ELECTRIC POLES
- [concrete post icon] CONCRETE ELECTRIC POLES
- [LV-EARTH icon] LV-EARTH
- [Protective Multiple Earthing icon] PME -PROTECTIVE MULTIPLE EARTHING
- [Stay icon] STAY

SCALE 1 : 5000

PROJECT: THE PREPARATORY SURVEY
ON THE PROJECT FOR IMPROVEMENT
OF POWER DISTRIBUTION SYSTEM
IN THE REPUBLIC OF KENYA

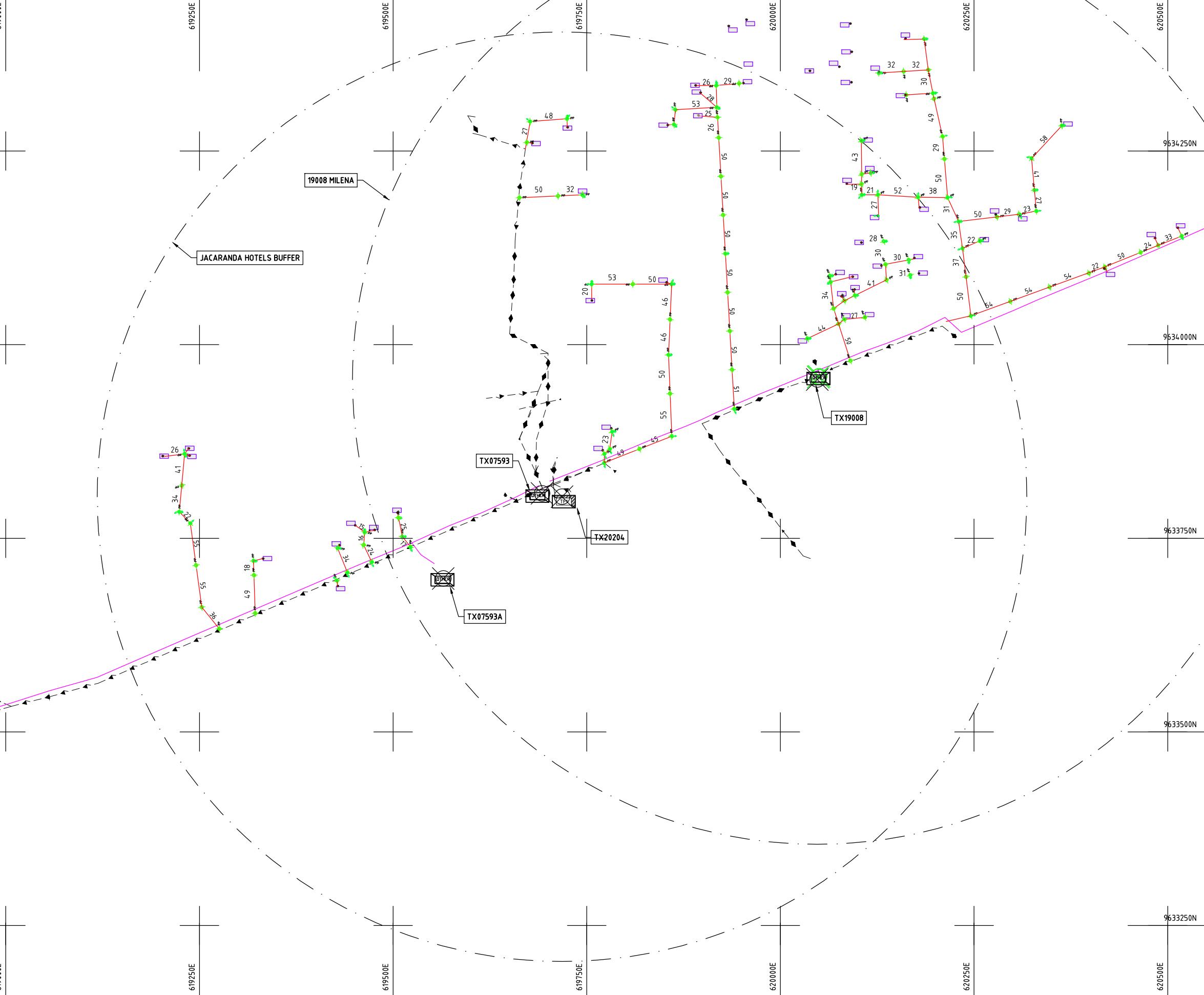
DRAWING TITLE

	DRAW. NO.	
	KLF-MA-129	

REARED BY	A.AKBAR
CHECKED BY	S.MAETA
PROVED BY	Y.TANAKA
DATE	10th SEP. 2018



NK NIPPON KOEI CO., LTD



NOTES:

- EXACT LOCATIONS OF POWER POLES TO BE DETERMINED ON SITE BY THE ENGINEER.
- CONCRETE/ WOODEN POLES TO BE DETERMINED ON SITE BY THE ENGINEER.
- LENGTH OF POLES TO BE DETERMINED ON SITE BY THE ENGINEER.
- PME TO BE AFTER EVERY 200m INTERVAL OR AFTER 4 SPANS.
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KEY PLAN

LEGEND

- Households/ Buildings
- Proposed Distribution Line
- Existing 11kV Line
- Existing 33kV Line
- Existing Distribution Line
- Maximisation Transformer
- Extension Transformer
- Other Existing Transformer
- Wooden Electric Poles
- Concrete Electric Poles
- LV-EARTH
- PME -Protective Multiple Earthing
- Stay

NIPON KOEI CO., LTD

PROJECT:

THE PREPARATORY SURVEY
ON THE PROJECT FOR IMPROVEMENT
OF POWER DISTRIBUTION SYSTEM
IN THE REPUBLIC OF KENYA

DRAWING TITLE

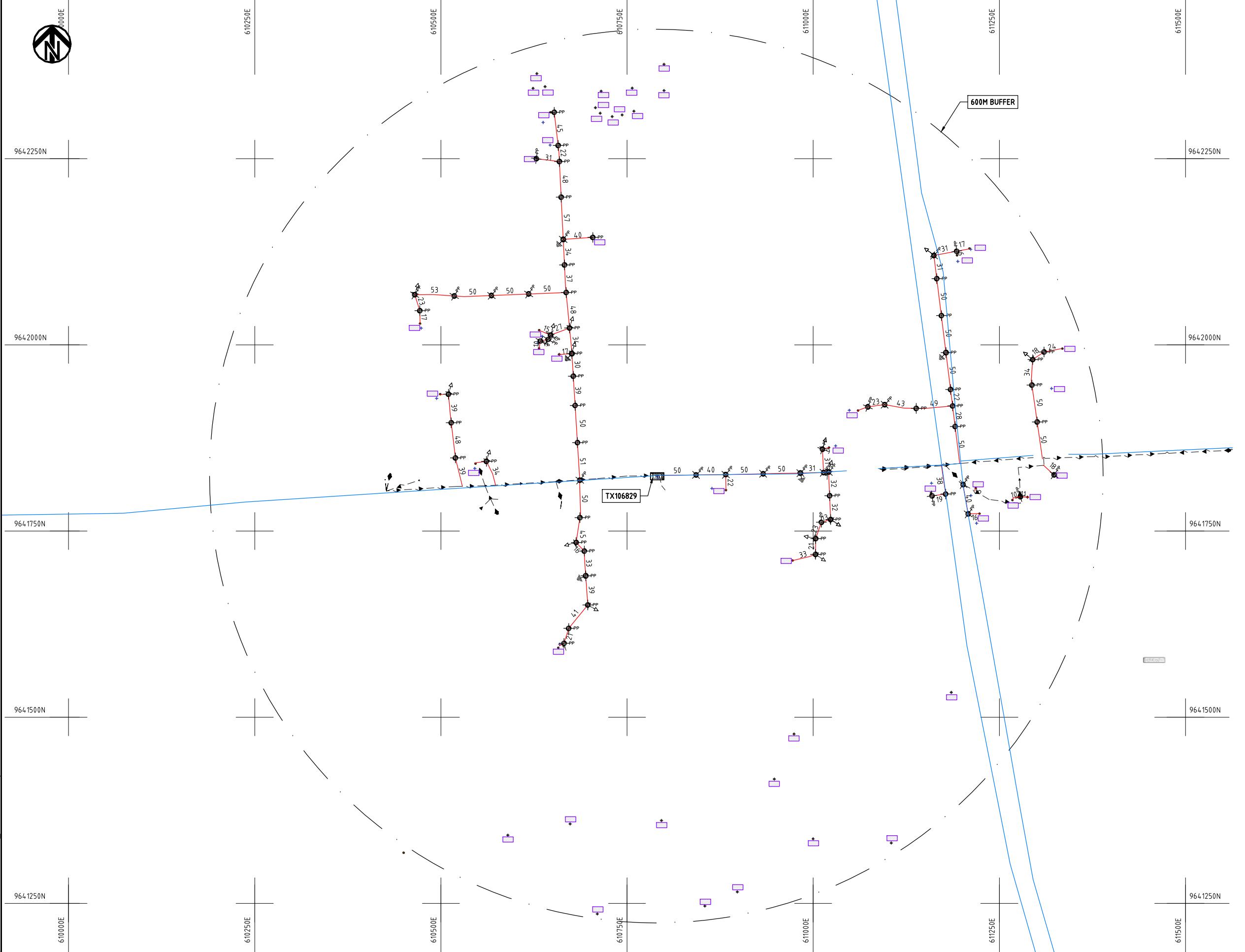
COUNTY: KILIFI
SCHEME: MAXIMIZATION
PROJECT SITE: 20204-JACARANDA HOTELS

DRAW. NO.

KLF-MA-130

PREPARED BY

A.AKBAR
S.MAETA
Y.TANAKA
DATE 10th SEP 2018

**NOTES:**

- EXACT LOCATIONS OF POWER POLES TO BE DETERMINED ON SITE BY THE ENGINEER.
- CONCRETE/ WOODEN POLES TO BE DETERMINED ON SITE BY THE ENGINEER.
- LENGTH OF POLES TO BE DETERMINED ON SITE BY THE ENGINEER.
- PME TO BE AFTER EVERY 200m INTERVAL OR AFTER 4 SPANS.

LEGEND

	HOUSEHOLDS / BUILDINGS
	PROPOSED 11kV
	PROPOSED 33kV
	PROPOSED DISTRIBUTION LINE
	EXISTING 11kV LINE
	EXISTING 33kV LINE
	EXISTING DISTRIBUTION LINE
	MAXIMISATION TRANSFORMER
	EXTENSION TRANSFORMER
	WOODEN ELECTRIC POLES
	CONCRETE ELECTRIC POLES 12M
	CONCRETE ELECTRIC POLES 11M
	LV-EARTH
	PME -PROTECTIVE MULTIPLE EARTHING
	STAY

SCALE 1:5000 50 0 50 100 150 200 250m (A3)

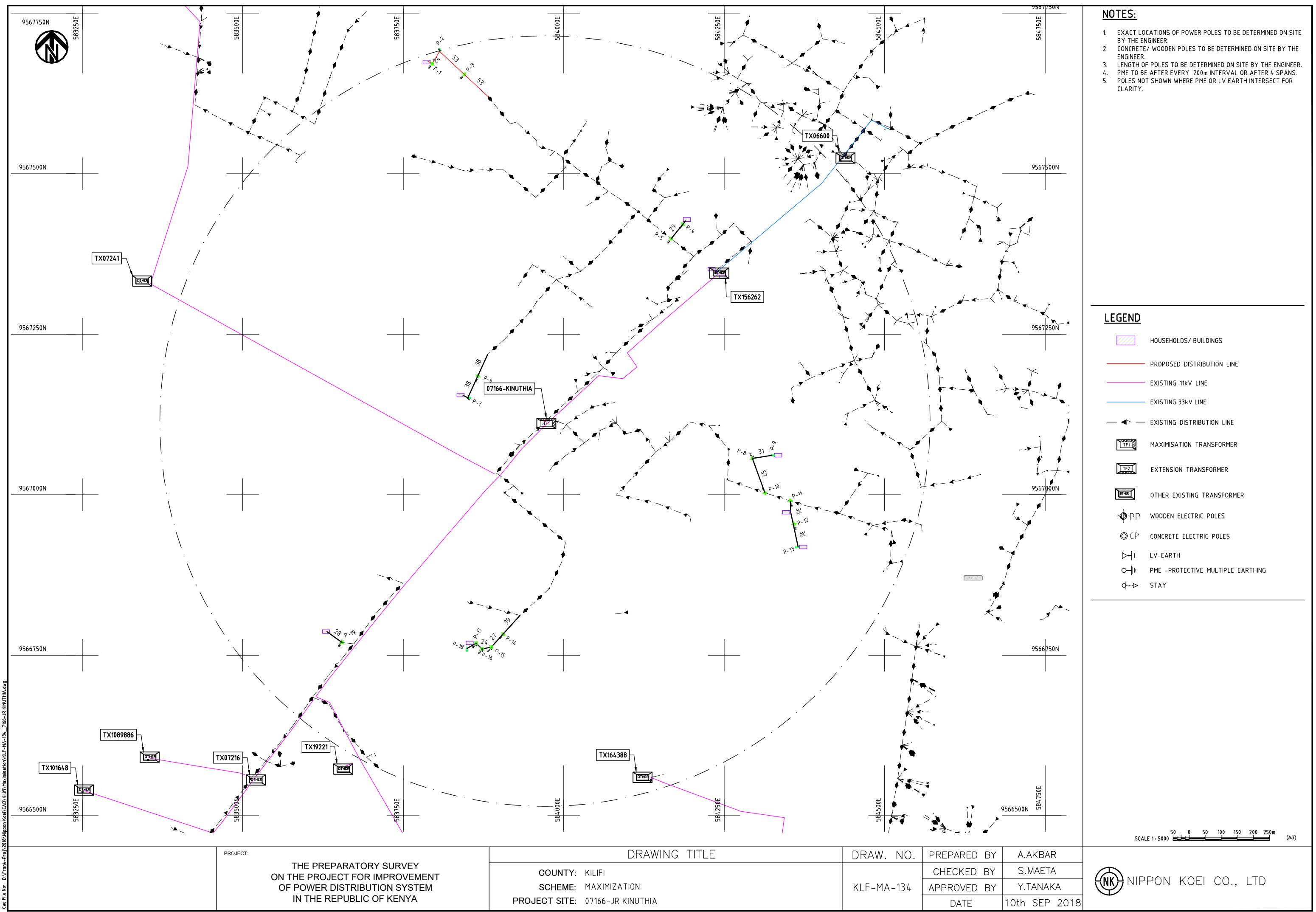
PROJECT:
THE PREPARATORY SURVEY
ON THE PROJECT FOR IMPROVEMENT
OF POWER DISTRIBUTION SYSTEM
IN THE REPUBLIC OF KENYA

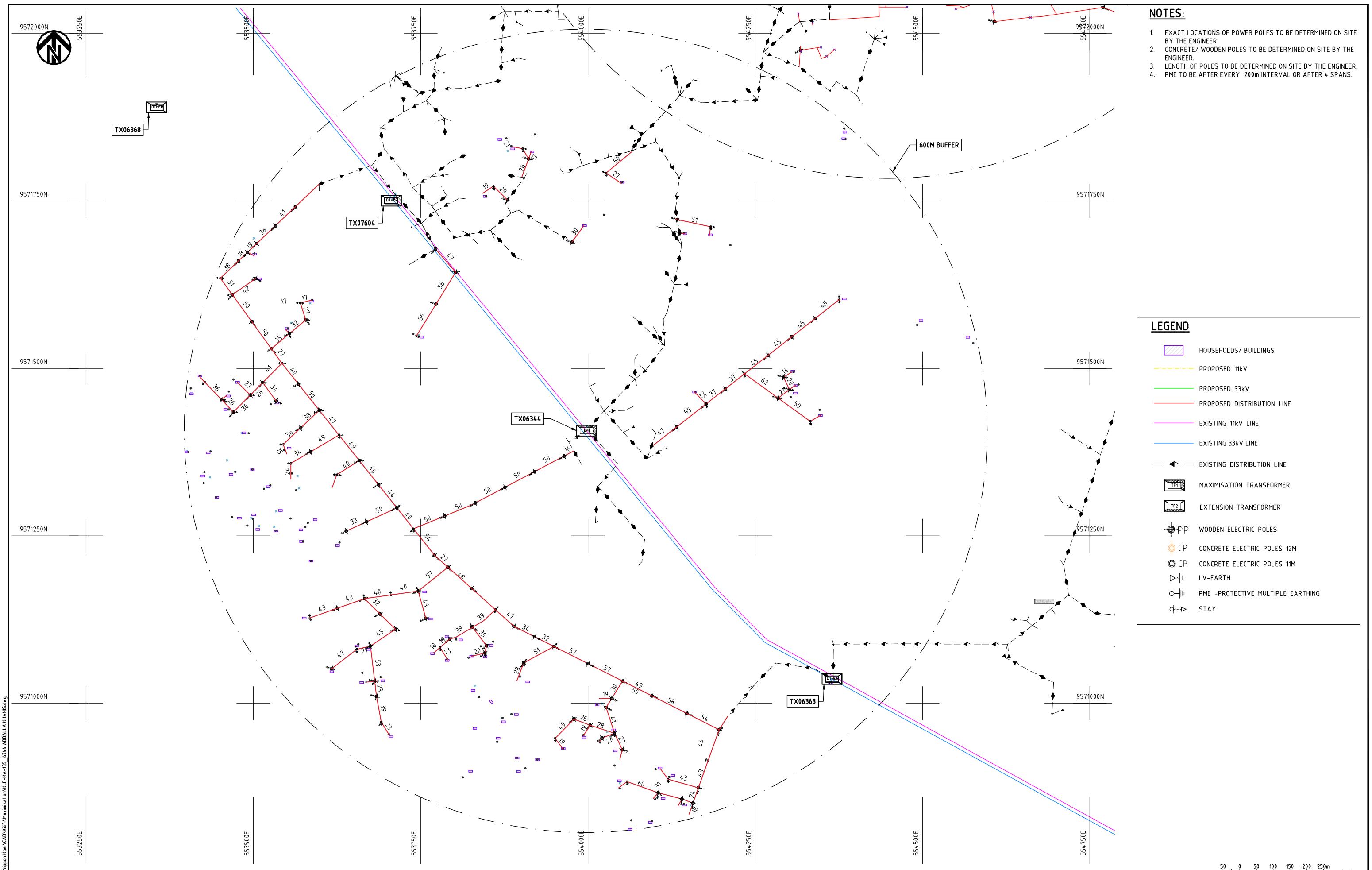
DRAWING TITLE
COUNTY: KILIFI
SCHEME: MAXIMIZATION
PROJECT SITE: 106829 KILIFI NORTH

DRAW. NO. KLF-MA-133
PREPARED BY A.AKBAR
CHECKED BY S.MAETA
APPROVED BY Y.TANAKA
DATE 10th SEP 2018



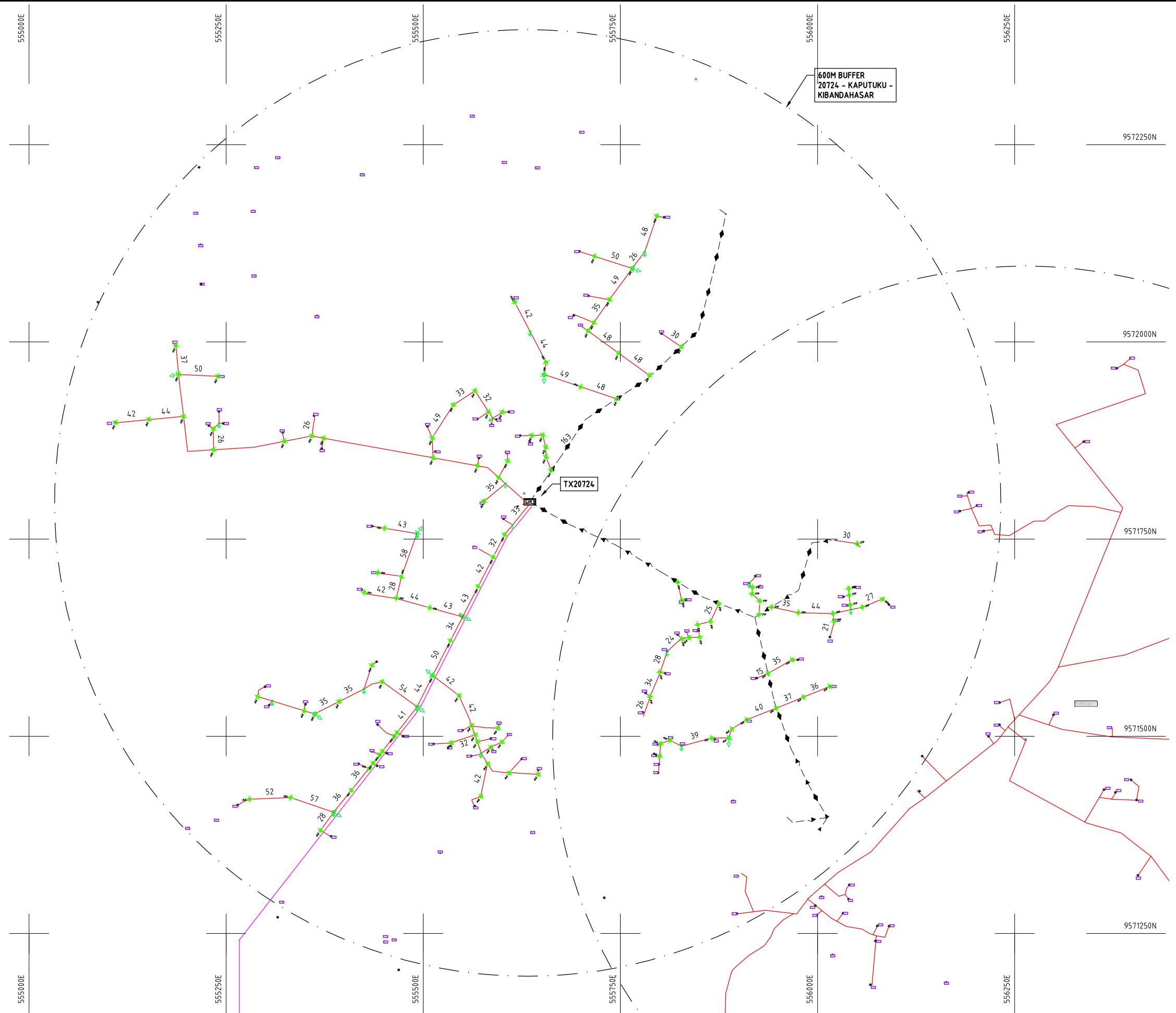
NIPPON KOEI CO., LTD







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NOTES:

1. EXACT LOCATIONS OF POWER POLES TO BE DETERMINED ON SITE BY THE ENGINEER.
 2. CONCRETE/ WOODEN POLES TO BE DETERMINED ON SITE BY THE ENGINEER.
 3. LENGTH OF POLES TO BE DETERMINED ON SITE BY THE ENGINEER.
 4. PME TO BE AFTER EVERY 200m INTERVAL OR AFTER 4 SPANS.

LEGEND

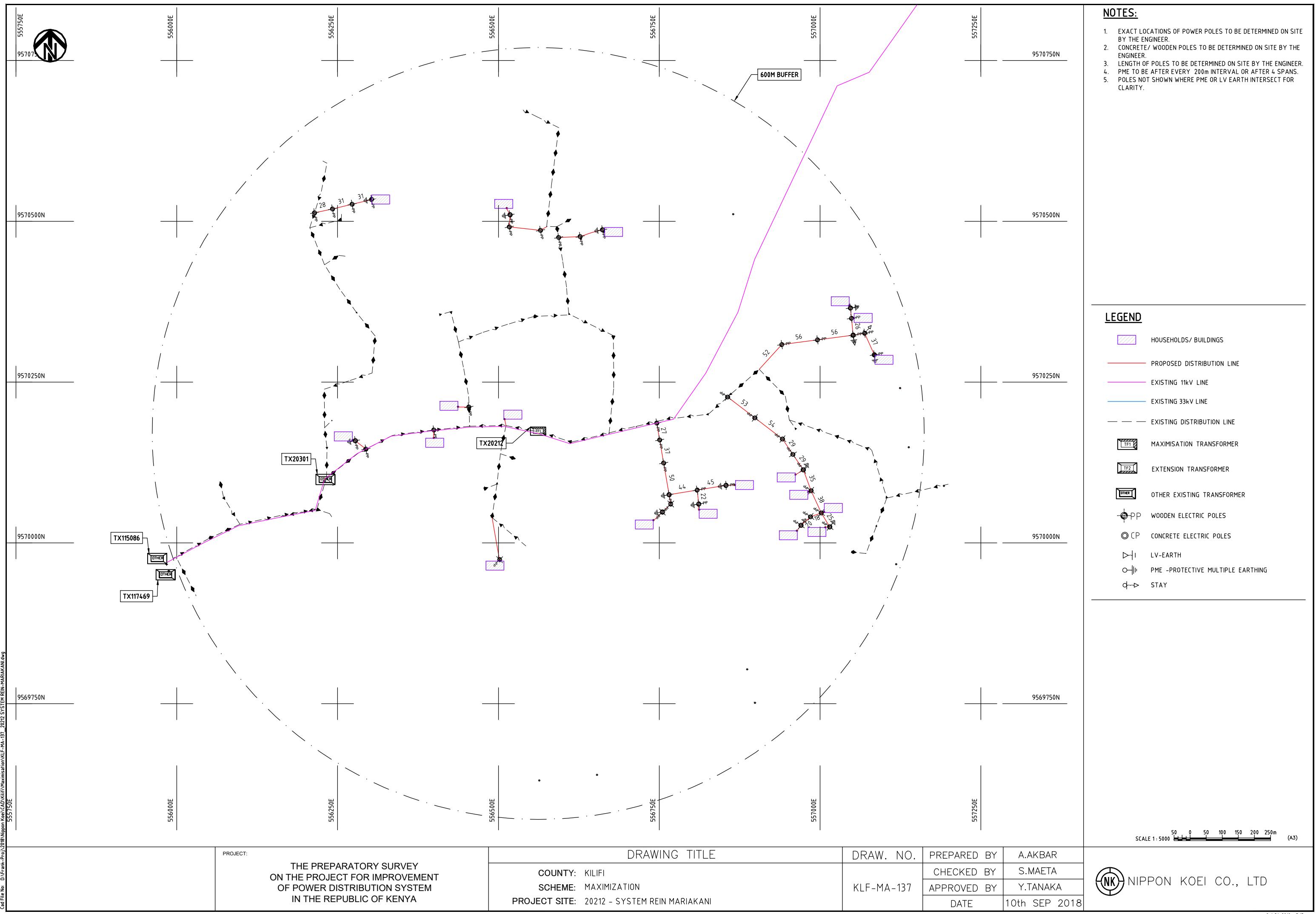
	HOUSEHOLDS/ BUILDINGS
	PROPOSED 11kV
	PROPOSED 33kV
	PROPOSED DISTRIBUTION LINE
	EXISTING 11kV LINE
	EXISTING 33kV LINE
	EXISTING DISTRIBUTION LINE
	MAXIMISATION TRANSFORMER
	EXTENSION TRANSFORMER
	WOODEN ELECTRIC POLES
	CONCRETE ELECTRIC POLES 12M
	CONCRETE ELECTRIC POLES 11M
	LV-EARTH
	PME -PROTECTIVE MULTIPLE EARTHING
	STAY

SCALE 1 : 5000 (A3)

PROJECT: THE PREPARATORY SURVEY ON THE PROJECT FOR IMPROVEMENT OF POWER DISTRIBUTION SYSTEM IN THE REPUBLIC OF KENYA	DRAWING TITLE	DRAW. NO.	PREPARED BY	A.AKBAR
	COUNTY: KILIFI	KLF-MA-136	CHECKED BY	S.MAETA
	SCHEME: MAXIMIZATION		APPROVED BY	Y.TANAKA
	PROJECT SITE: 20724-KAPTUKU STELLA KATWA KOKOTONI		DATE	10th SEP 2018

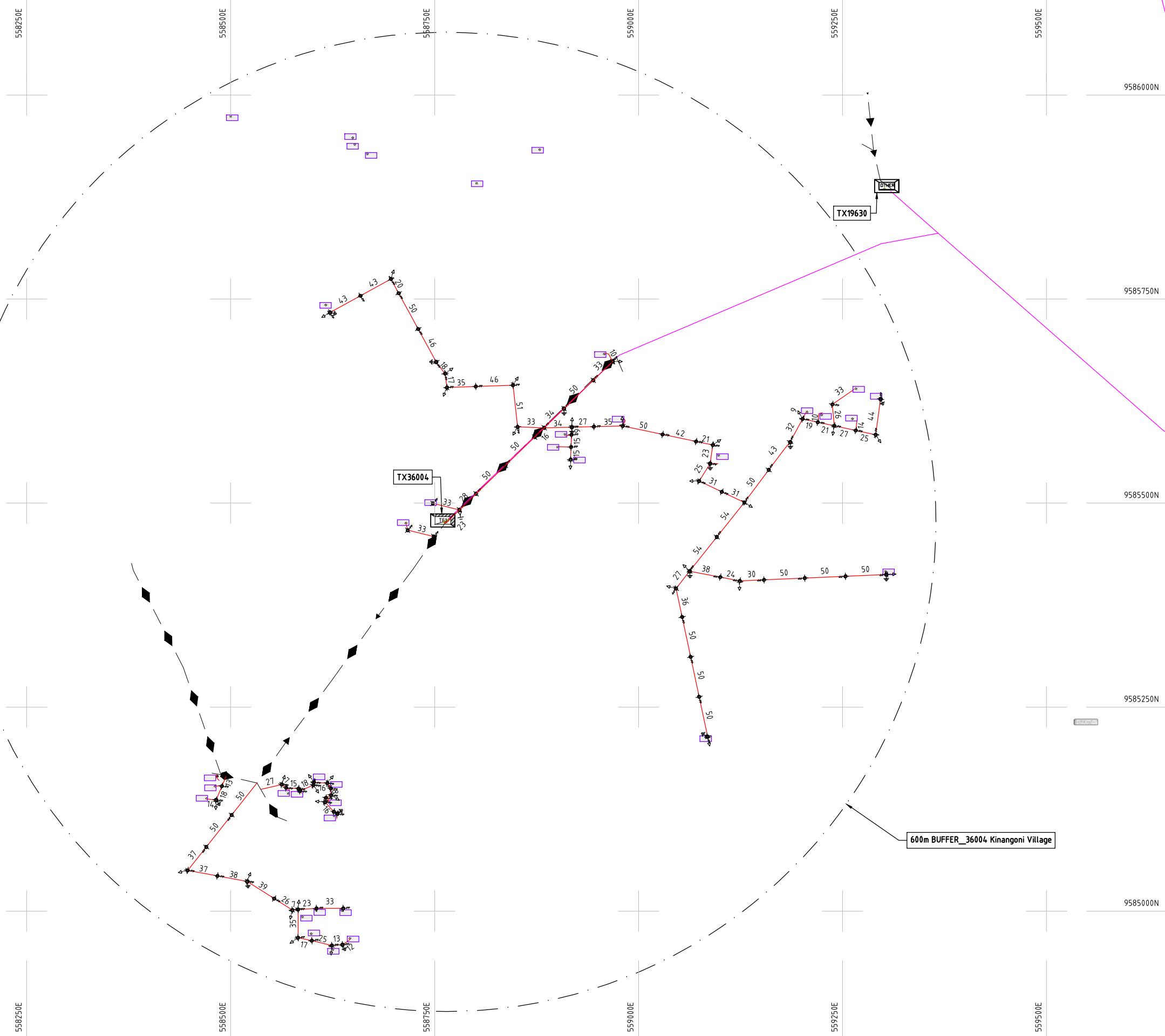


 NIPPON KOEI CO., LTD





958600N

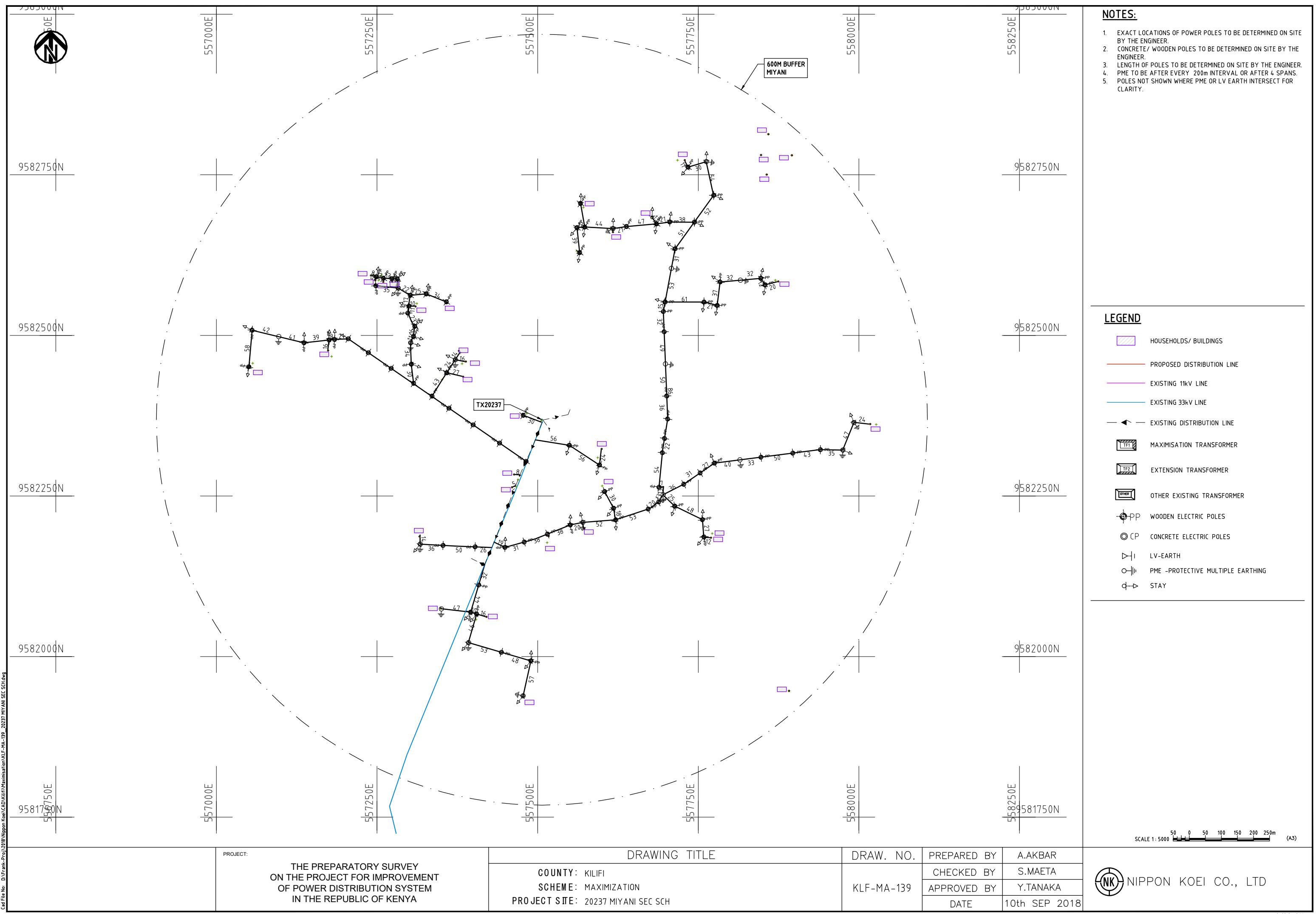
**NOTES:**

- EXACT LOCATIONS OF POWER POLES TO BE DETERMINED ON SITE BY THE ENGINEER.
- CONCRETE/ WOODEN POLES TO BE DETERMINED ON SITE BY THE ENGINEER.
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- PME TO BE AFTER EVERY 200m INTERVAL OR AFTER 4 SPANS.
- POLES NOT SHOWN WHERE PME OR LV EARTH INTERSECT FOR CLARITY.

LEGEND

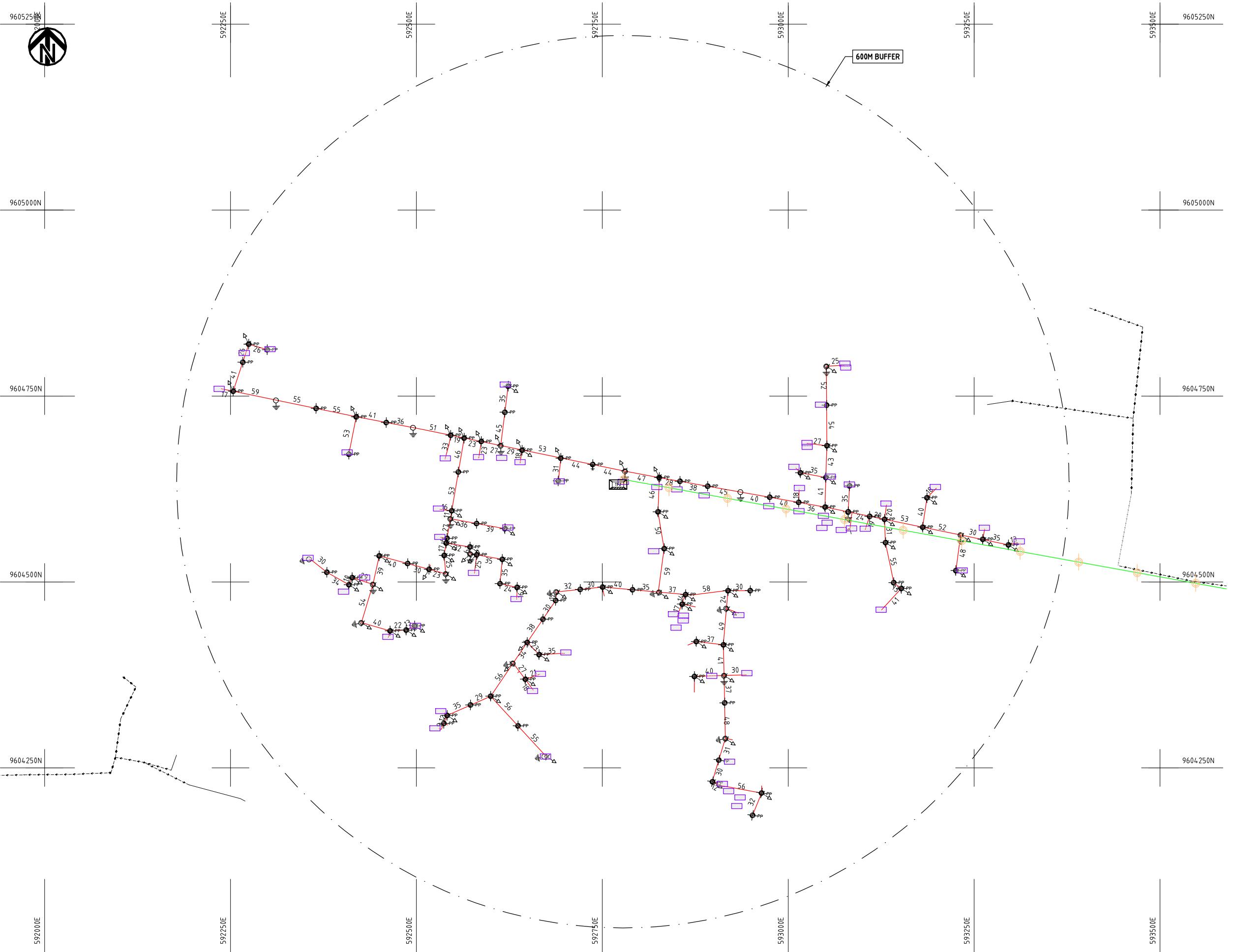
- [Purple square] HOUSEHOLDS/ BUILDINGS
- [Red line] PROPOSED DISTRIBUTION LINE
- [Pink line] EXISTING 11kV LINE
- [Blue line] EXISTING 33kV LINE
- [Black dashed line] EXISTING DISTRIBUTION LINE
- [Transformer icon] MAXIMISATION TRANSFORMER
- [Transformer icon] EXTENSION TRANSFORMER
- [Transformer icon] OTHER EXISTING TRANSFORMER
- [Wooden pole icon] WOODEN ELECTRIC POLES
- [Concrete pole icon] CONCRETE ELECTRIC POLES
- [Earth symbol] LV-EARTH
- [PME symbol] PME -PROTECTIVE MULTIPLE EARTHING
- [Stay symbol] STAY

NIPPON KOEI CO., LTD

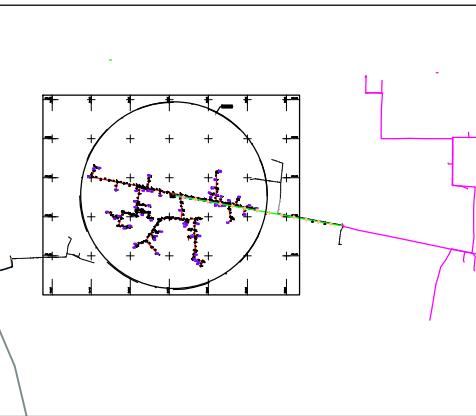


キリフィ郡

Extension and Maximization

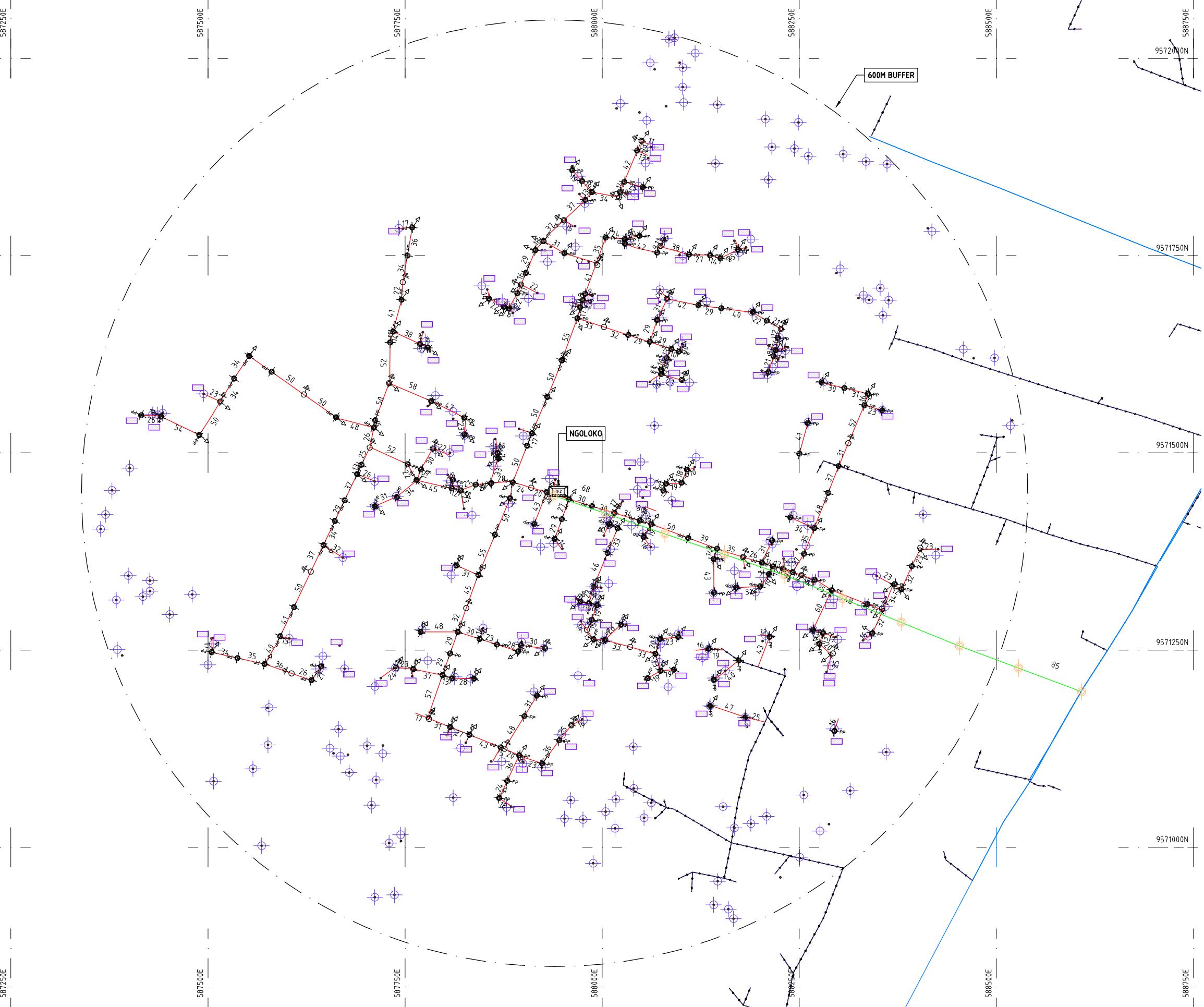
**NOTES:**

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- CONCRETE/ WOODEN POLES TO BE DETERMINED ON SITE BY THE ENGINEER.
- LENGTH OF POLES TO BE DETERMINED ON SITE BY THE ENGINEER.
- PME TO BE AFTER EVERY 200m INTERVAL OR AFTER 4 SPANS.



- [Symbol: Purple square] HOUSEHOLDS/ BUILDINGS
- [Symbol: Yellow dashed line] PROPOSED 11kV
- [Symbol: Green solid line] PROPOSED 33kV
- [Symbol: Red solid line] PROPOSED DISTRIBUTION LINE
- [Symbol: Magenta solid line] EXISTING 11kV LINE
- [Symbol: Blue solid line] EXISTING 33kV LINE
- [Symbol: Black dashed line] EXISTING DISTRIBUTION LINE
- [Symbol: TF1] MAXIMISATION TRANSFORMER
- [Symbol: TF2] EXTENSION TRANSFORMER
- [Symbol: Circle with "PP"] WOODEN ELECTRIC POLES
- [Symbol: Circle with "CP"] CONCRETE ELECTRIC POLES 12M
- [Symbol: Circle with "CP"] CONCRETE ELECTRIC POLES 11M
- [Symbol: Triangle with "I"] LV-EARTH
- [Symbol: Open circle with vertical lines] PME -PROTECTIVE MULTIPLE EARTHING STAY

PROJECT: THE PREPARATORY SURVEY ON THE PROJECT FOR IMPROVEMENT OF POWER DISTRIBUTION SYSTEM IN THE REPUBLIC OF KENYA	DRAWING TITLE COUNTY: KILIFI SCHEME: EXTENSION PROJECT SITE: MKINGIRINI PRIMARY ENVI	DRAW. NO.	PREPARED BY	A.AKBAR	NIPPON KOEI CO., LTD
		KLF-EX-1	CHECKED BY	S.MAETA	
			APPROVED BY	Y.TANAKA	
			DATE	10th SEP 2018	



NOTES:

1. EXACT LOCATIONS OF POWER POLES TO BE DETERMINED ON SITE BY THE ENGINEER.
2. CONCRETE/ WOODEN POLES TO BE DETERMINED ON SITE BY THE ENGINEER.
3. LENGTH OF POLES TO BE DETERMINED ON SITE BY THE ENGINEER.
4. PME TO BE AFTER EVERY 200m INTERVAL OR AFTER 4 SPANS.

- HOUSEHOLDS/ BUILDINGS
- PROPOSED 11kV
- PROPOSED 33kV
- PROPOSED DISTRIBUTION LINE
- EXISTING 11kV LINE
- EXISTING 33kV LINE
- EXISTING DISTRIBUTION LINE
- MAXIMISATION TRANSFORMER
- EXTENSION TRANSFORMER
- WOODEN ELECTRIC POLES
- CP CONCRETE ELECTRIC POLES 12M
- CP CONCRETE ELECTRIC POLES 11M
- LV-EARTH
- PME -PROTECTIVE MULTIPLE EARTHING STAY

PROJECT:
THE PREPARATORY SURVEY
ON THE PROJECT FOR IMPROVEMENT
OF POWER DISTRIBUTION SYSTEM
IN THE REPUBLIC OF KENYA

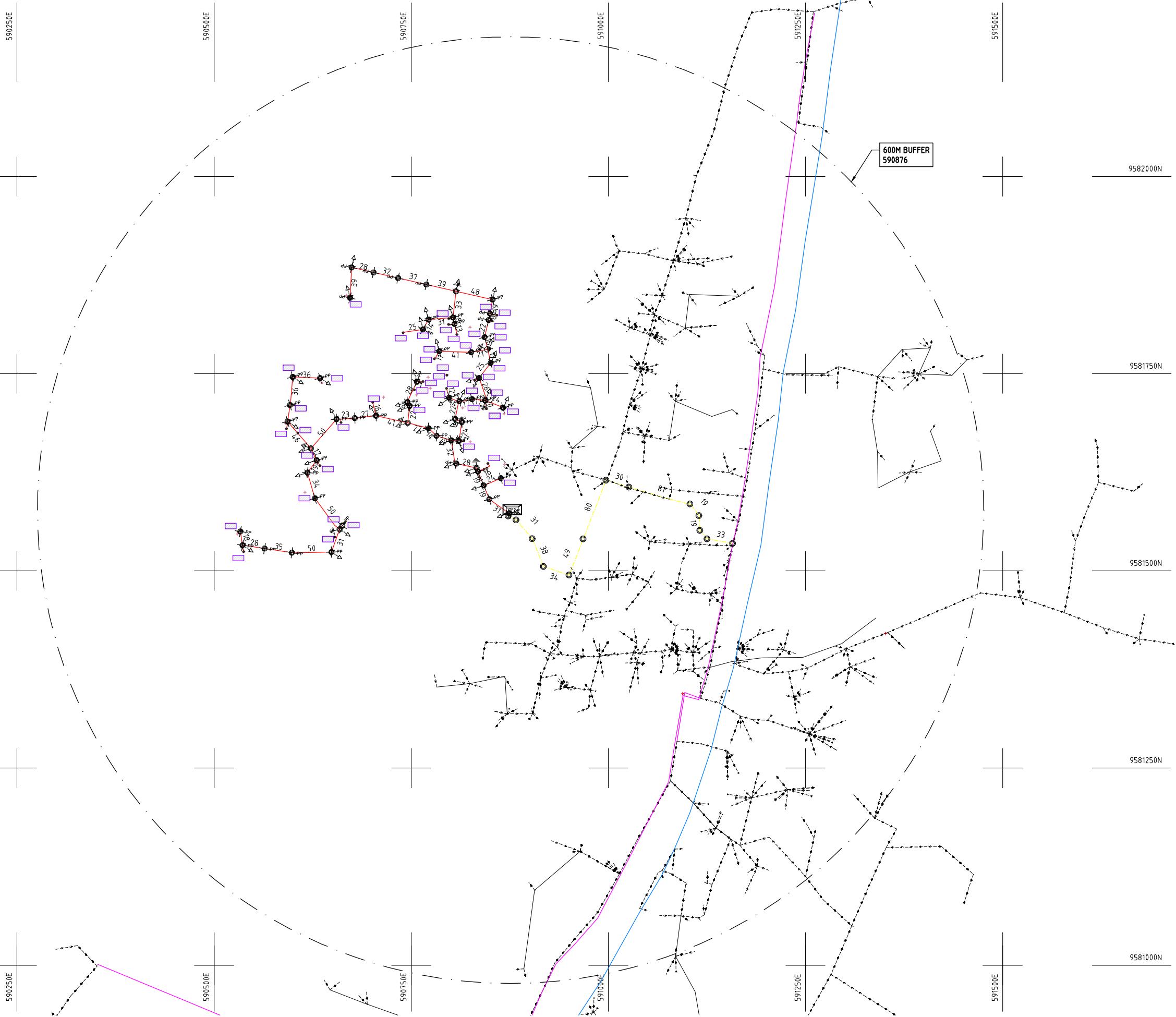
DRAWING TITLE
COUNTY: KILIFI
SCHEME: EXTENSION
PROJECT SITE: NGOLOKO VILLAGE

DRAW. NO.
KLF-EX-2

PREPARED BY
A.AKBAR
CHECKED BY
S.MAETA
APPROVED BY
Y.TANAKA
DATE
10th SEP 2018



NIPPON KOEI CO., LTD



NOTES:

- EXACT LOCATIONS OF POWER POLES TO BE DETERMINED ON SITE BY THE ENGINEER.
- CONCRETE/ WOODEN POLES TO BE DETERMINED ON SITE BY THE ENGINEER.
- LENGTH OF POLES TO BE DETERMINED ON SITE BY THE ENGINEER.
- PME TO BE AFTER EVERY 200m INTERVAL OR AFTER 4 SPANS.

- HOUSEHOLDS/ BUILDINGS
- PROPOSED 11kV
- PROPOSED 33kV
- PROPOSED DISTRIBUTION LINE
- EXISTING 11kV LINE
- EXISTING 33kV LINE
- EXISTING DISTRIBUTION LINE
- MAXIMISATION TRANSFORMER
- EXTENSION TRANSFORMER
- WOODEN ELECTRIC POLES
- CONCRETE ELECTRIC POLES 12M
- CONCRETE ELECTRIC POLES 11M
- LV-EARTH
- PME -PROTECTIVE MULTIPLE EARTHING STAY

PROJECT:
THE PREPARATORY SURVEY
ON THE PROJECT FOR IMPROVEMENT
OF POWER DISTRIBUTION SYSTEM
IN THE REPUBLIC OF KENYA

DRAWING TITLE
COUNTY: KILIFI
SCHEME: EXTENSION
PROJECT SITE: SHARIANYI MAJENGOMAPYA

DRAW. NO. A.AKBAR
KLF-EX-3
CHECKED BY S.MAETA
APPROVED BY Y.TANAKA
DATE 10th SEP 2018

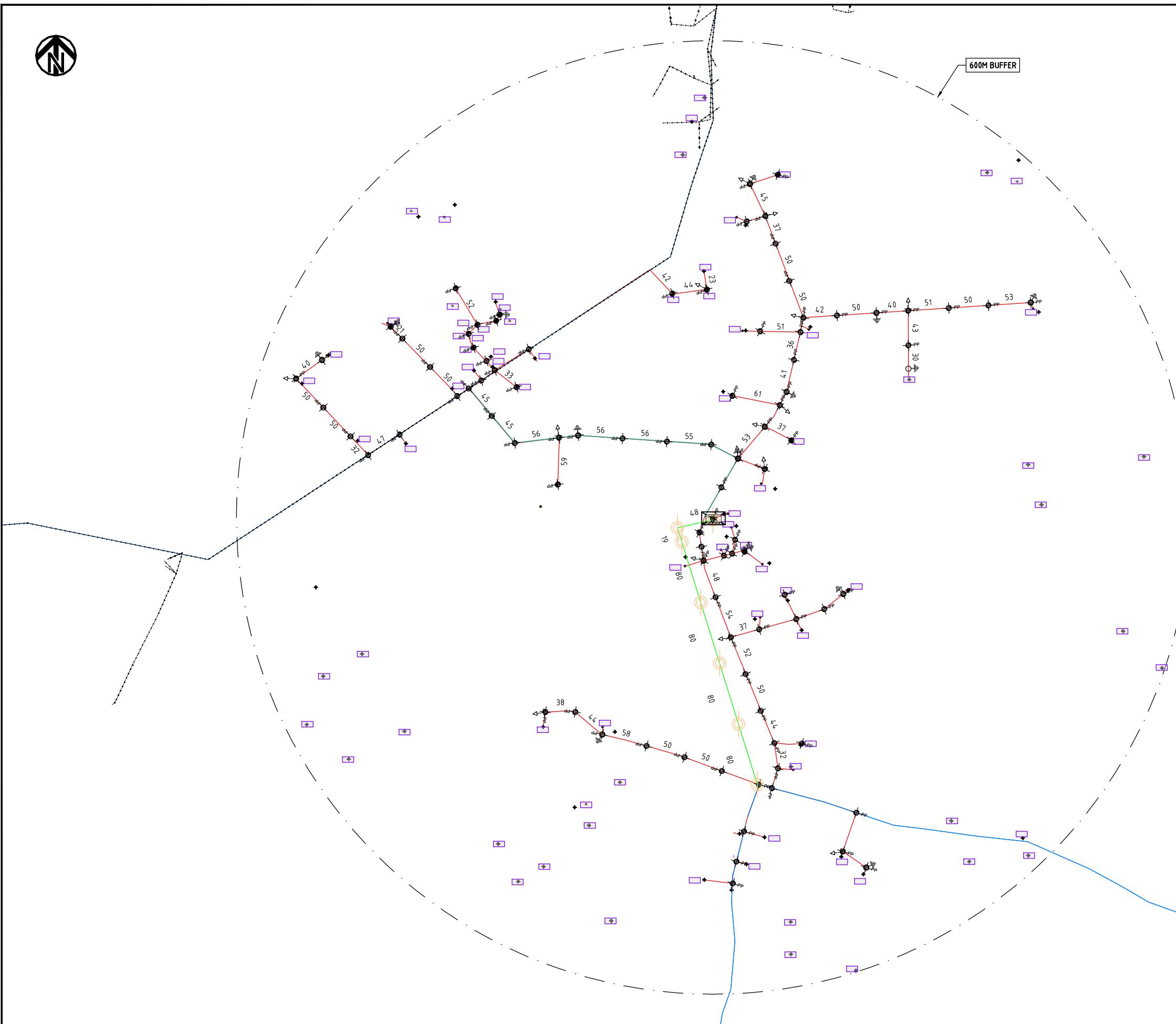


NIPPON KOEI CO., LTD



NOTES:

1. EXACT LOCATIONS OF POWER POLES TO BE DETERMINED ON SITE BY THE ENGINEER.
2. CONCRETE/ WOODEN POLES TO BE DETERMINED ON SITE BY THE ENGINEER.
3. LENGTH OF POLES TO BE DETERMINED ON SITE BY THE ENGINEER.
4. PME TO BE AFTER EVERY 200m INTERVAL OR AFTER 4 SPANS.



■ HOUSEHOLDS/ BUILDINGS
— PROPOSED 11kV
— Proposed 33kV
— PROPOSED DISTRIBUTION LINE
— EXISTING 11kV LINE
— EXISTING 33kV LINE
— EXISTING DISTRIBUTION LINE
TF1 MAXIMISATION TRANSFORMER
TF2 EXTENSION TRANSFORMER
PP WOODEN ELECTRIC POLES
CP CONCRETE ELECTRIC POLES 12M
◎ CP CONCRETE ELECTRIC POLES 11M
▷ I LV-EARTH
○ ||| PME -PROTECTIVE MULTIPLE EARTHING STAY

(A3)

PROJECT:	THE PREPARATORY SURVEY ON THE PROJECT FOR IMPROVEMENT OF POWER DISTRIBUTION SYSTEM IN THE REPUBLIC OF KENYA	DRAWING TITLE	DRAW. NO.	PREPARED BY	A.AKBAR	NIPPON KOEI CO., LTD 
		COUNTY: KILIFI SCHEME: EXTENSION PROJECT SITE: KWA ABEID MWARAKAYA	KLF-EX-4	CHECKED BY	S.MAETA	
APPROVED BY	Y.TANAKA	DATE	10th SEP 2018			



577250E

577500E

577750E

578000E

578250E

578500E

578750E

9585500N

9585250N

9585000N

9584750N

9584500N

577500E

577750E

578000E

578250E

578500E

578750E

PROJECT:
THE PREPARATORY SURVEY
ON THE PROJECT FOR IMPROVEMENT
OF POWER DISTRIBUTION SYSTEM
IN THE REPUBLIC OF KENYA

DRAWING TITLE
COUNTY: KILIFI
SCHEME: MAXIMIZATION
PROJECT SITE: KATIKIRIENYI VILLAGE CHONYI

DRAW. NO.
KLF-EX-5

PREPARED BY
A.AKBAR
CHECKED BY
S.MAETA
APPROVED BY
Y.TANAKA
DATE
10th SEP 2018

NOTES:

1. EXACT LOCATIONS OF POWER POLES TO BE DETERMINED ON SITE BY THE ENGINEER.
2. CONCRETE/ WOODEN POLES TO BE DETERMINED ON SITE BY THE ENGINEER.
3. LENGTH OF POLES TO BE DETERMINED ON SITE BY THE ENGINEER.
4. PME TO BE AFTER EVERY 200m INTERVAL OR AFTER 4 SPANS.

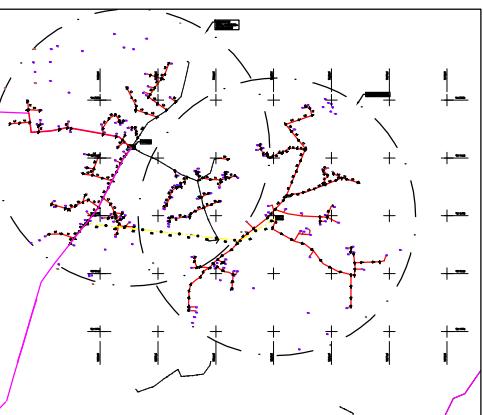
- HOUSEHOLDS/ BUILDINGS
- PROPOSED 11kV
- PROPOSED 33kV
- PROPOSED DISTRIBUTION LINE
- EXISTING 11kV LINE
- EXISTING 33kV LINE
- EXISTING DISTRIBUTION LINE
- TF1 MAXIMISATION TRANSFORMER
- TF2 EXTENSION TRANSFORMER
- PP WOODEN ELECTRIC POLES
- CP CONCRETE ELECTRIC POLES 12M
- ◎ CP CONCRETE ELECTRIC POLES 11M
- △ LV-EARTH
- PME -PROTECTIVE MULTIPLE EARTHING STAY

NIPPON KOEI CO., LTD

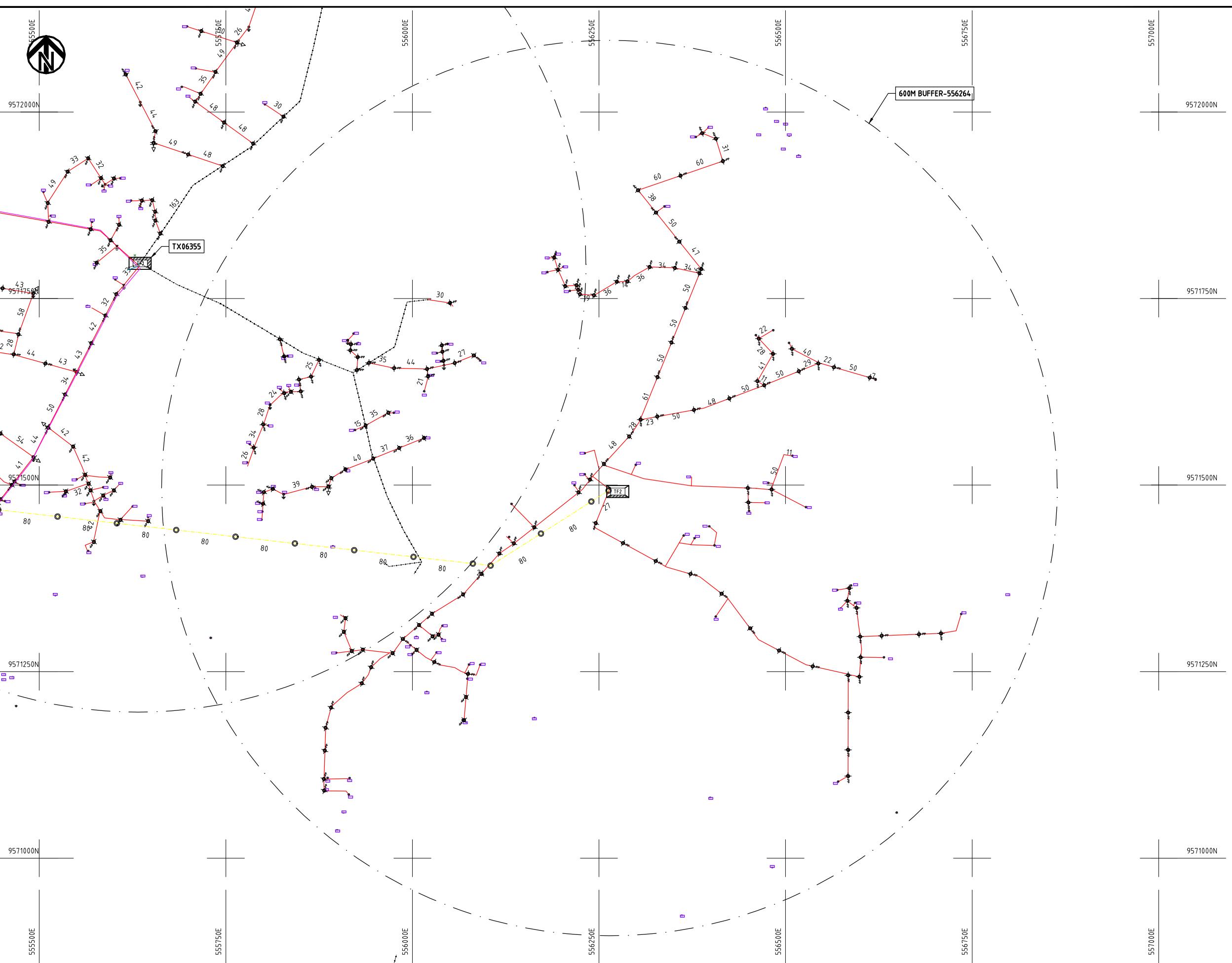


NOTES:

1. EXACT LOCATIONS OF POWER POLES TO BE DETERMINED ON SITE BY THE ENGINEER.
2. CONCRETE / WOODEN POLES TO BE DETERMINED ON SITE BY THE ENGINEER.
3. LENGTH OF POLES TO BE DETERMINED ON SITE BY THE ENGINEER.
4. PME TO BE AFTER EVERY 200m INTERVAL OR AFTER 4 SPANS.



- HOUSEHOLDS/ BUILDINGS
- - - PROPOSED 11kV
- - - PROPOSED 33kV
- - - PROPOSED DISTRIBUTION LINE
- - - EXISTING 11kV LINE
- - - EXISTING 33kV LINE
- - - EXISTING DISTRIBUTION LINE
- [TF1] MAXIMISATION TRANSFORMER
- [TF2] EXTENSION TRANSFORMER
- PP WOODEN ELECTRIC POLES
- CP CONCRETE ELECTRIC POLES 12M
- ◎ CP CONCRETE ELECTRIC POLES 11M
- △ LV-EARTH
- PME —PROTECTIVE MULTIPLE EARTHING STAY



PROJECT:

THE PREPARATORY SURVEY
ON THE PROJECT FOR IMPROVEMENT
OF POWER DISTRIBUTION SYSTEM
IN THE REPUBLIC OF KENYA

DRAWING TITLE

COUNTY: KILIFI
SCHEME: EXTENSION
PROJECT SITE: KWA CHIKOLOLO VILLAGE MARIAKANI

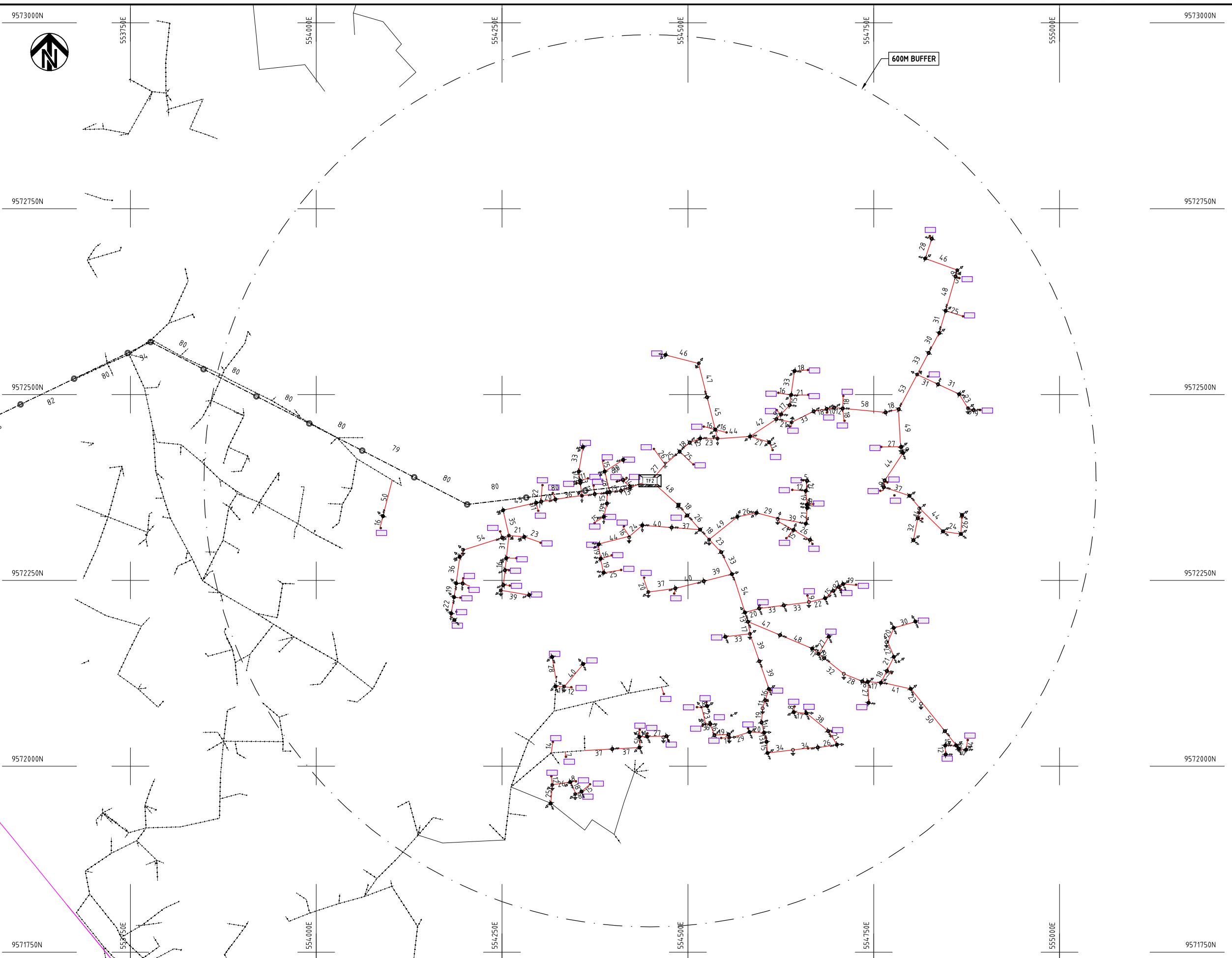
DRAW. NO.

KLF-EX-6

PREPARED BY

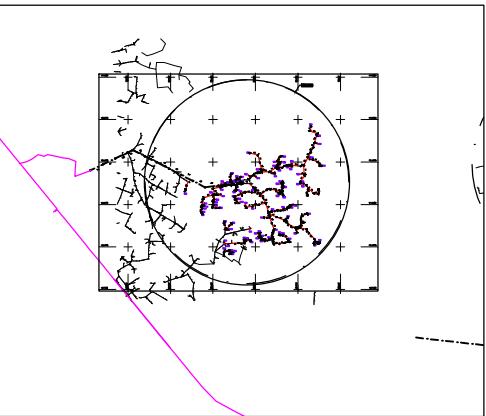
A.AKBAR
S.MAETA
Y.TANAKA
DATE 10th SEP 2018

NIPPON KOEI CO., LTD



NOTES:

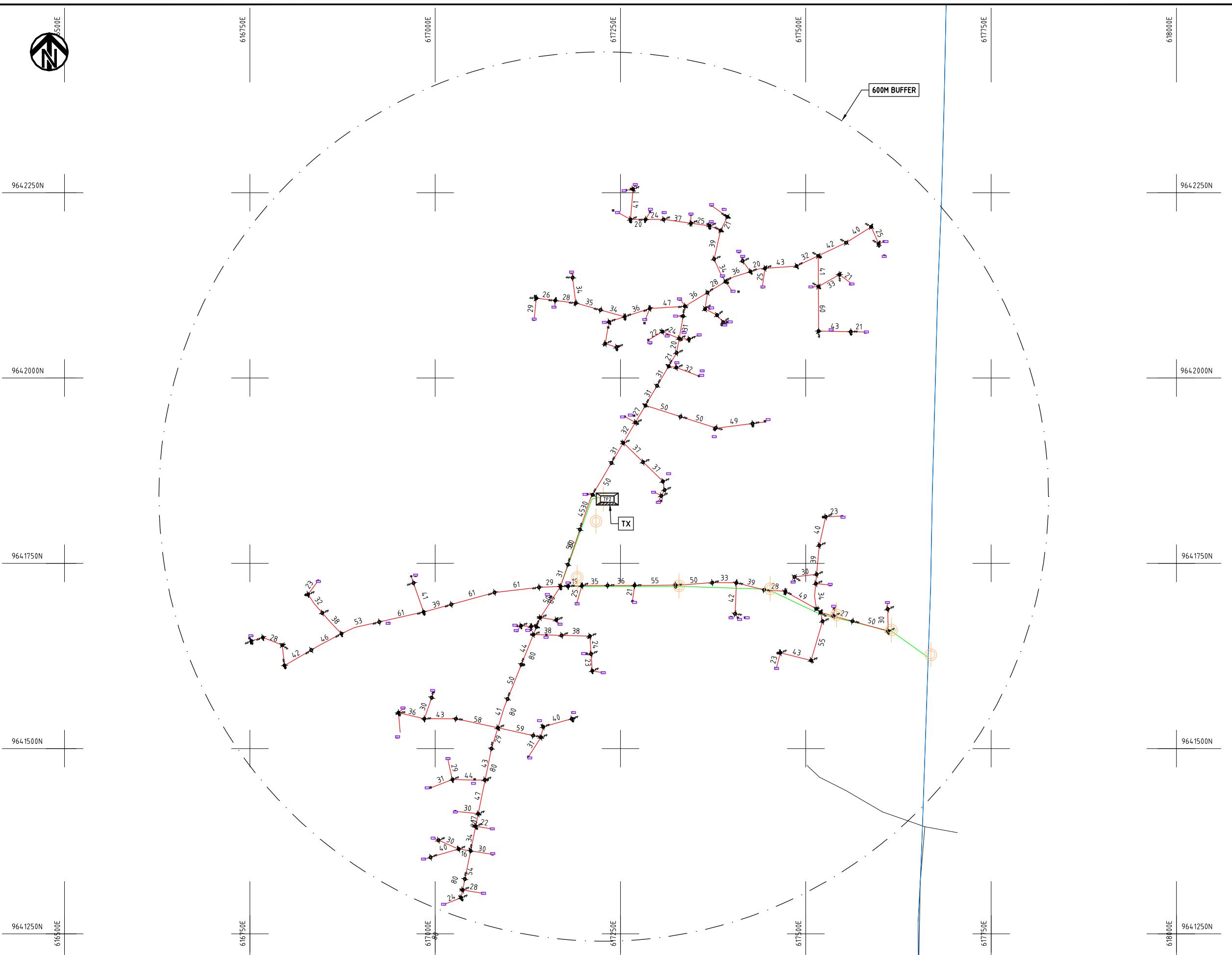
- EXACT LOCATIONS OF POWER POLES TO BE DETERMINED ON SITE BY THE ENGINEER.
- CONCRETE/ WOODEN POLES TO BE DETERMINED ON SITE BY THE ENGINEER.
- LENGTH OF POLES TO BE DETERMINED ON SITE BY THE ENGINEER.
- PME TO BE AFTER EVERY 200m INTERVAL OR AFTER 4 SPANS.



- HOUSEHOLDS/ BUILDINGS
- PROPOSED 11kV
- PROPOSED 33kV
- PROPOSED DISTRIBUTION LINE
- EXISTING 11kV LINE
- EXISTING 33kV LINE
- EXISTING DISTRIBUTION LINE
- [TF1] MAXIMISATION TRANSFORMER
- [TF2] EXTENSION TRANSFORMER
- PP WOODEN ELECTRIC POLES
- CP CONCRETE ELECTRIC POLES 12M
- ◎ CP CONCRETE ELECTRIC POLES 11M
- △ I LV-EARTH
- PME —PROTECTIVE MULTIPLE EARTHING STAY

PROJECT:	THE PREPARATORY SURVEY ON THE PROJECT FOR IMPROVEMENT OF POWER DISTRIBUTION SYSTEM IN THE REPUBLIC OF KENYA	DRAWING TITLE	DRAW. NO.	PREPARED BY	A.AKBAR
		COUNTY: KILIFI SCHEME: EXTENSION PROJECT SITE: MKWAJUNI VILLAGE MARIAKANI	KLF-EX-7	CHECKED BY	S.MAETA
				APPROVED BY	Y.TANAKA
				DATE	10th SEP 2018

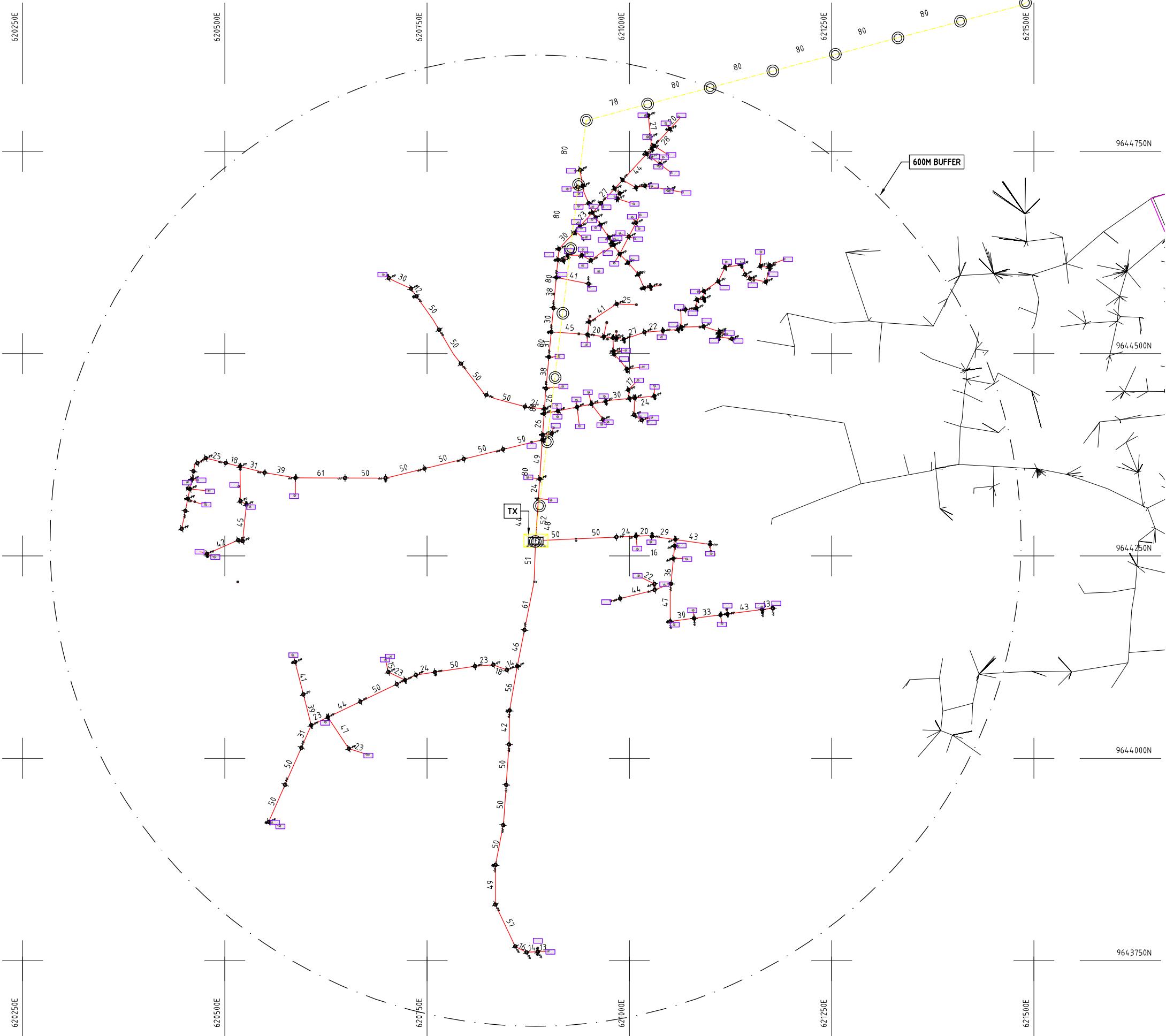
NIPPON KOEI CO., LTD

**NOTES:**

- EXACT LOCATIONS OF POWER POLES TO BE DETERMINED ON SITE BY THE ENGINEER.
- CONCRETE/ WOODEN POLES TO BE DETERMINED ON SITE BY THE ENGINEER.
- LENGTH OF POLES TO BE DETERMINED ON SITE BY THE ENGINEER.
- PME TO BE AFTER EVERY 200m INTERVAL OR AFTER 4 SPANS.

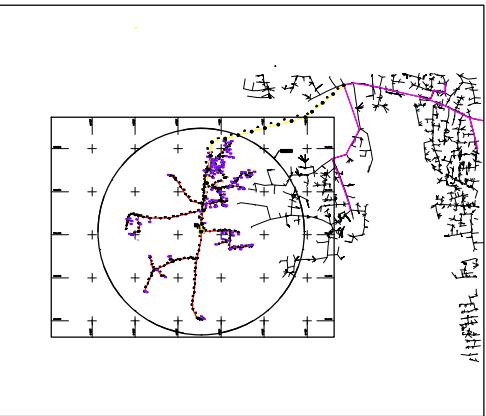
- [Symbol: Purple square] HOUSEHOLDS/ BUILDINGS
- [Symbol: Yellow dashed line] PROPOSED 11kV
- [Symbol: Green solid line] PROPOSED 33kV
- [Symbol: Red solid line] PROPOSED DISTRIBUTION LINE
- [Symbol: Magenta dashed line] EXISTING 11kV LINE
- [Symbol: Blue solid line] EXISTING 33kV LINE
- [Symbol: Black dashed line] EXISTING DISTRIBUTION LINE
- [Symbol: Transformer icon] MAXIMISATION TRANSFORMER
- [Symbol: Transformer icon] EXTENSION TRANSFORMER
- [Symbol: Circle with dot] WOODEN ELECTRIC POLES
- [Symbol: Circle with dot and cross] CONCRETE ELECTRIC POLES 12M
- [Symbol: Circle with dot and cross] CONCRETE ELECTRIC POLES 11M
- [Symbol: Triangle with vertical line] LV-EARTH
- [Symbol: Circle with vertical line] PME -PROTECTIVE MULTIPLE EARTHING STAY

PROJECT: THE PREPARATORY SURVEY ON THE PROJECT FOR IMPROVEMENT OF POWER DISTRIBUTION SYSTEM IN THE REPUBLIC OF KENYA	DRAWING TITLE COUNTY: KILIFI SCHEME: MAXIMIZATION PROJECT SITE: MSHONGOLENI JUNCTION	DRAW. NO.	PREPARED BY	A.AKBAR	NIPPON KOEI CO., LTD
		KLF-EX-8	CHECKED BY	S.MAETA	
			APPROVED BY	Y.TANAKA	
			DATE	10th SEP 2018	



NOTES:

- EXACT LOCATIONS OF POWER POLES TO BE DETERMINED ON SITE BY THE ENGINEER.
- CONCRETE/ WOODEN POLES TO BE DETERMINED ON SITE BY THE ENGINEER.
- LENGTH OF POLES TO BE DETERMINED ON SITE BY THE ENGINEER.
- PME TO BE AFTER EVERY 200m INTERVAL OR AFTER 4 SPANS.



- HOUSEHOLDS/ BUILDINGS
- PROPOSED 11kV
- PROPOSED 33kV
- PROPOSED DISTRIBUTION LINE
- EXISTING 11kV LINE
- EXISTING 33kV LINE
- EXISTING DISTRIBUTION LINE
- TX MAXIMISATION TRANSFORMER
- TF2 EXTENSION TRANSFORMER
- PP WOODEN ELECTRIC POLES
- CP CONCRETE ELECTRIC POLES 12M
- ◎ CP CONCRETE ELECTRIC POLES 11M
- △ LV-EARTH
- PME —PROTECTIVE MULTIPLE EARTHING STAY

PROJECT:
THE PREPARATORY SURVEY
ON THE PROJECT FOR IMPROVEMENT
OF POWER DISTRIBUTION SYSTEM
IN THE REPUBLIC OF KENYA

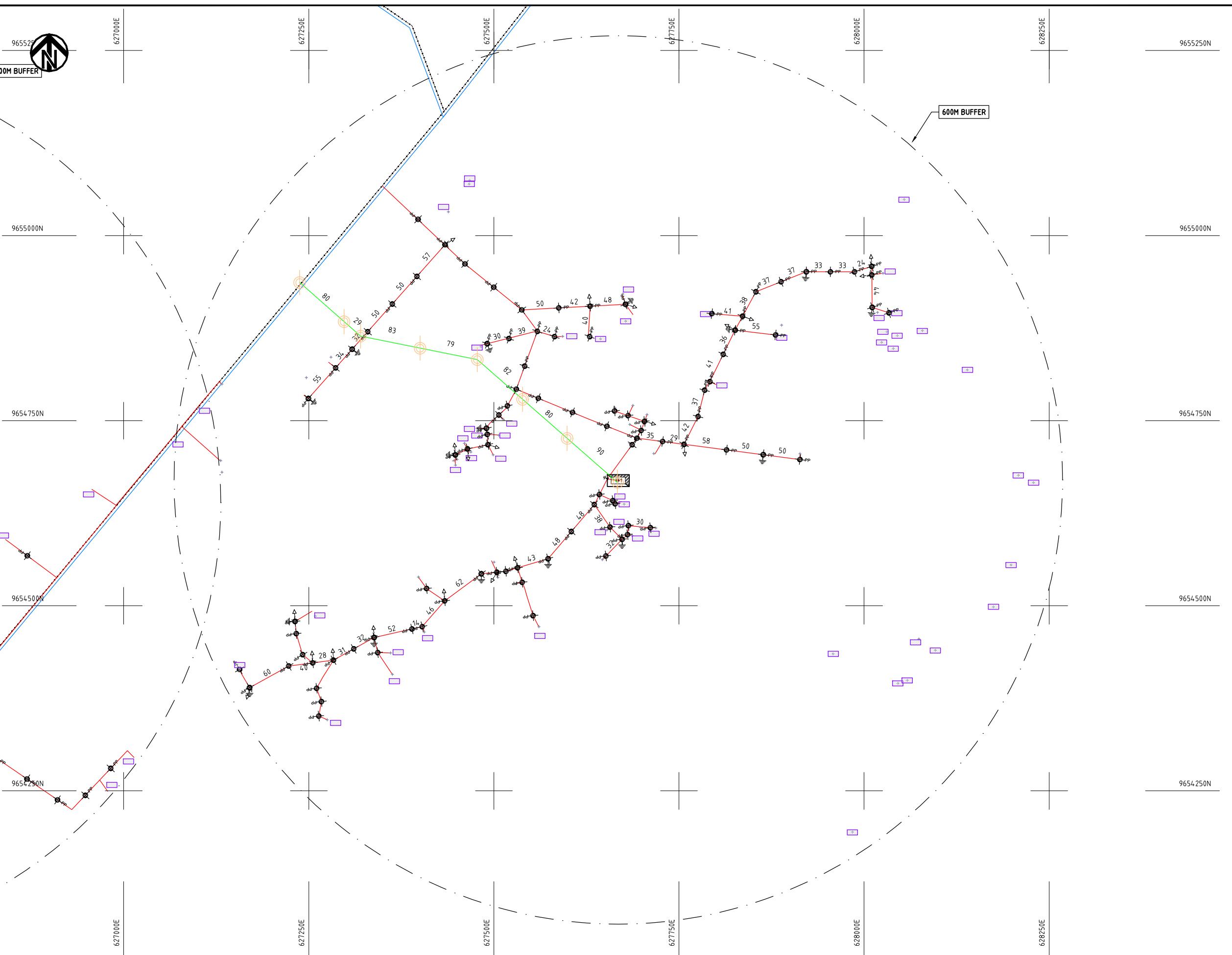
DRAWING TITLE
COUNTY: KILIFI
SCHEME: MAXIMIZATION
PROJECT SITE: GANDA VURUNZI

DRAW. NO. A.AKBAR
KLF-EX-9
CHECKED BY S.MAETA
APPROVED BY Y.TANAKA
DATE 10th SEP 2018



NIPPON KOEI CO., LTD

(A3)

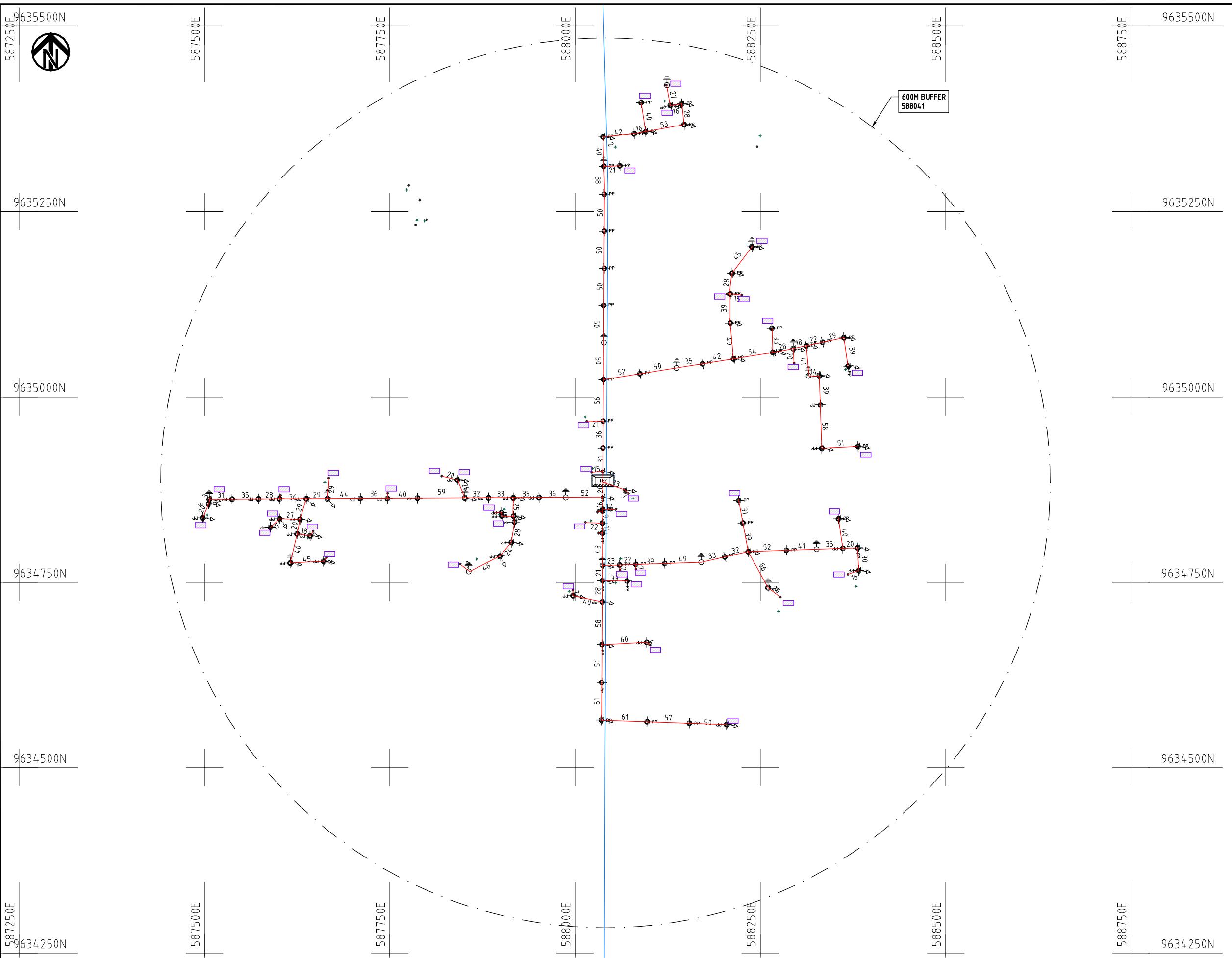


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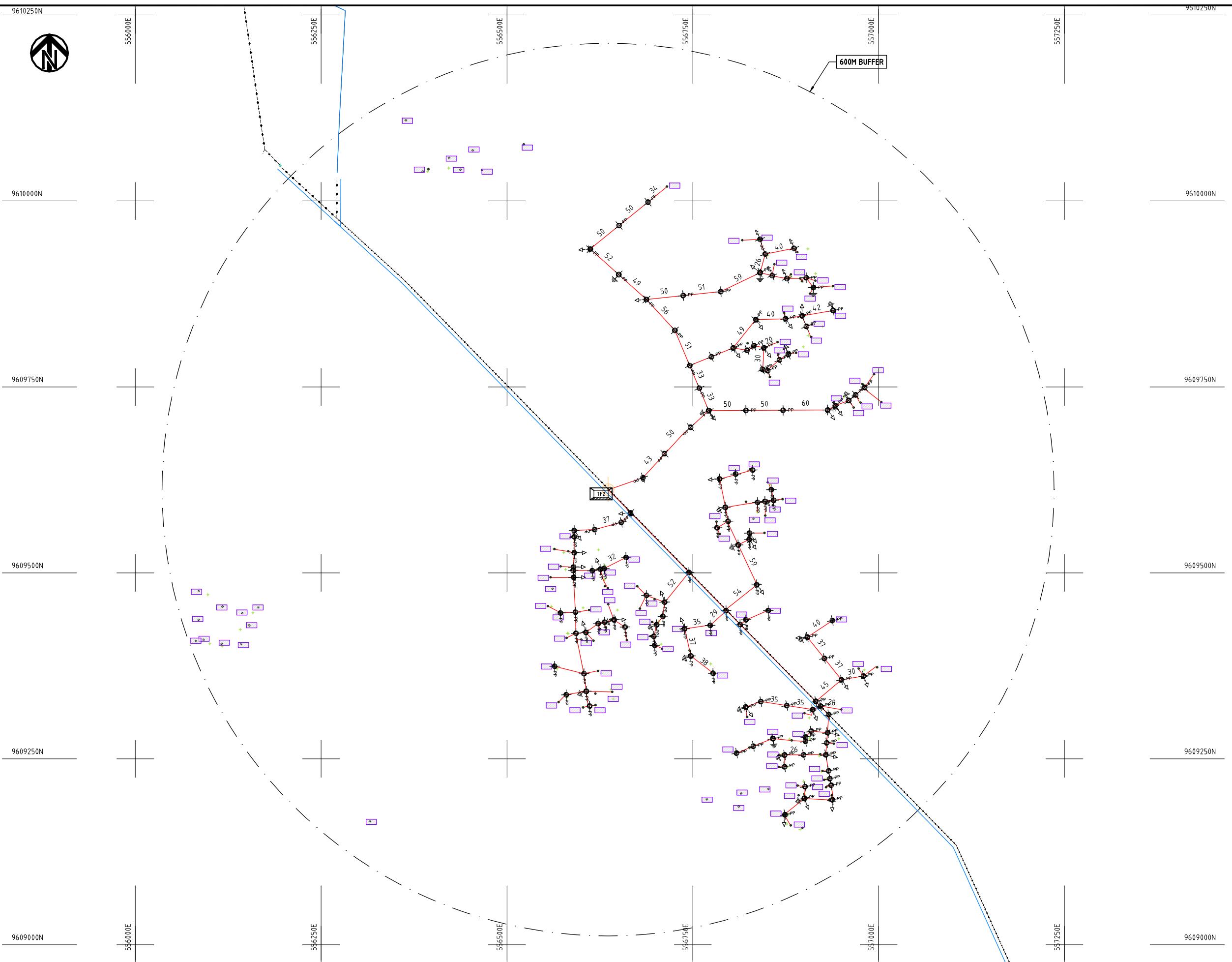
- EXACT LOCATIONS OF POWER POLES TO BE DETERMINED ON SITE BY THE ENGINEER.
- CONCRETE/ WOODEN POLES TO BE DETERMINED ON SITE BY THE ENGINEER.
- LENGTH OF POLES TO BE DETERMINED ON SITE BY THE ENGINEER.
- PME TO BE AFTER EVERY 200m INTERVAL OR AFTER 4 SPANS.

- [Purple square] HOUSEHOLDS/ BUILDINGS
- [Yellow dashed line] PROPOSED 11kV
- [Green solid line] PROPOSED 33kV
- [Red solid line] PROPOSED DISTRIBUTION LINE
- [Pink solid line] EXISTING 11kV LINE
- [Blue solid line] EXISTING 33kV LINE
- [Black dashed line] EXISTING DISTRIBUTION LINE
- [TF1 icon] MAXIMISATION TRANSFORMER
- [TF2 icon] EXTENSION TRANSFORMER
- [PP symbol] WOODEN ELECTRIC POLES
- [CP symbol] CONCRETE ELECTRIC POLES 12M
- [◎ CP symbol] CONCRETE ELECTRIC POLES 11M
- [Triangle symbol] LV-EARTH
- [PME symbol] PME -PROTECTIVE MULTIPLE EARTHING STAY

PROJECT:	THE PREPARATORY SURVEY ON THE PROJECT FOR IMPROVEMENT OF POWER DISTRIBUTION SYSTEM IN THE REPUBLIC OF KENYA	DRAWING TITLE	DRAW. NO.	PREPARED BY	A.AKBAR	NIPPON KOEI CO., LTD
		COUNTY: KILIFI SCHEME: EXTENSION PROJECT SITE: MAMBRUI	KLF-EX-10	CHECKED BY	S.MAETA	
				APPROVED BY	Y.TANAKA	
				DATE	10th SEP 2018	



PROJECT: THE PREPARATORY SURVEY ON THE PROJECT FOR IMPROVEMENT OF POWER DISTRIBUTION SYSTEM IN THE REPUBLIC OF KENYA	DRAWING TITLE COUNTY: KILIFI SCHEME: EXTENSION PROJECT SITE: MITSUFINI VILLAGE	DRAW. NO.	PREPARED BY	A.AKBAR	NIPPON KOEI CO., LTD (A3)
		KLF-EX-11	CHECKED BY	S.MAETA	
			APPROVED BY	Y.TANAKA	
			DATE	10th SEP 2018	

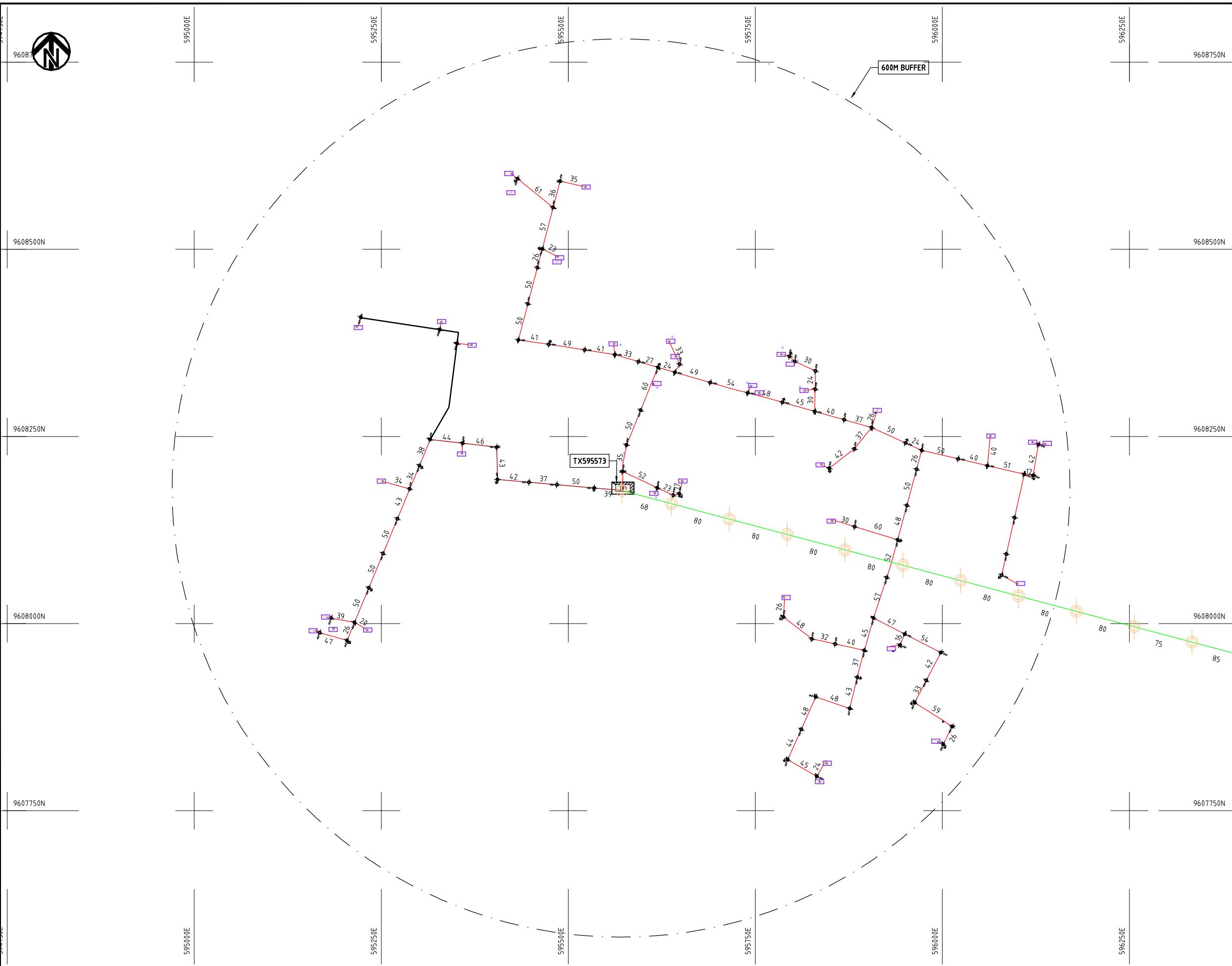


NOTES:

1. EXACT LOCATIONS OF POWER POLES TO BE DETERMINED ON SITE BY THE ENGINEER.
2. CONCRETE/ WOODEN POLES TO BE DETERMINED ON SITE BY THE ENGINEER.
3. LENGTH OF POLES TO BE DETERMINED ON SITE BY THE ENGINEER.
4. PME TO BE AFTER EVERY 200m INTERVAL OR AFTER 4 SPANS.
5. POLES NOT SHOWN WHERE PME OR LV EARTH INTERSECT FOR CLARITY.

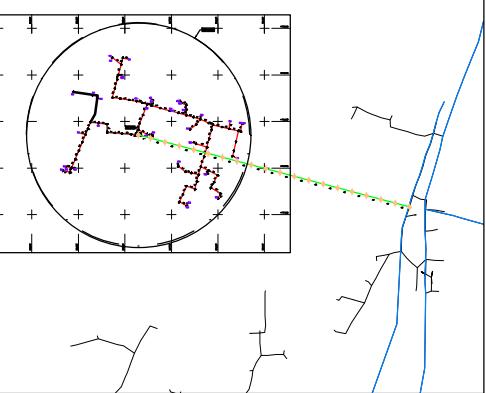
- [Households/Buildings]
- [Proposed Distribution Line]
- [Existing 11kV Line]
- [Existing 33kV Line]
- [Existing Distribution Line]
- [Maximisation Transformer]
- [Extension Transformer]
- [Other Existing Transformer]
- [Wooden Electric Poles]
- [Concrete Electric Poles]
- [LV-Earth]
- [PME -Protective Multiple Earthing Stay]

PROJECT:	THE PREPARATORY SURVEY ON THE PROJECT FOR IMPROVEMENT OF POWER DISTRIBUTION SYSTEM IN THE REPUBLIC OF KENYA	DRAWING TITLE	DRAW. NO.	PREPARED BY	A.AKBAR	NIPPON KOEI CO., LTD
		COUNTY: KILIFI SCHEME: EXTENSION PROJECT SITE: MWENZAMOYO BAMBA	KLF-EX-12	CHECKED BY	S.MAETA	
				APPROVED BY	Y.TANAKA	
				DATE	10th SEP 2018	



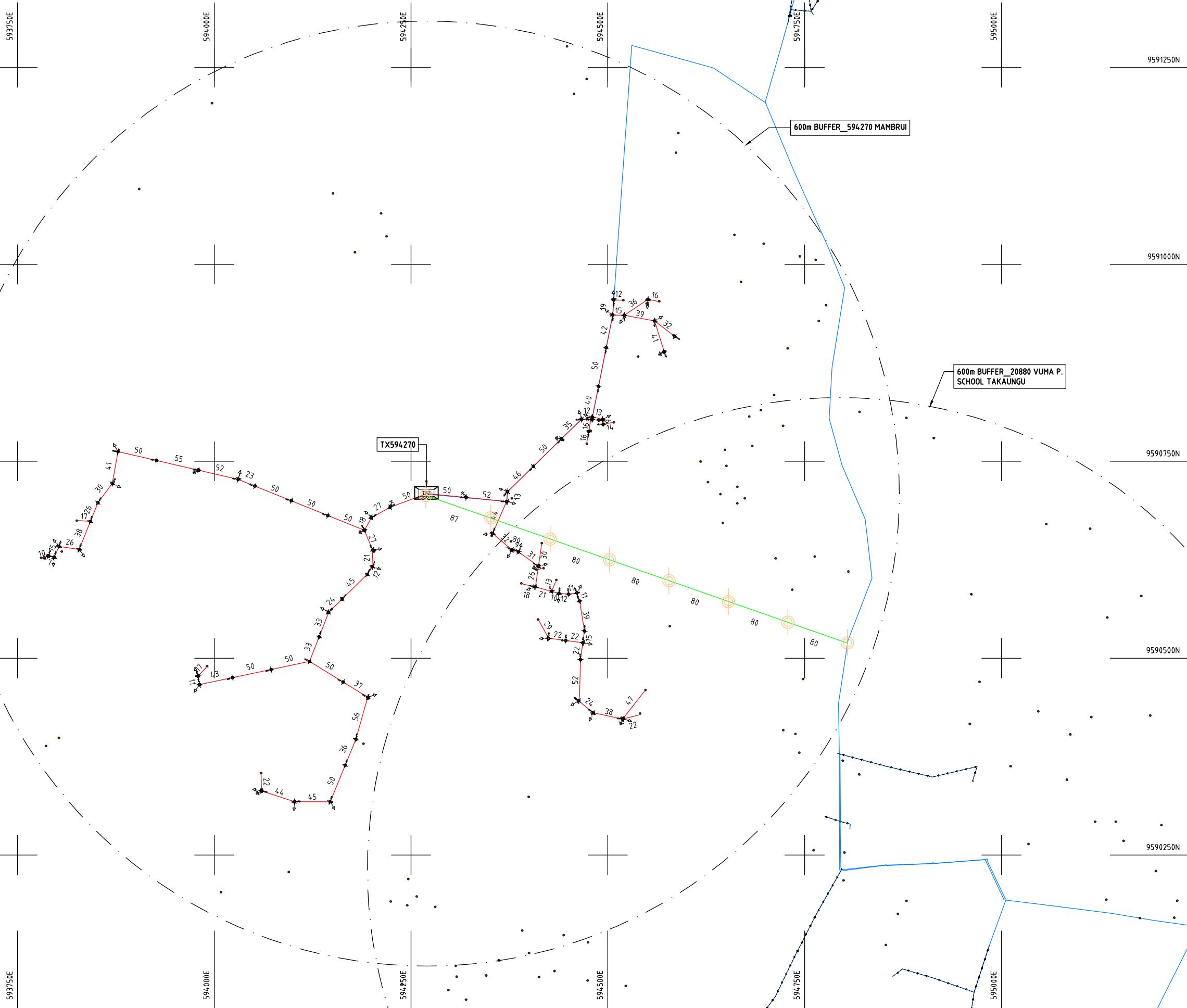
NOTES:

- EXACT LOCATIONS OF POWER POLES TO BE DETERMINED ON SITE BY THE ENGINEER.
- CONCRETE/ WOODEN POLES TO BE DETERMINED ON SITE BY THE ENGINEER.
- LENGTH OF POLES TO BE DETERMINED ON SITE BY THE ENGINEER.
- PME TO BE AFTER EVERY 200m INTERVAL OR AFTER 4 SPANS.



- HOUSEHOLDS/ BUILDINGS
- - - PROPOSED 11kV
- Proposed 33kV
- PROPOSED DISTRIBUTION LINE
- EXISTING 11kV LINE
- EXISTING 33kV LINE
- ▶ EXISTING DISTRIBUTION LINE
- TF1 MAXIMISATION TRANSFORMER
- TF2 EXTENSION TRANSFORMER
- PP WOODEN ELECTRIC POLES
- CP CONCRETE ELECTRIC POLES 12M
- ◎ CP CONCRETE ELECTRIC POLES 11M
- △ LV-EARTH
- PME —PROTECTIVE MULTIPLE EARTHING STAY

PROJECT: THE PREPARATORY SURVEY ON THE PROJECT FOR IMPROVEMENT OF POWER DISTRIBUTION SYSTEM IN THE REPUBLIC OF KENYA	DRAWING TITLE COUNTY: KILIFI SCHEME: MAXIMIZATION PROJECT SITE: KITUONI TEZO	DRAW. NO.	PREPARED BY	A.AKBAR	NIPPON KOEI CO., LTD
		KLF-DL-13	CHECKED BY	S.MAETA	
			APPROVED BY	Y.TANAKA	
			DATE	10th SEP 2018	

**NOTES:**

1. EXACT LOCATIONS OF POWER POLES TO BE DETERMINED ON SITE BY THE ENGINEER.
2. CONCRETE/ WOODEN POLES TO BE DETERMINED ON SITE BY THE ENGINEER.
3. LENGTH OF POLES TO BE DETERMINED ON SITE BY THE ENGINEER.
4. PME TO BE AFTER EVERY 200m INTERVAL OR AFTER 4 SPANS.

- HOUSEHOLDS/ BUILDINGS
- PROPOSED 11kV
- PROPOSED 33kV
- PROPOSED DISTRIBUTION LINE
- EXISTING 11kV LINE
- EXISTING 33kV LINE
- EXISTING DISTRIBUTION LINE
- TF1 MAXIMISATION TRANSFORMER
- TF2 EXTENSION TRANSFORMER
- PP WOODEN ELECTRIC POLES
- CP CONCRETE ELECTRIC POLES 12M
- CP CONCRETE ELECTRIC POLES 11M
- △ I LV-EARTH
- ||| PME —PROTECTIVE MULTIPLE EARTHING STAY

(A3)

PROJECT:
THE PREPARATORY SURVEY
ON THE PROJECT FOR IMPROVEMENT
OF POWER DISTRIBUTION SYSTEM
IN THE REPUBLIC OF KENYA

DRAWING TITLE
COUNTY: KILIFI
SCHEME: MAXIMIZATION
PROJECT SITE: TAKAUNGU VUMA -KAYANDA VILLAGE

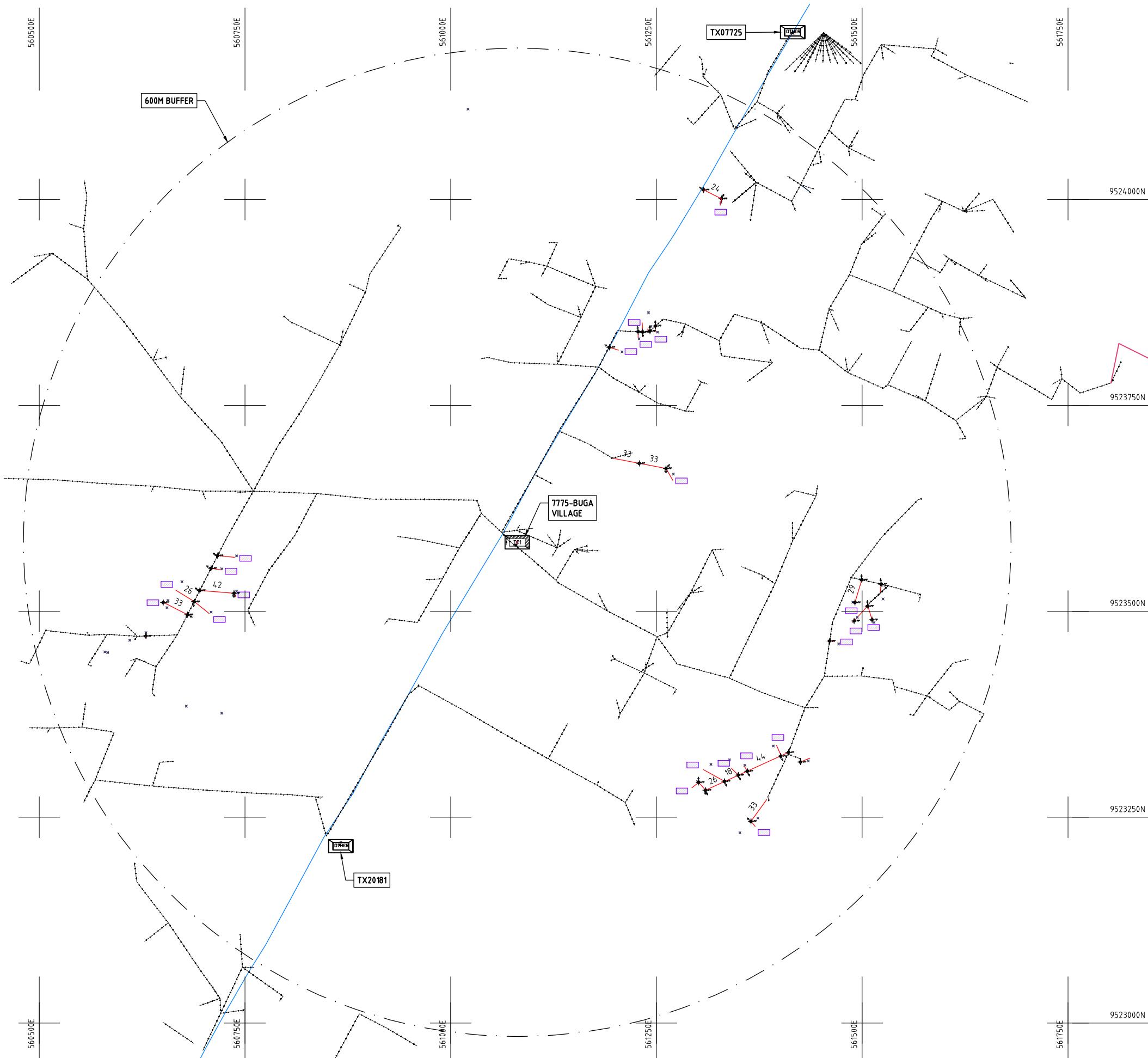
DRAW. NO. KLF-EX-14
PREPARED BY A.AKBAR
CHECKED BY S.MAETA
APPROVED BY Y.TANAKA
DATE 10th SEP 2018



NIPPON KOEI CO., LTD

クワレ郡

Maximization

**NOTES:**

- EXACT LOCATIONS OF POWER POLES TO BE DETERMINED ON SITE BY THE ENGINEER.
- CONCRETE/ WOODEN POLES TO BE DETERMINED ON SITE BY THE ENGINEER.
- LENGTH OF POLES TO BE DETERMINED ON SITE BY THE ENGINEER.
- PME TO BE AFTER EVERY 200m INTERVAL OR AFTER 4 SPANS.

- HOUSEHOLDS/ BUILDINGS
- PROPOSED 11kV
- Proposed 33kV
- PROPOSED DISTRIBUTION LINE
- EXISTING 11kV LINE
- EXISTING 33kV LINE
- EXISTING DISTRIBUTION LINE
- MAXIMISATION TRANSFORMER
- EXTENSION TRANSFORMER
- WOODEN ELECTRIC POLES
- CP CONCRETE ELECTRIC POLES 12M
- ◎ CP CONCRETE ELECTRIC POLES 11M
- △ LV-EARTH
- PME —PROTECTIVE MULTIPLE EARTHING STAY

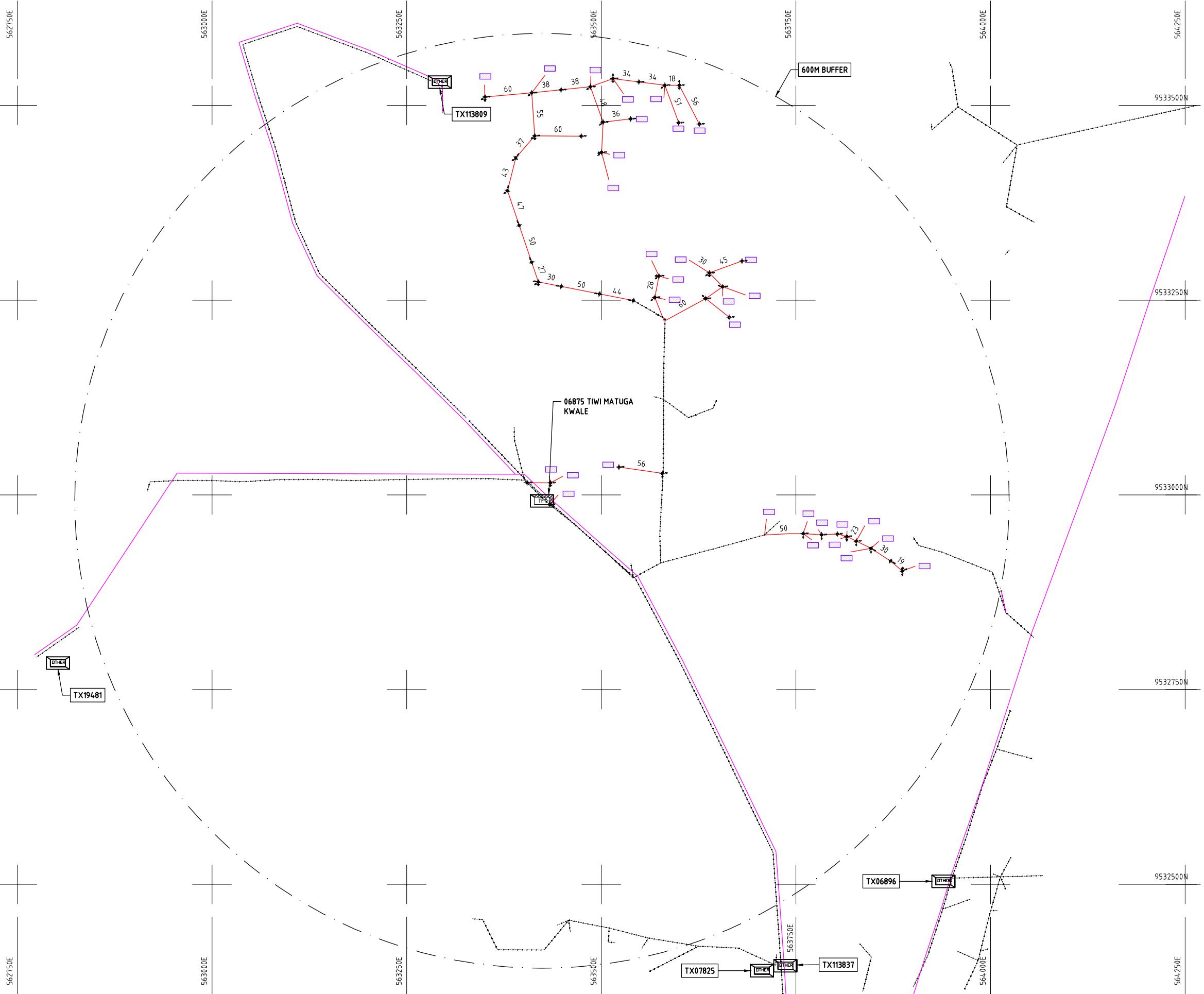
PROJECT:
THE PREPARATORY SURVEY
ON THE PROJECT FOR IMPROVEMENT
OF POWER DISTRIBUTION SYSTEM
IN THE REPUBLIC OF KENYA

DRAWING TITLE
COUNTY: KWALE
SCHEME: MAXIMIZATION
PROJECT SITE: 7775 BUGA VILLAGE VUGA TSIMBA

DRAW. NO. A.AKBAR
DRAW. NO. PREPARED BY A.AKBAR
CHECKED BY S.MAETA
APPROVED BY Y.TANAKA
DATE 10th SEP 2018



NIPPON KOEI CO., LTD

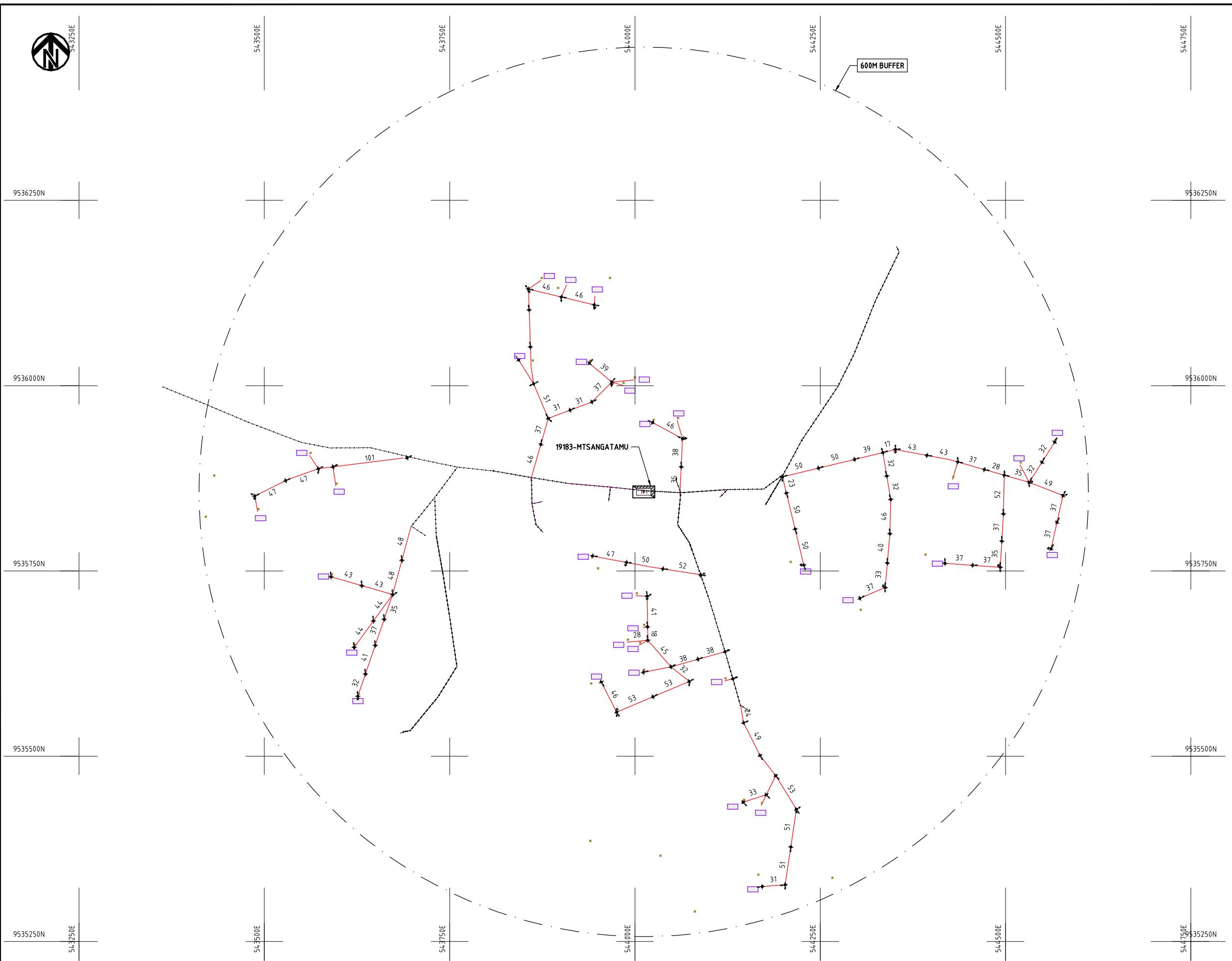


NOTES:

- EXACT LOCATIONS OF POWER POLES TO BE DETERMINED ON SITE BY THE ENGINEER.
- CONCRETE/ WOODEN POLES TO BE DETERMINED ON SITE BY THE ENGINEER.
- LENGTH OF POLES TO BE DETERMINED ON SITE BY THE ENGINEER.
- PME TO BE AFTER EVERY 200m INTERVAL OR AFTER 4 SPANS.

- HOUSEHOLDS/ BUILDINGS
- PROPOSED 11kV
- Proposed 33kV
- PROPOSED DISTRIBUTION LINE
- EXISTING 11kV LINE
- EXISTING 33kV LINE
- EXISTING DISTRIBUTION LINE
- TF1 MAXIMISATION TRANSFORMER
- TF2 EXTENSION TRANSFORMER
- WOODEN ELECTRIC POLES
- CP CONCRETE ELECTRIC POLES 12M
- ◎ CP CONCRETE ELECTRIC POLES 11M
- △ LV-EARTH
- PME -PROTECTIVE MULTIPLE EARTHING STAY

PROJECT:	THE PREPARATORY SURVEY ON THE PROJECT FOR IMPROVEMENT OF POWER DISTRIBUTION SYSTEM IN THE REPUBLIC OF KENYA	DRAWING TITLE	DRAW. NO.	PREPARED BY	A.AKBAR	NIPPON KOEI CO., LTD		
				CHECKED BY	S.MAETA			
COUNTY: KWALE SCHEME: MAXIMIZATION PROJECT SITE: 06875 TIWI MATUGA KWALE			KWL-MA-2	APPROVED BY	Y.TANAKA			
				DATE	10th SEP 2018			

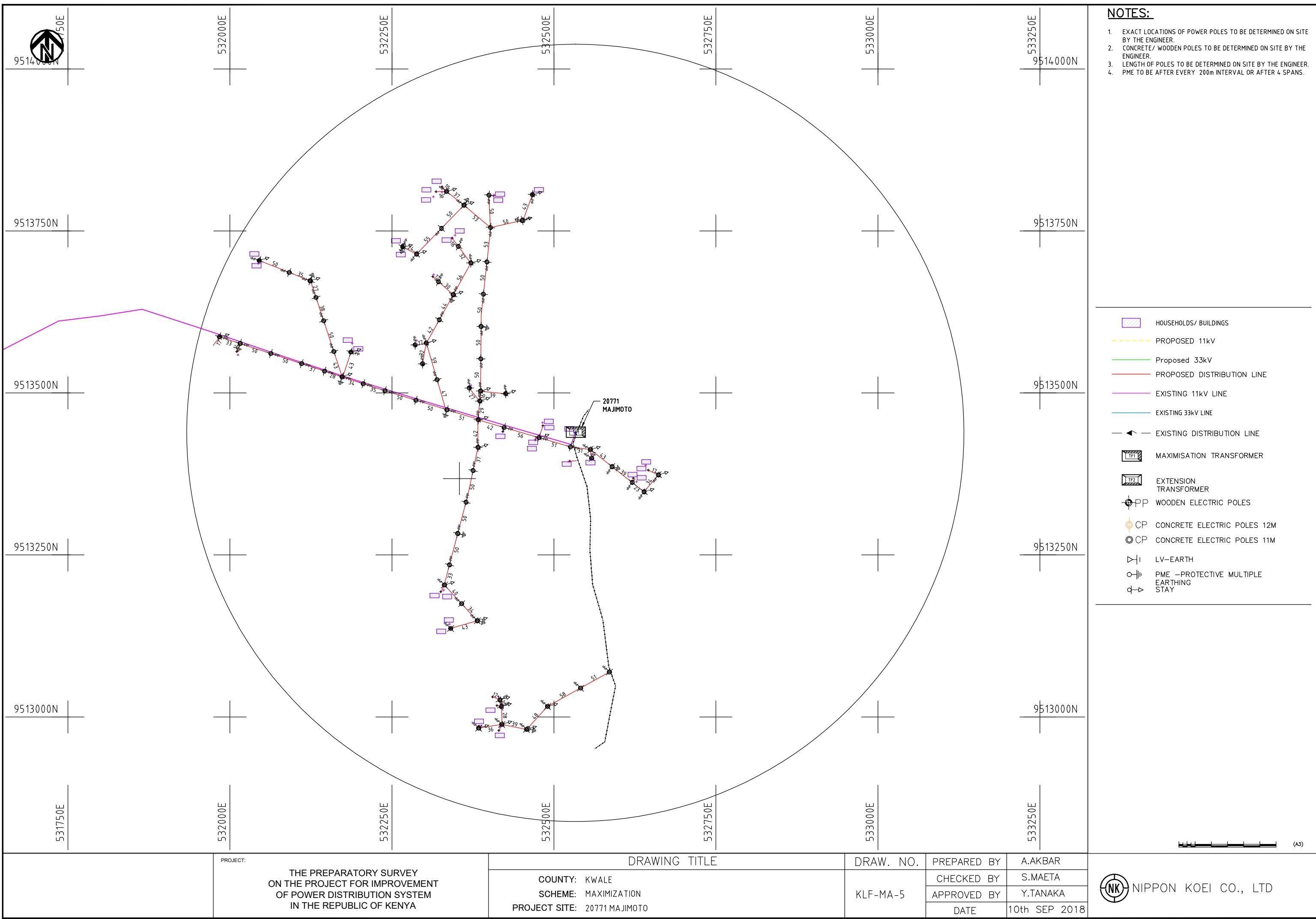


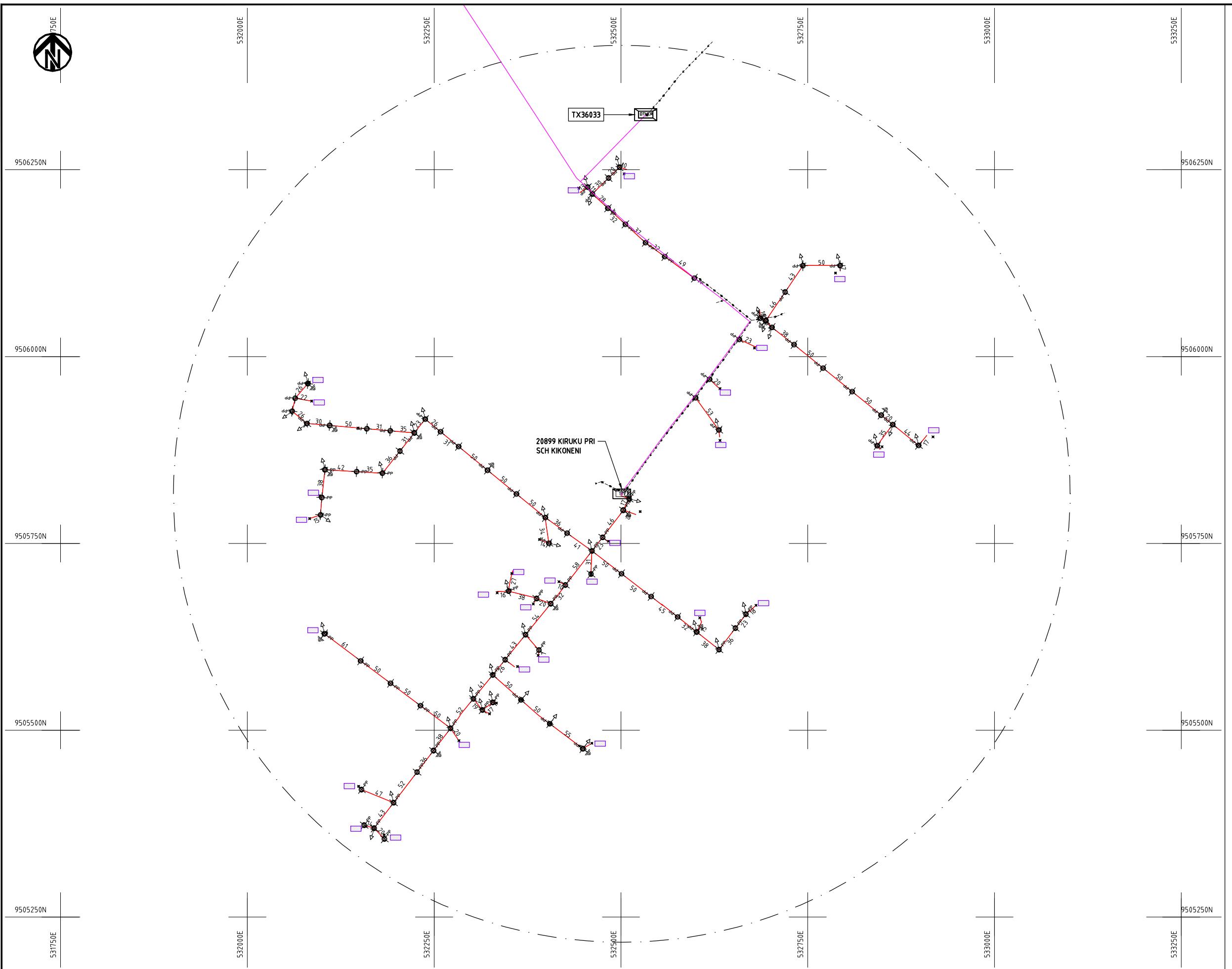
NOTES:

1. EXACT LOCATIONS OF POWER POLES TO BE DETERMINED ON SITE BY THE ENGINEER.
2. CONCRETE/ WOODEN POLES TO BE DETERMINED ON SITE BY THE ENGINEER.
3. LENGTH OF POLES TO BE DETERMINED ON SITE BY THE ENGINEER.
4. PME TO BE AFTER EVERY 200m INTERVAL OR AFTER 4 SPANS.

- HOUSEHOLDS/ BUILDINGS
- PROPOSED 11kV
- Proposed 33kV
- PROPOSED DISTRIBUTION LINE
- EXISTING 11kV LINE
- EXISTING 33kV LINE
- EXISTING DISTRIBUTION LINE
- MAXIMISATION TRANSFORMER
- EXTENSION TRANSFORMER
- OPP WOODEN ELECTRIC POLES
- CP CONCRETE ELECTRIC POLES 12M
- ◎ CP CONCRETE ELECTRIC POLES 11M
- △ LV-EARTH
- PME —PROTECTIVE MULTIPLE EARTHING STAY

PROJECT:	THE PREPARATORY SURVEY ON THE PROJECT FOR IMPROVEMENT OF POWER DISTRIBUTION SYSTEM IN THE REPUBLIC OF KENYA	DRAWING TITLE	DRAW. NO.	PREPARED BY	A.AKBAR	NIPPON KOEI CO., LTD
		COUNTY: KWALE	DRAW. NO.	CHECKED BY	S.MAETA	
	SCHEME: MAXIMIZATION	PROJECT SITE: 19183 MTSANGATAMU	KWL-MA-4	APPROVED BY	Y.TANAKA	
				DATE	10th SEP 2018	



**NOTES:**

- EXACT LOCATIONS OF POWER POLES TO BE DETERMINED ON SITE BY THE ENGINEER.
- CONCRETE/ WOODEN POLES TO BE DETERMINED ON SITE BY THE ENGINEER.
- LENGTH OF POLES TO BE DETERMINED ON SITE BY THE ENGINEER.
- PME TO BE AFTER EVERY 200m INTERVAL OR AFTER 4 SPANS.

- [Symbol: Purple square] HOUSEHOLDS/ BUILDINGS
- [Symbol: Yellow dashed line] PROPOSED 11kV
- [Symbol: Green line] Proposed 33kV
- [Symbol: Red line] PROPOSED DISTRIBUTION LINE
- [Symbol: Magenta line] EXISTING 11kV LINE
- [Symbol: Blue line] EXISTING 33kV LINE
- [Symbol: Dashed line] EXISTING DISTRIBUTION LINE
- [Symbol: Transformer icon] MAXIMISATION TRANSFORMER
- [Symbol: Transformer icon] EXTENSION TRANSFORMER
- [Symbol: Circle with cross] WOODEN ELECTRIC POLES
- [Symbol: Circle with dot] CONCRETE ELECTRIC POLES 12M
- [Symbol: Circle with dot] CONCRETE ELECTRIC POLES 11M
- [Symbol: Triangle with vertical line] LV-EARTH
- [Symbol: Circle with three vertical lines] PME -PROTECTIVE MULTIPLE EARTHING STAY

PROJECT:	THE PREPARATORY SURVEY ON THE PROJECT FOR IMPROVEMENT OF POWER DISTRIBUTION SYSTEM IN THE REPUBLIC OF KENYA	DRAWING TITLE	DRAW. NO.	PREPARED BY	A.AKBAR	NIPPON KOEI CO., LTD
		COUNTY: KWALE SCHEME: MAXIMIZATION PROJECT SITE: 20899-KIRUKU PRY SCH KIKONENI	KLF-MA-6	CHECKED BY	S.MAETA	
APPROVED BY	Y.TANAKA					
DATE	10th SEP 2018					



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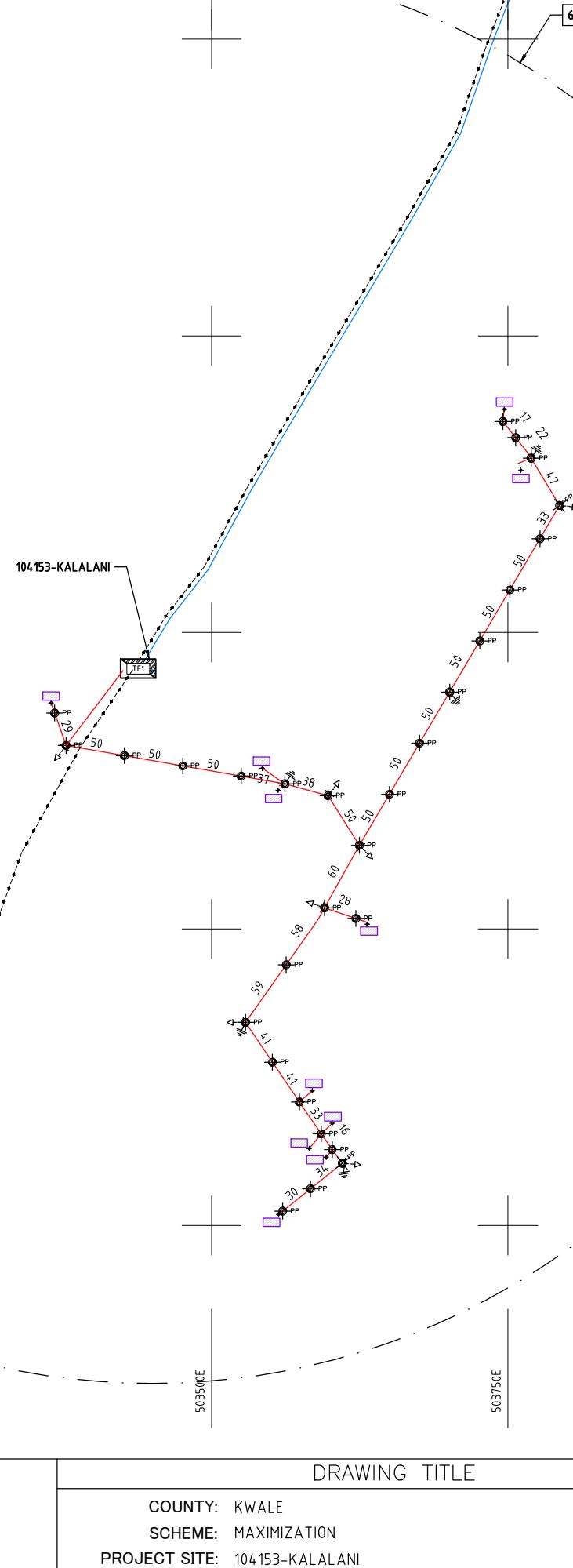
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9522000N

9521750N

9521500N

104153-KALALANI

NOTES:

1. EXACT LOCATIONS OF POWER POLES TO BE DETERMINED ON SITE BY THE ENGINEER.
2. CONCRETE/ WOODEN POLES TO BE DETERMINED ON SITE BY THE ENGINEER.
3. LENGTH OF POLES TO BE DETERMINED ON SITE BY THE ENGINEER.
4. PME TO BE AFTER EVERY 200m INTERVAL OR AFTER 4 SPANS.

- HOUSEHOLDS/ BUILDINGS
- PROPOSED 11kV
- Proposed 33kV
- PROPOSED DISTRIBUTION LINE
- EXISTING 11kV LINE
- EXISTING 33kV LINE
- EXISTING DISTRIBUTION LINE
- MAXIMISATION TRANSFORMER
- EXTENSION TRANSFORMER
- WOODEN ELECTRIC POLES
- CP CONCRETE ELECTRIC POLES 12M
- CP CONCRETE ELECTRIC POLES 11M
- LV-EARTH
- PME -PROTECTIVE MULTIPLE EARTHING STAY

PROJECT:
THE PREPARATORY SURVEY
ON THE PROJECT FOR IMPROVEMENT
OF POWER DISTRIBUTION SYSTEM
IN THE REPUBLIC OF KENYA

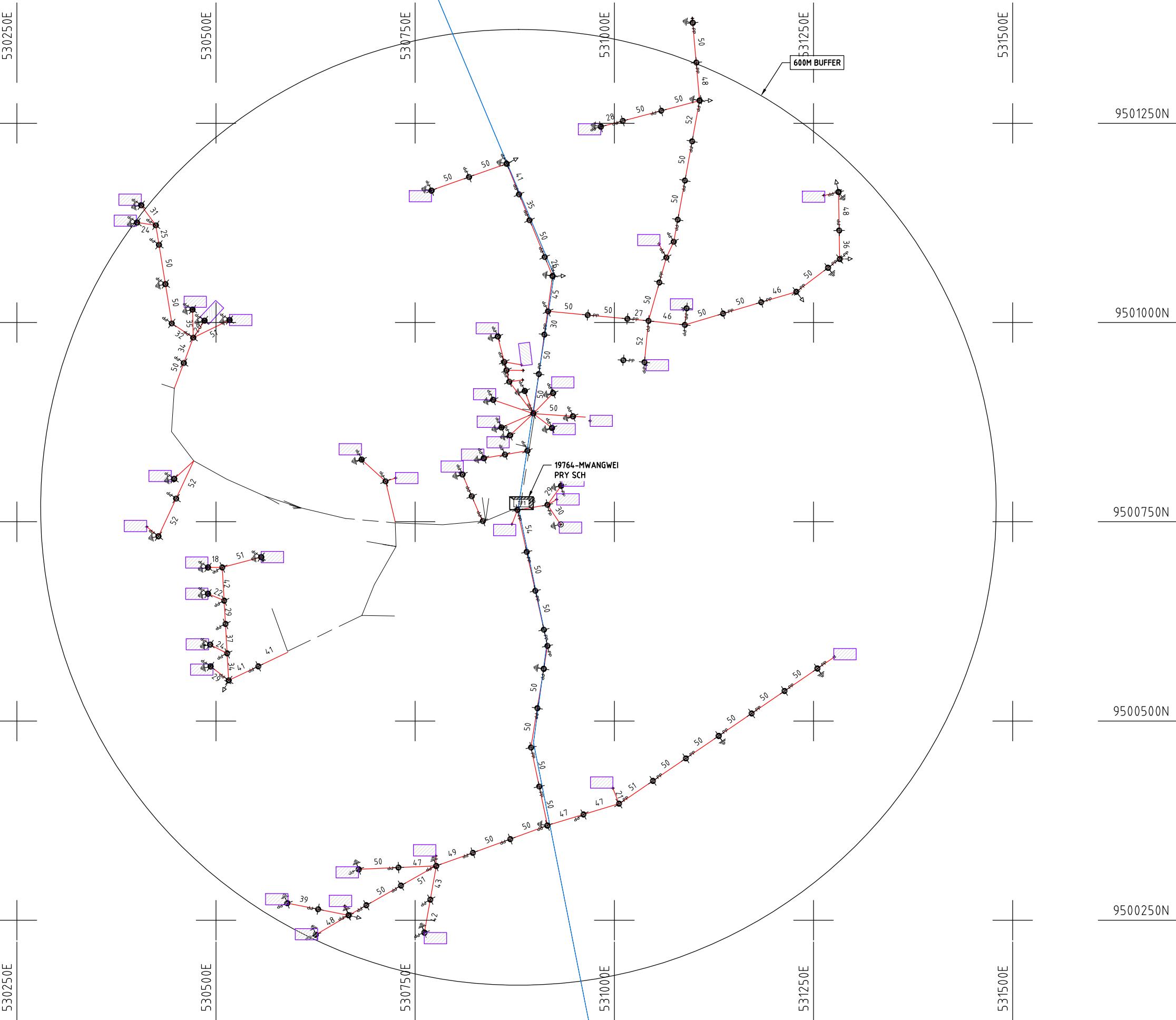
DRAWING TITLE
COUNTY: KWALE
SCHEME: MAXIMIZATION
PROJECT SITE: 104153-KALALANI

DRAW. NO. A.AKBAR
KWL-MA-8
CHECKED BY S.MAETA
APPROVED BY Y.TANAKA
DATE 10th SEP 2018



NIPPON KOEI CO., LTD

(A3)



NOTES:

1. EXACT LOCATIONS OF POWER POLES TO BE DETERMINED ON SITE BY THE ENGINEER.
2. CONCRETE/ WOODEN POLES TO BE DETERMINED ON SITE BY THE ENGINEER.
3. LENGTH OF POLES TO BE DETERMINED ON SITE BY THE ENGINEER.
4. PME TO BE AFTER EVERY 200m INTERVAL OR AFTER 4 SPANS.

- HOUSEHOLDS/ BUILDINGS
- PROPOSED 11kV
- Proposed 33kV
- PROPOSED DISTRIBUTION LINE
- EXISTING 11KV LINE
- EXISTING 33kV LINE
- EXISTING DISTRIBUTION LINE
- MAXIMISATION TRANSFORMER
- EXTENSION TRANSFORMER
- WOODEN ELECTRIC POLES
- CONCRETE ELECTRIC POLES 12M
- CONCRETE ELECTRIC POLES 11M
- LV-EARTH
- PME -PROTECTIVE MULTIPLE EARTHING STAY

PROJECT:
THE PREPARATORY SURVEY
ON THE PROJECT FOR IMPROVEMENT
OF POWER DISTRIBUTION SYSTEM
IN THE REPUBLIC OF KENYA

DRAWING TITLE

COUNTY: KWALE
SCHEME: MAXIMIZATION
PROJECT SITE: 19764 - MWANGWEI PRY SCH

DRAW. NO.

KWL-MA-9

PREPARED BY

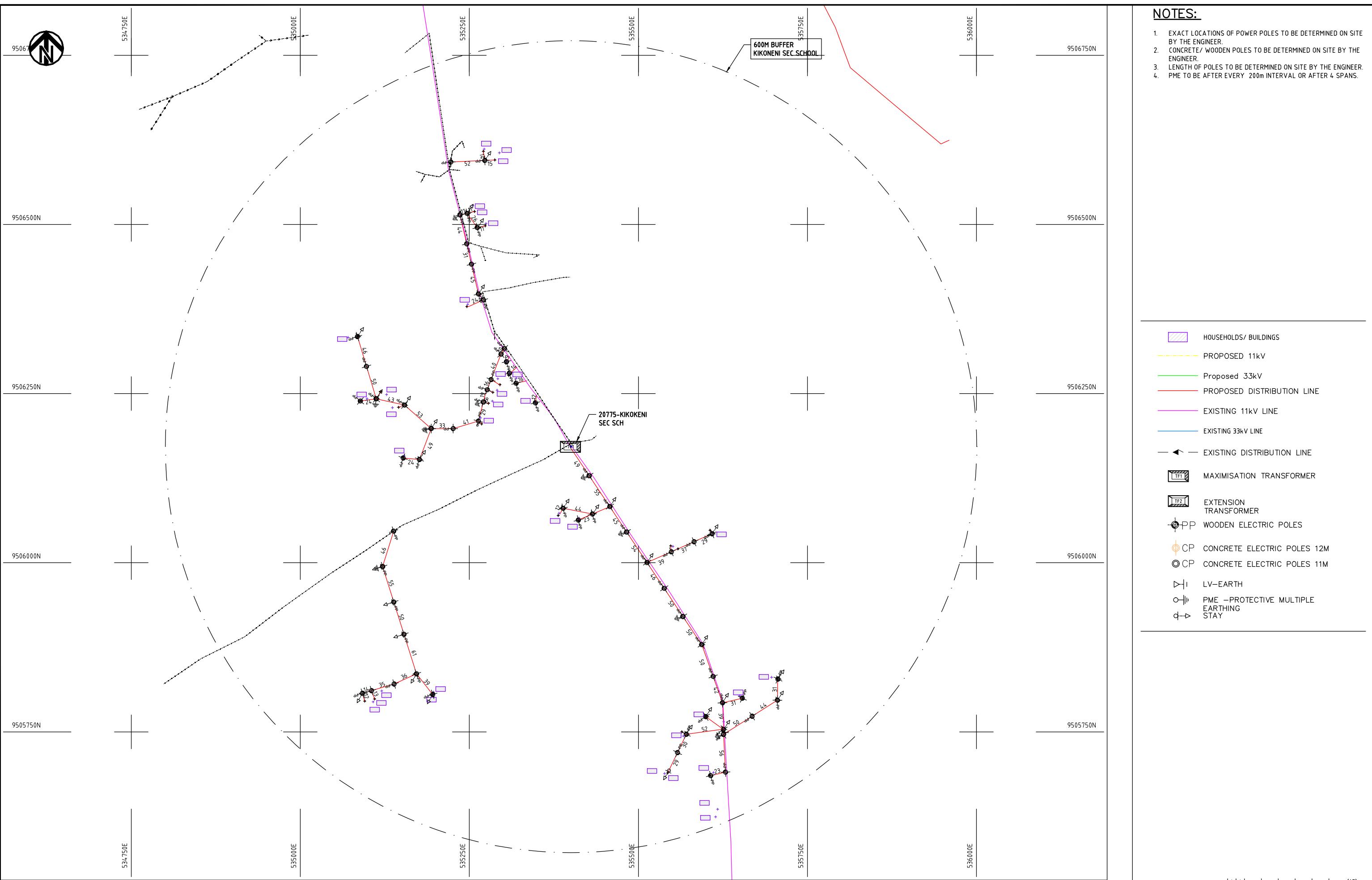
A.AKBAR
S.MAETA
Y.TANAKA
10th SEP 2018

CHECKED BY

APPROVED BY

DATE

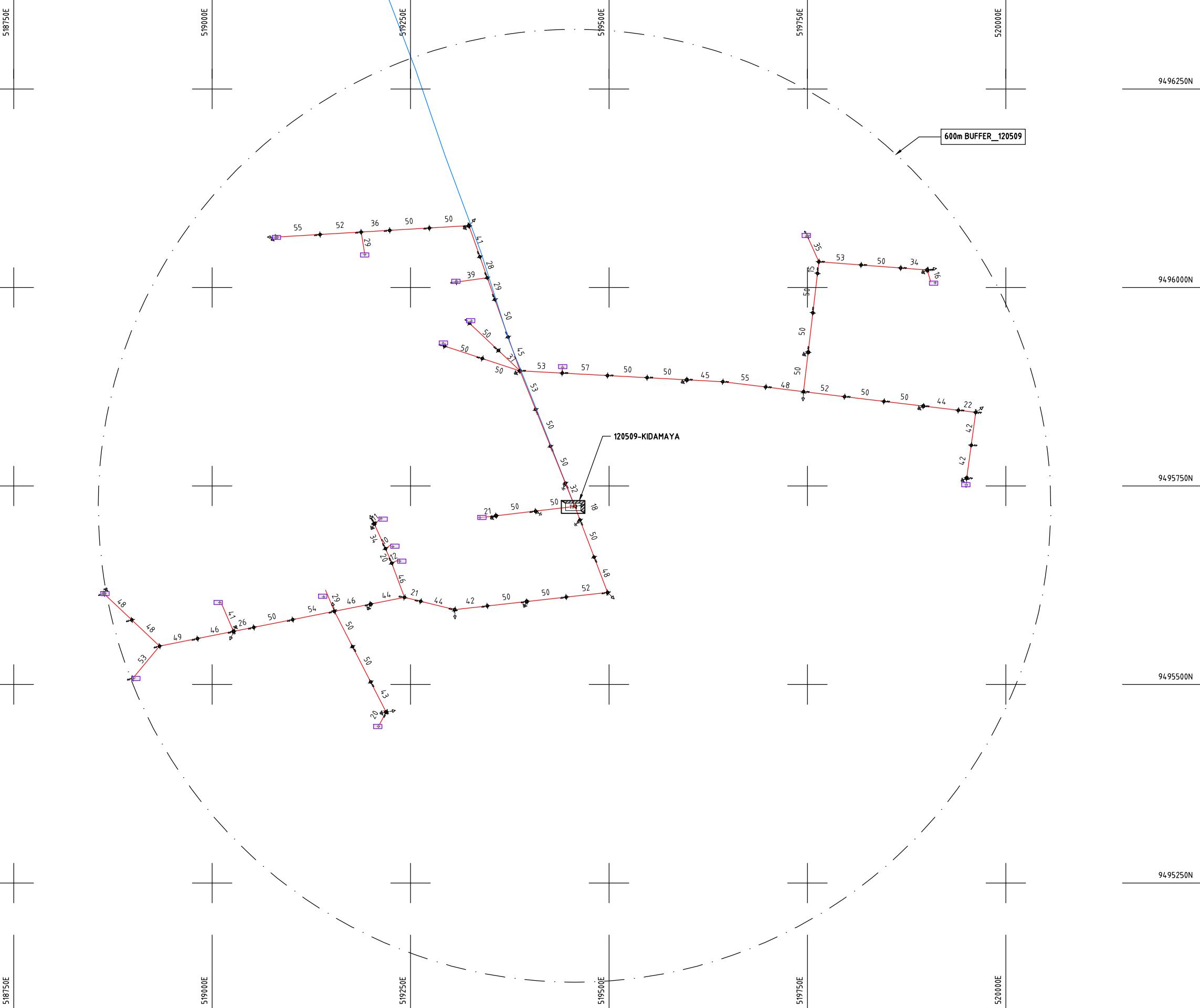
(A3)
NIPPON KOEI CO., LTD



PROJECT:	THE PREPARATORY SURVEY ON THE PROJECT FOR IMPROVEMENT OF POWER DISTRIBUTION SYSTEM IN THE REPUBLIC OF KENYA	DRAWING TITLE	DRAW. NO.	PREPARED BY	A.AKBAR	NIPPON KOEI CO., LTD
		COUNTY: KWALE SCHEME: MAXIMIZATION PROJECT SITE: 20775 KIKONENI SEC SCH	KLF-MA-010	CHECKED BY	S.MAETA	
				APPROVED BY	Y.TANAKA	
				DATE	10th SEP 2018	



9496250N

NOTES:

1. EXACT LOCATIONS OF POWER POLES TO BE DETERMINED ON SITE BY THE ENGINEER.
2. CONCRETE/ WOODEN POLES TO BE DETERMINED ON SITE BY THE ENGINEER.
3. LENGTH OF POLES TO BE DETERMINED ON SITE BY THE ENGINEER.
4. PME TO BE AFTER EVERY 200m INTERVAL OR AFTER 4 SPANS.

- HOUSEHOLDS/ BUILDINGS
- PROPOSED 11kV
- Proposed 33kV
- PROPOSED DISTRIBUTION LINE
- EXISTING 11kV LINE
- EXISTING 33kV LINE
- EXISTING DISTRIBUTION LINE
- MAXIMISATION TRANSFORMER
- EXTENSION TRANSFORMER
- PP WOODEN ELECTRIC POLES
- CP CONCRETE ELECTRIC POLES 12M
- COP CONCRETE ELECTRIC POLES 11M
- LV-EARTH
- PME -PROTECTIVE MULTIPLE EARTHING STAY

(A3)

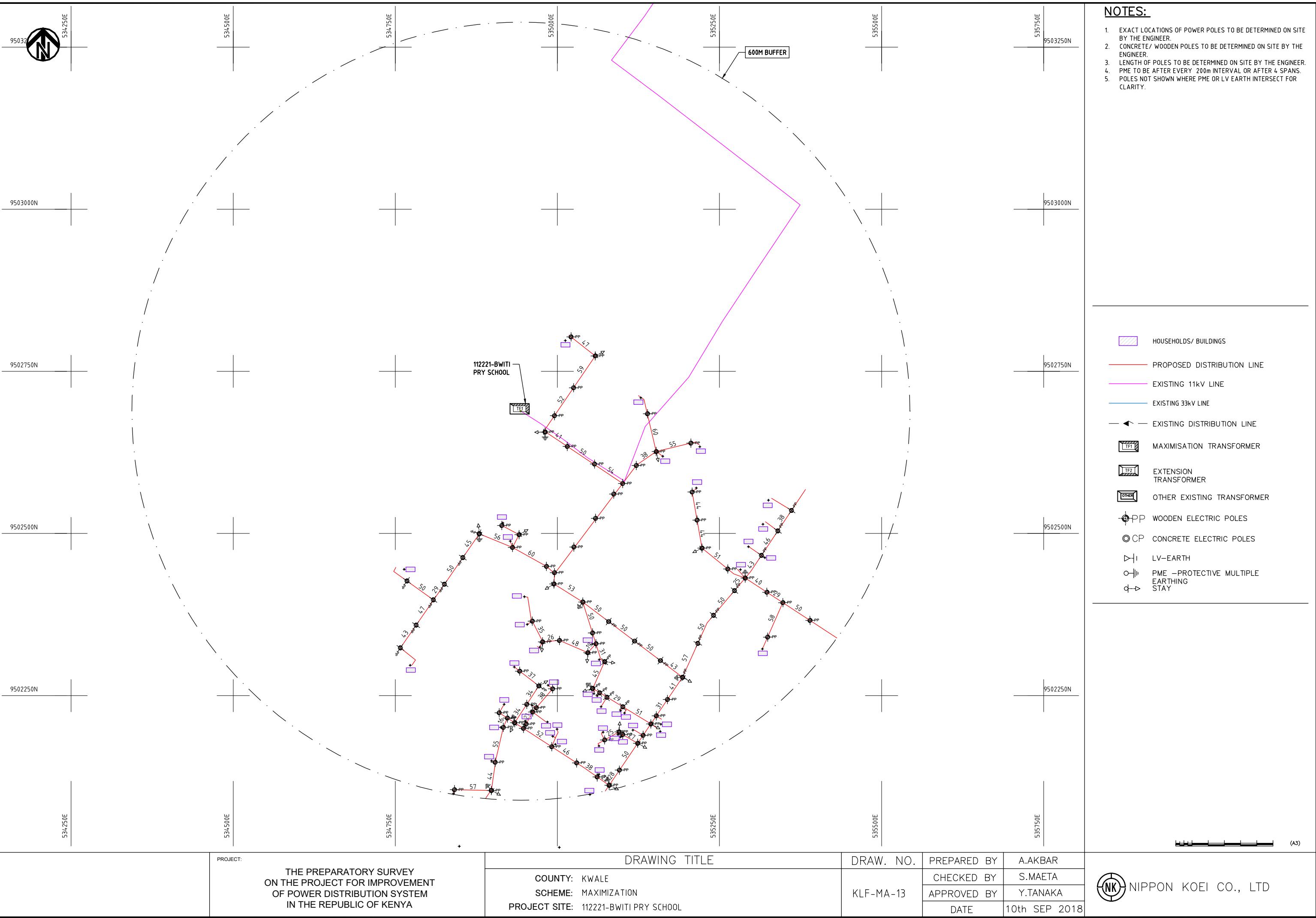
PROJECT:
THE PREPARATORY SURVEY
ON THE PROJECT FOR IMPROVEMENT
OF POWER DISTRIBUTION SYSTEM
IN THE REPUBLIC OF KENYA

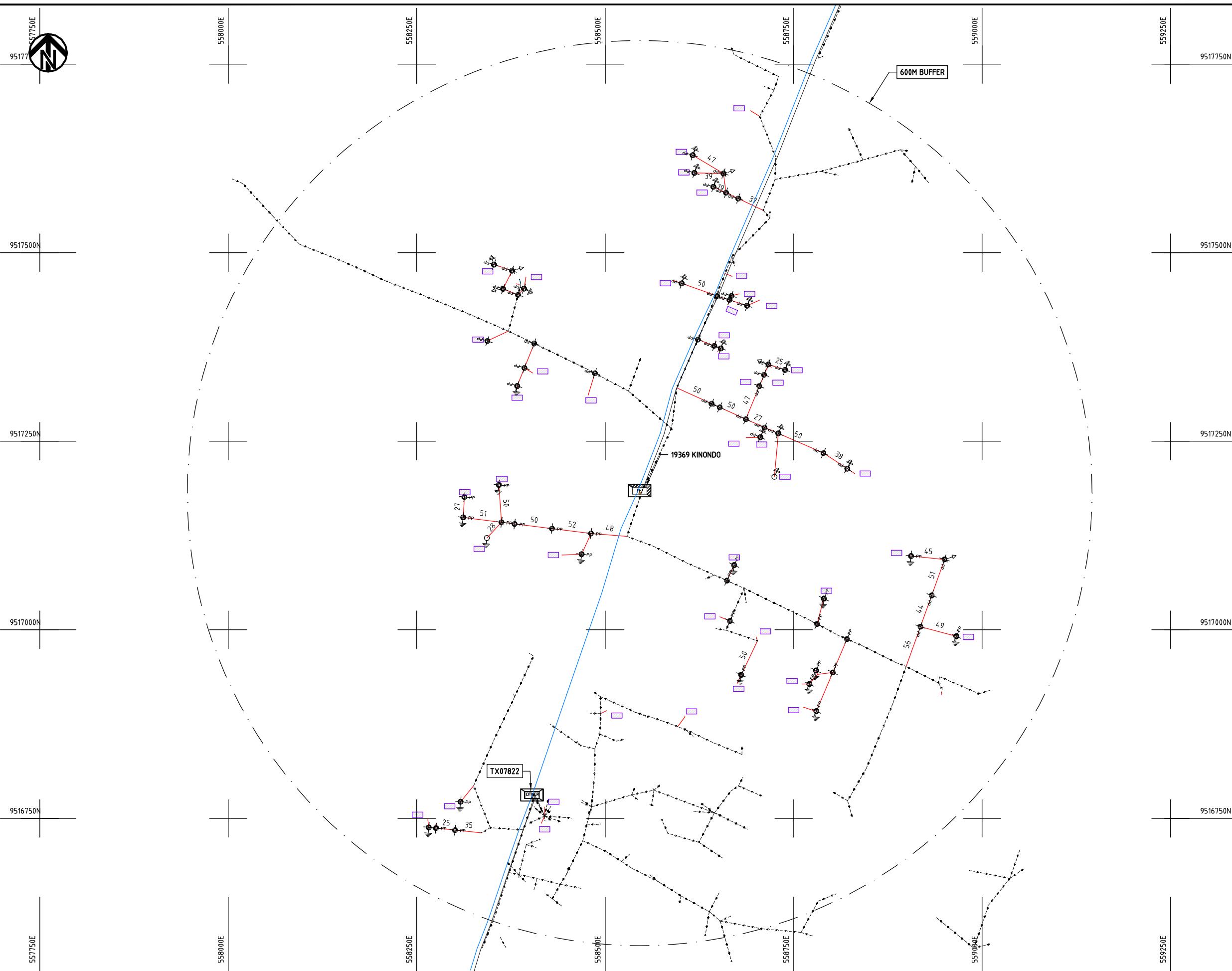
DRAWING TITLE
COUNTY: KWALE
SCHEME: MAXIMIZATION
PROJECT SITE: 120509 KIDAMAYA

DRAW. NO. KLF-MA-12
PREPARED BY A.AKBAR
CHECKED BY S.MAETA
APPROVED BY Y.TANAKA
DATE 10th SEP 2018



NIPPON KOEI CO., LTD





NOTES:

1. EXACT LOCATIONS OF POWER POLES TO BE DETERMINED ON SITE BY THE ENGINEER.
2. CONCRETE/ WOODEN POLES TO BE DETERMINED ON SITE BY THE ENGINEER.
3. LENGTH OF POLES TO BE DETERMINED ON SITE BY THE ENGINEER.
4. PME TO BE AFTER EVERY 200m INTERVAL OR AFTER 4 SPANS.
5. POLES NOT SHOWN WHERE PME OR LV EARTH INTERSECT FOR CLARITY.

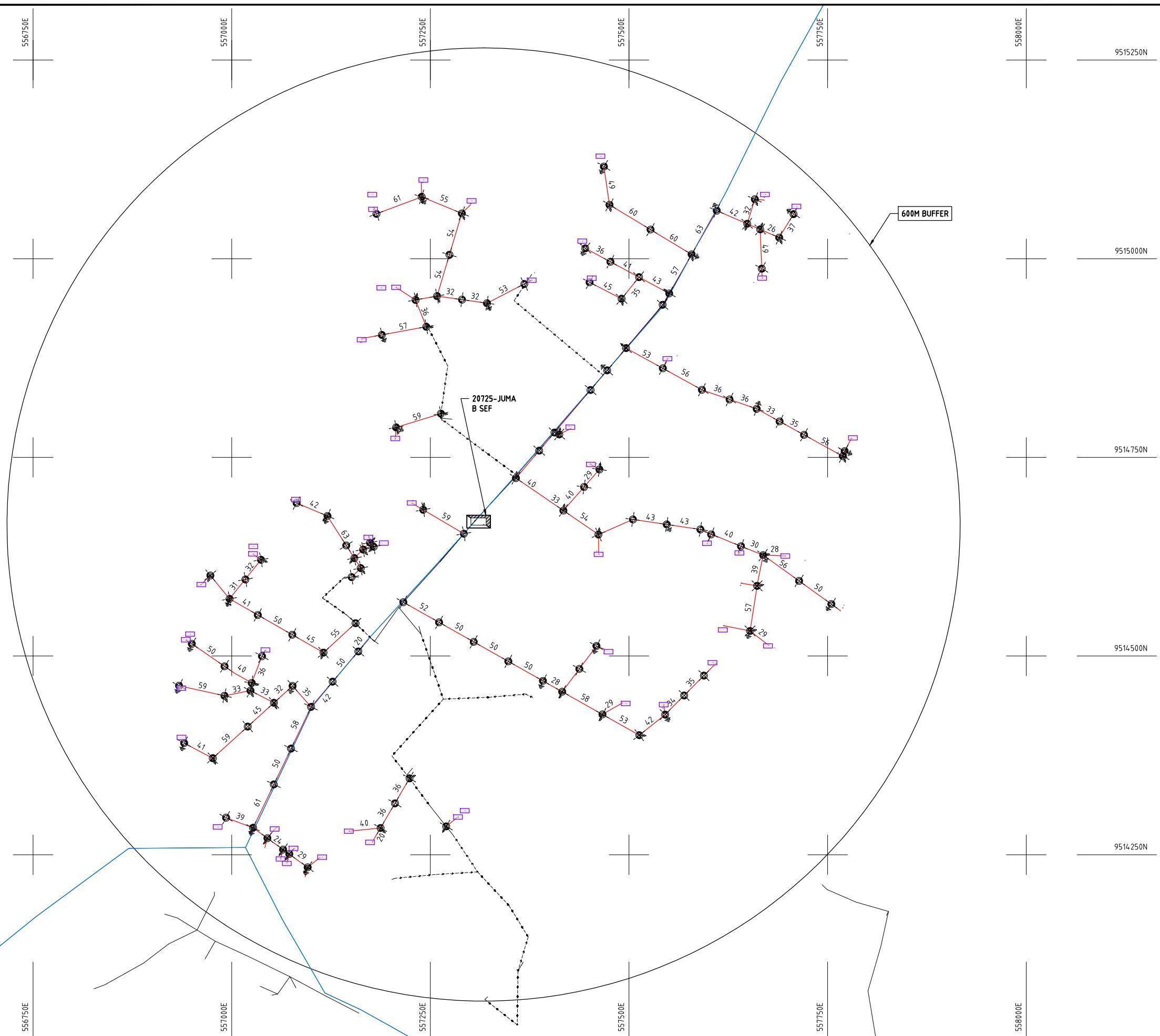
- HOUSEHOLDS/ BUILDINGS
- PROPOSED DISTRIBUTION LINE
- EXISTING 11kV LINE
- EXISTING 33kV LINE
- Existing Distribution Line
- MAXIMISATION TRANSFORMER
- EXTENSION TRANSFORMER
- OTHER EXISTING TRANSFORMER
- PP WOODEN ELECTRIC POLES
- CP CONCRETE ELECTRIC POLES
- △ LV-EARTH
- PME —PROTECTIVE MULTIPLE EARTHING STAY

PROJECT:
THE PREPARATORY SURVEY
ON THE PROJECT FOR IMPROVEMENT
OF POWER DISTRIBUTION SYSTEM
IN THE REPUBLIC OF KENYA

DRAWING TITLE
COUNTY: KWALE
SCHEME: MAXIMIZATION
PROJECT SITE: 19369 - KINONDO

DRAW. NO. A.AKBAR
DRAW. NO. PREPARED BY
CHECKED BY S.MAETA
APPROVED BY Y.TANAKA
DATE 10th SEP 2018

(A3)
NIPPON KOEI CO., LTD



PROJECT:
THE PREPARATORY SURVEY
ON THE PROJECT FOR IMPROVEMENT
OF POWER DISTRIBUTION SYSTEM
IN THE REPUBLIC OF KENYA

DRAWING TITLE

COUNTY: KWALE
SCHEME: MAXIMIZATION
PROJECT SITE: 20725 JUMA B SEF

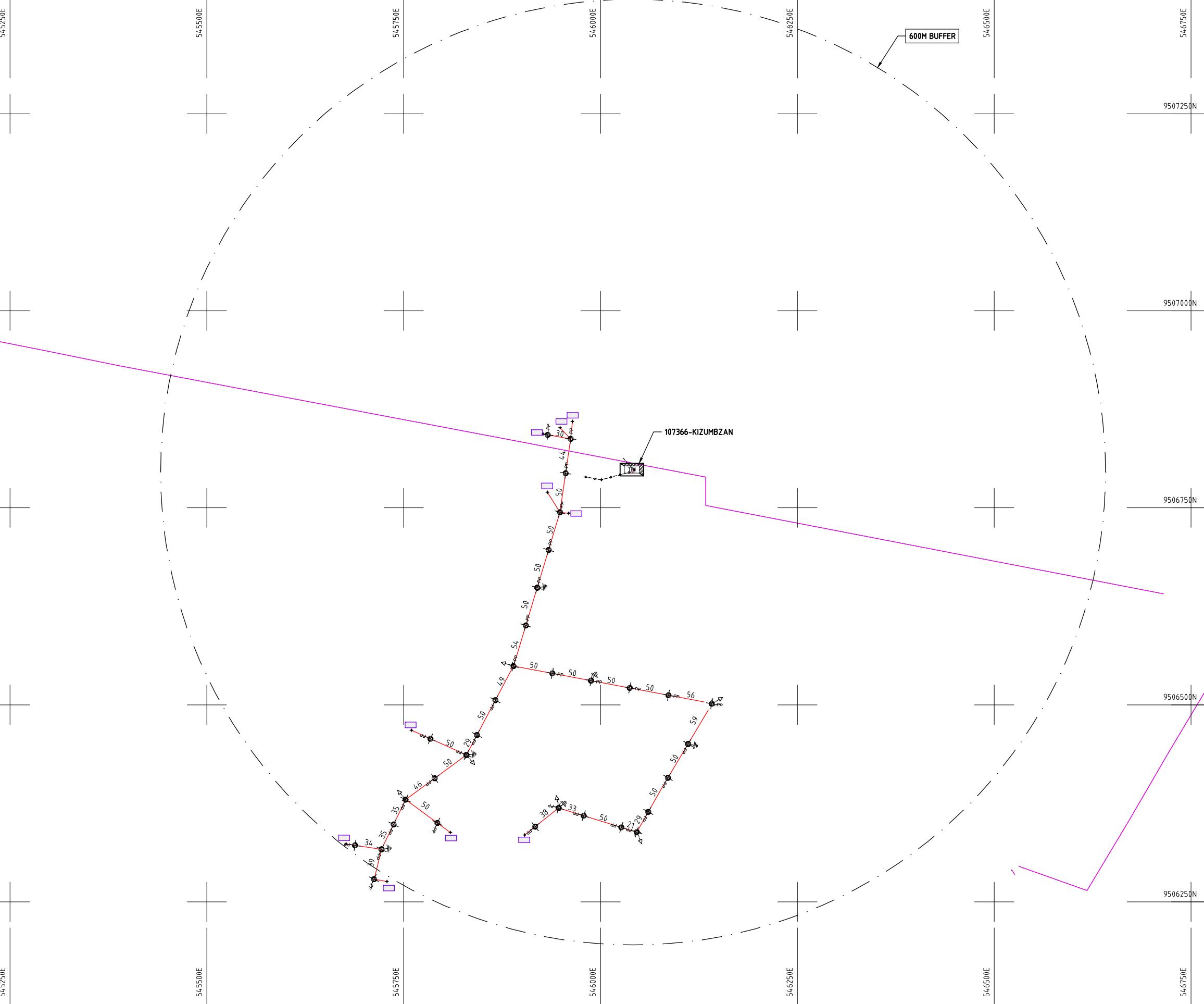
DRAW. NO.
KWL-MA-16

PREPARED BY	A.AKBAR
CHECKED BY	S.MAETA
APPROVED BY	Y.TANAKA
DATE	10th SEP 2018



NIPPON KOEI CO., LTD

(A3)

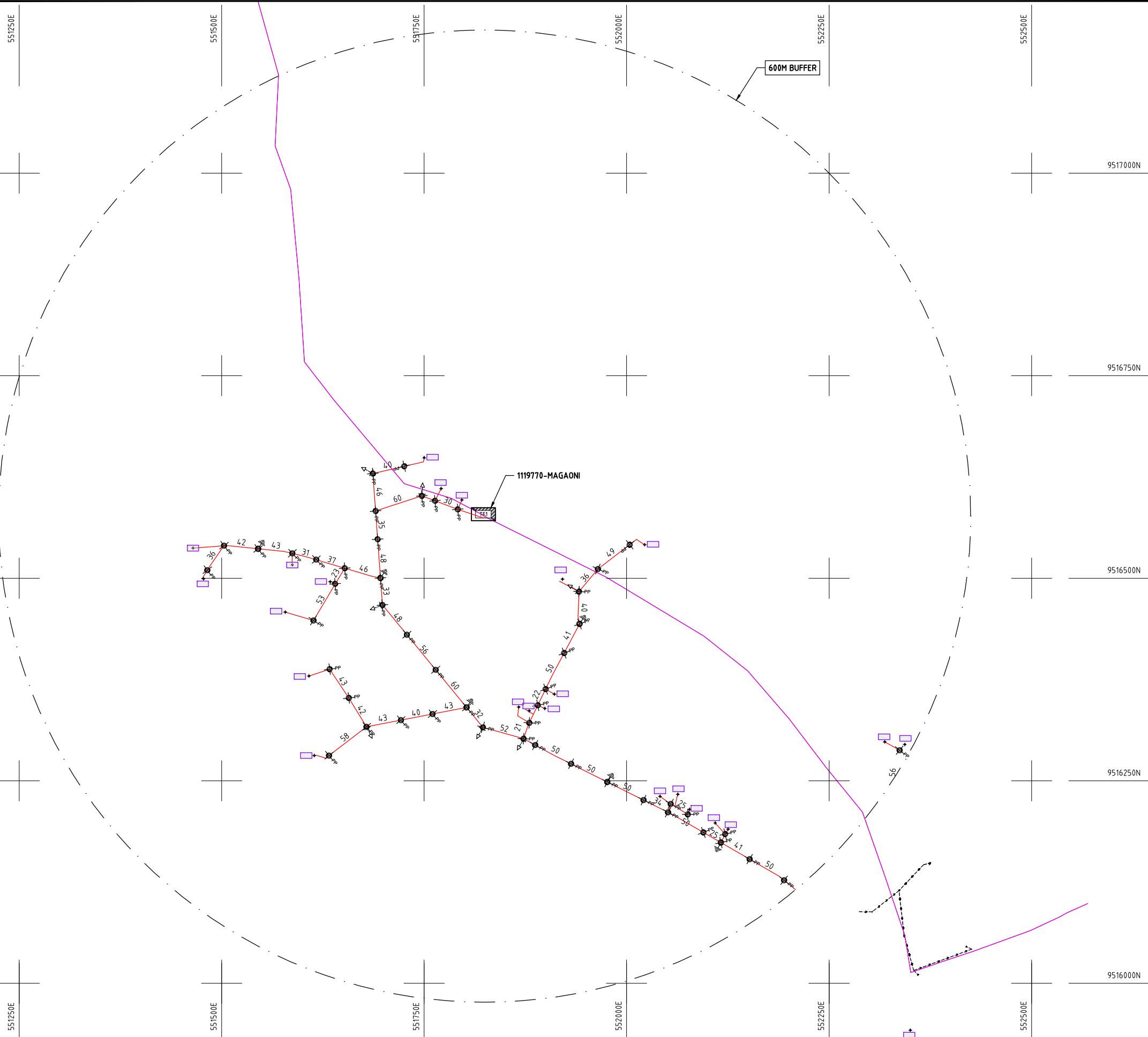
**NOTES:**

1. EXACT LOCATIONS OF POWER POLES TO BE DETERMINED ON SITE BY THE ENGINEER.
2. CONCRETE/ WOODEN POLES TO BE DETERMINED ON SITE BY THE ENGINEER.
3. LENGTH OF POLES TO BE DETERMINED ON SITE BY THE ENGINEER.
4. PME TO BE AFTER EVERY 200m INTERVAL OR AFTER 4 SPANS.
5. POLES NOT SHOWN WHERE PME OR LV EARTH INTERSECT FOR CLARITY.

- HOUSEHOLDS/ BUILDINGS
- PROPOSED DISTRIBUTION LINE
- EXISTING 11kV LINE
- EXISTING 33kV LINE
- EXISTING DISTRIBUTION LINE
- TF1 MAXIMISATION TRANSFORMER
- TF2 EXTENSION TRANSFORMER
- OTHER OTHER EXISTING TRANSFORMER
- PP WOODEN ELECTRIC POLES
- CP CONCRETE ELECTRIC POLES
- △ I LV-EARTH
- II PME -PROTECTIVE MULTIPLE EARTHING STAY

(A3)

PROJECT:	THE PREPARATORY SURVEY ON THE PROJECT FOR IMPROVEMENT OF POWER DISTRIBUTION SYSTEM IN THE REPUBLIC OF KENYA	DRAWING TITLE	DRAW. NO.	PREPARED BY	A.AKBAR	NIPPON KOEI CO., LTD
		COUNTY: KWALE SCHEME: MAXIMIZATION PROJECT SITE: 107366 KIZUMBAN	KLF-MA-17	CHECKED BY	S.MAETA	
				APPROVED BY	Y.TANAKA	
				DATE	10th SEP 2018	



PROJECT:
THE PREPARATORY SURVEY
ON THE PROJECT FOR IMPROVEMENT
OF POWER DISTRIBUTION SYSTEM
IN THE REPUBLIC OF KENYA

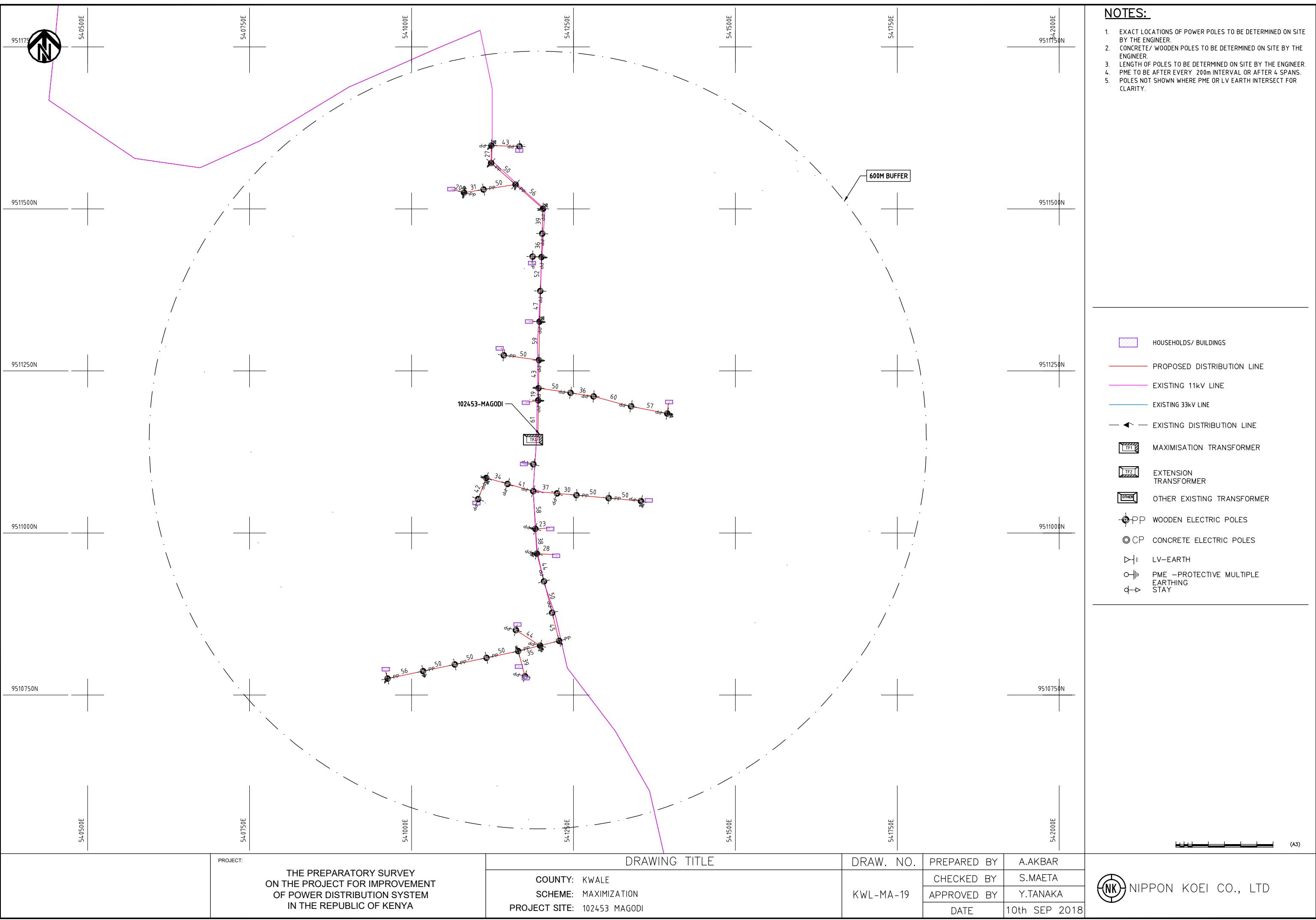
DRAWING TITLE
COUNTY: KWALE
SCHEME: MAXIMIZATION
PROJECT SITE: 119770 MAGAONI

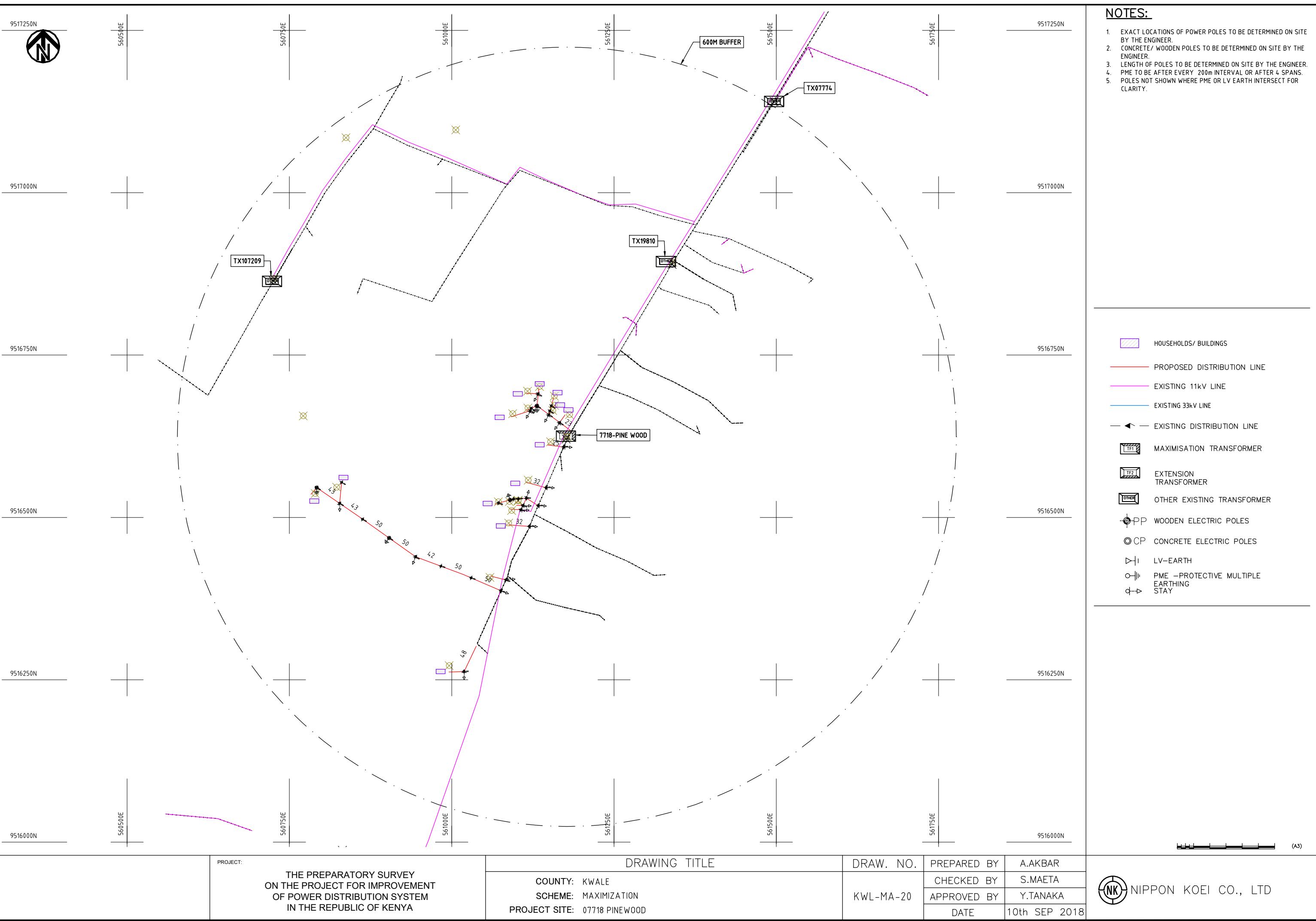
DRAW. NO.
KLF-MA-18

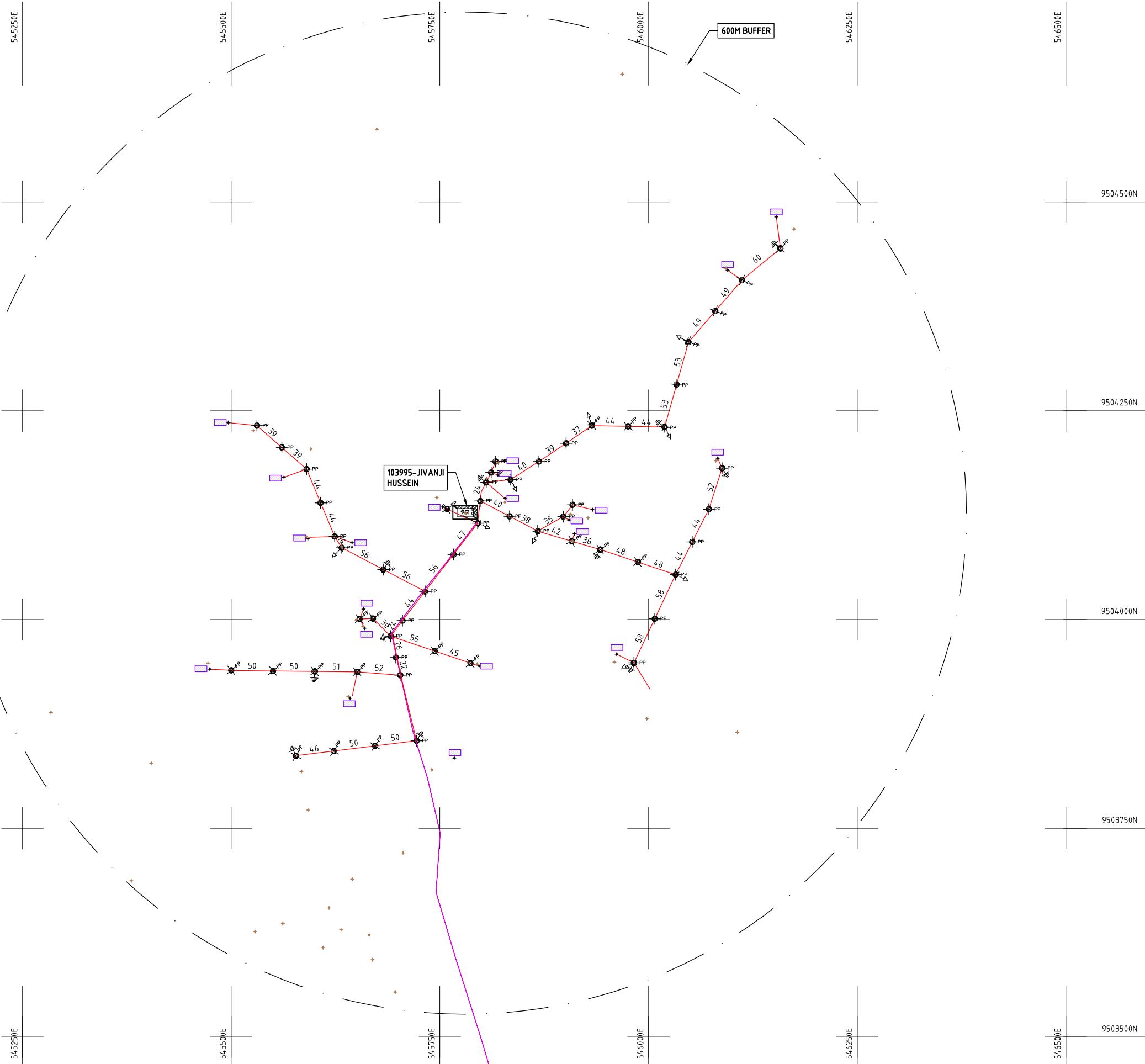
PREPARED BY
A.AKBAR
CHECKED BY
S.MAETA
APPROVED BY
Y.TANAKA
DATE
10th SEP 2018



NIPPON KOEI CO., LTD





**NOTES:**

1. EXACT LOCATIONS OF POWER POLES TO BE DETERMINED ON SITE BY THE ENGINEER.
2. CONCRETE/ WOODEN POLES TO BE DETERMINED ON SITE BY THE ENGINEER.
3. LENGTH OF POLES TO BE DETERMINED ON SITE BY THE ENGINEER.
4. PME TO BE AFTER EVERY 200m INTERVAL OR AFTER 4 SPANS.
5. POLES NOT SHOWN WHERE PME OR LV EARTH INTERSECT FOR CLARITY.

- HOUSEHOLDS/ BUILDINGS
- PROPOSED DISTRIBUTION LINE
- EXISTING 11kV LINE
- EXISTING 33kV LINE
- > EXISTING DISTRIBUTION LINE
- TF1 MAXIMISATION TRANSFORMER
- TF2 EXTENSION TRANSFORMER
- OTHER OTHER EXISTING TRANSFORMER
- PP WOODEN ELECTRIC POLES
- CP CONCRETE ELECTRIC POLES
- △ I LV-EARTH
- III PME —PROTECTIVE MULTIPLE EARTHING STAY

PROJECT:
THE PREPARATORY SURVEY
ON THE PROJECT FOR IMPROVEMENT
OF POWER DISTRIBUTION SYSTEM
IN THE REPUBLIC OF KENYA

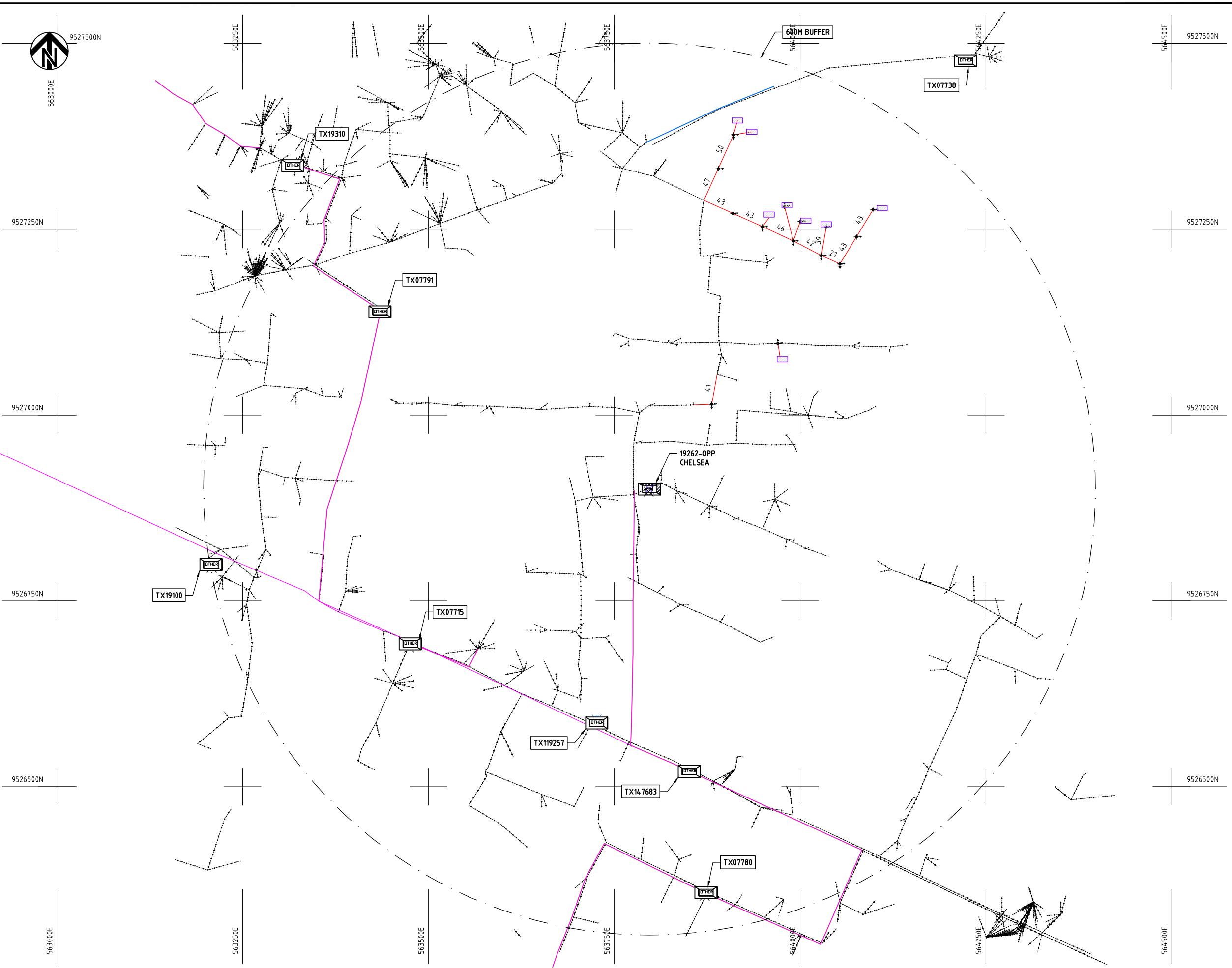
DRAWING TITLE
COUNTY: KWALE
SCHEME: MAXIMIZATION
PROJECT SITE: 103995-JIVANJI HUSSEIN

DRAW. NO. A.AKBAR
DRAW. NO. DRAW. NO. PREPARED BY A.AKBAR
CHECKED BY S.MAETA
APPROVED BY Y.TANAKA
DATE 10th SEP 2018



NIPPON KOEI CO., LTD

(A3)

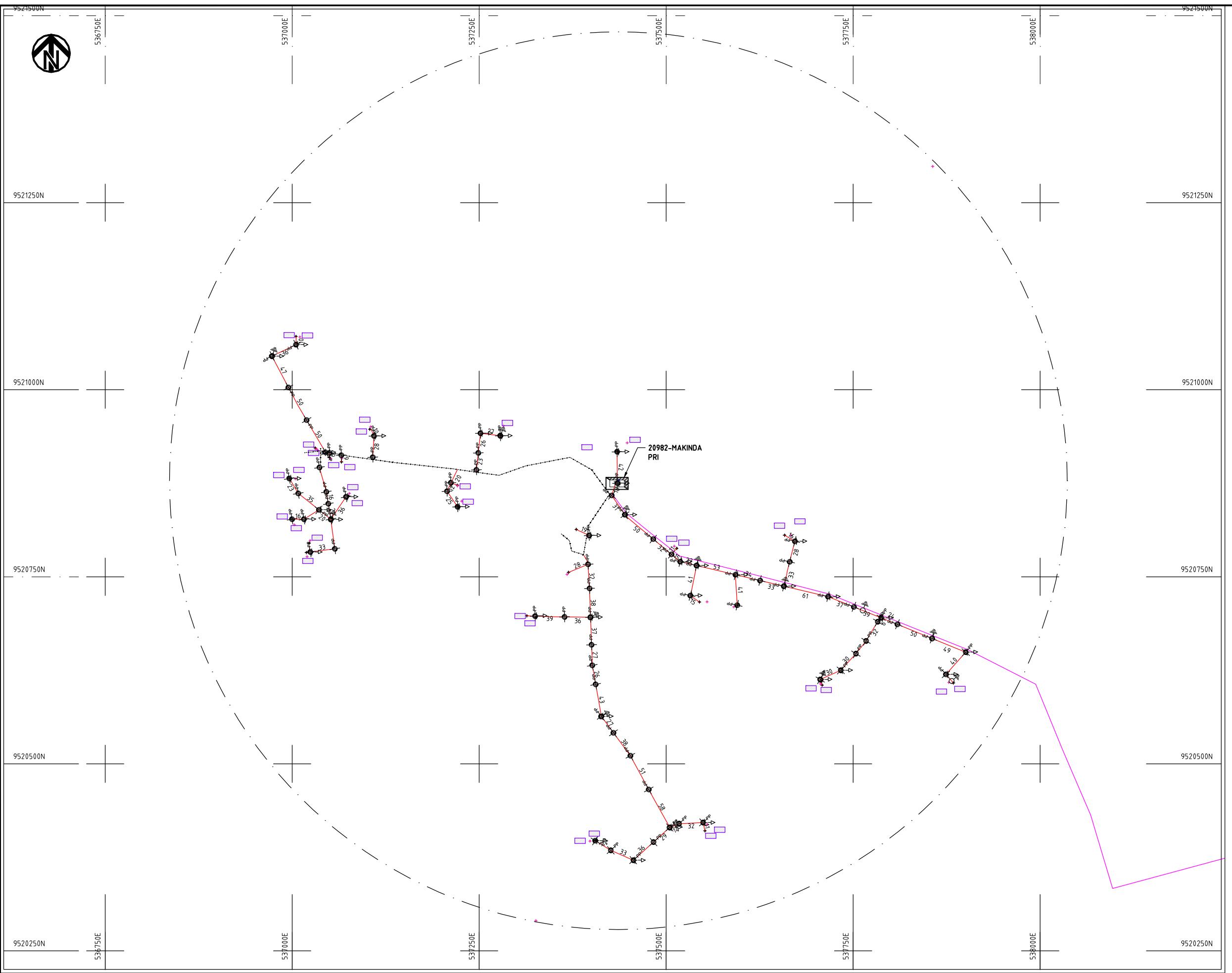


NOTES:

1. EXACT LOCATIONS OF POWER POLES TO BE DETERMINED ON SITE BY THE ENGINEER.
2. CONCRETE/ WOODEN POLES TO BE DETERMINED ON SITE BY THE ENGINEER.
3. LENGTH OF POLES TO BE DETERMINED ON SITE BY THE ENGINEER.
4. PME TO BE AFTER EVERY 200m INTERVAL OR AFTER 4 SPANS.
5. POLES NOT SHOWN WHERE PME OR LV EARTH INTERSECT FOR CLARITY.

- HOUSEHOLDS/ BUILDINGS
- PROPOSED DISTRIBUTION LINE
- EXISTING 11kV LINE
- EXISTING 33kV LINE
- EXISTING DISTRIBUTION LINE
- ▲ MAXIMISATION TRANSFORMER
- EXTENSION TRANSFORMER
- OTHER EXISTING TRANSFORMER
- WOODEN ELECTRIC POLES
- CONCRETE ELECTRIC POLES
- △ LV-EARTH
- PME —PROTECTIVE MULTIPLE EARTHING STAY

PROJECT:	THE PREPARATORY SURVEY ON THE PROJECT FOR IMPROVEMENT OF POWER DISTRIBUTION SYSTEM IN THE REPUBLIC OF KENYA	DRAWING TITLE	DRAW. NO.	PREPARED BY	A.AKBAR	NIPPON KOEI CO., LTD
		COUNTY: KWALE SCHEME: MAXIMIZATION PROJECT SITE: 19262 OPP. CHELSEA	KWL-MA-22	CHECKED BY	S.MAETA	
				APPROVED BY	Y.TANAKA	
				DATE	10th SEP 2018	



NOTES:

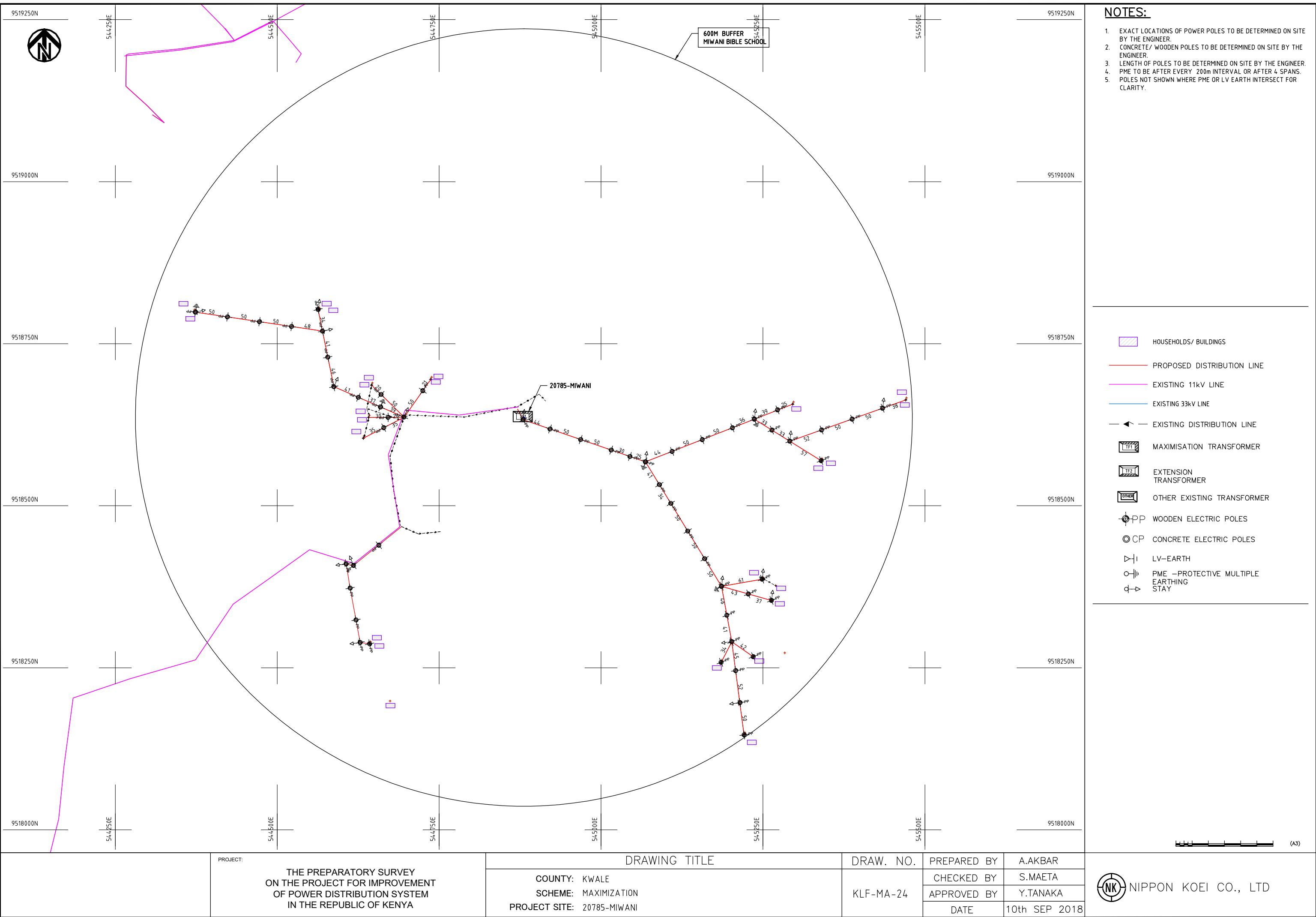
1. EXACT LOCATIONS OF POWER POLES TO BE DETERMINED ON SITE BY THE ENGINEER.
2. CONCRETE/ WOODEN POLES TO BE DETERMINED ON SITE BY THE ENGINEER.
3. LENGTH OF POLES TO BE DETERMINED ON SITE BY THE ENGINEER.
4. PME TO BE AFTER EVERY 200m INTERVAL OR AFTER 4 SPANS.
5. POLES NOT SHOWN WHERE PME OR LV EARTH INTERSECT FOR CLARITY.

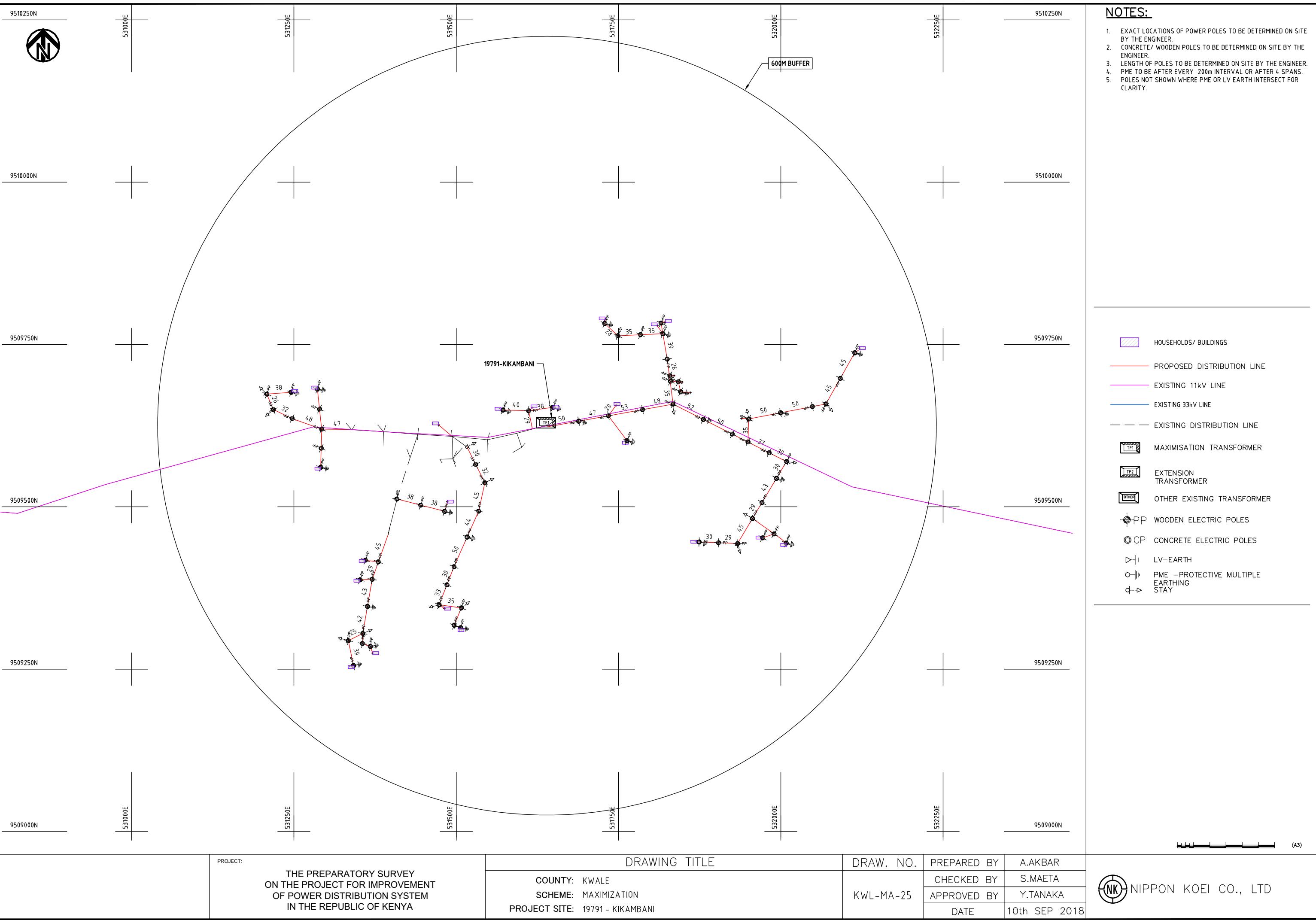
- [Purple hatched rectangle] HOUSEHOLDS/ BUILDINGS
- [Red line] PROPOSED DISTRIBUTION LINE
- [Pink line] EXISTING 11kV LINE
- [Blue line] EXISTING 33kV LINE
- [Dashed line with arrowhead] EXISTING DISTRIBUTION LINE
- [TF1 icon] MAXIMISATION TRANSFORMER
- [TF2 icon] EXTENSION TRANSFORMER
- [OTHER icon] OTHER EXISTING TRANSFORMER
- [Circle with cross] WOODEN ELECTRIC POLES
- [Circle with dot] CONCRETE ELECTRIC POLES
- [Black triangle] LV-EARTH
- [Circle with three vertical lines] PME —PROTECTIVE MULTIPLE EARTHING STAY

PROJECT:	THE PREPARATORY SURVEY ON THE PROJECT FOR IMPROVEMENT OF POWER DISTRIBUTION SYSTEM IN THE REPUBLIC OF KENYA	DRAWING TITLE	DRAW. NO.	PREPARED BY	A.AKBAR	(A3)
		COUNTY: KILIFI SCHEME: MAXIMIZATION PROJECT SITE: 20982-MKANDA PRIMARY	KLF-MA-23	CHECKED BY	S.MAETA	
				APPROVED BY	Y.TANAKA	
				DATE	10th SEP 2018	



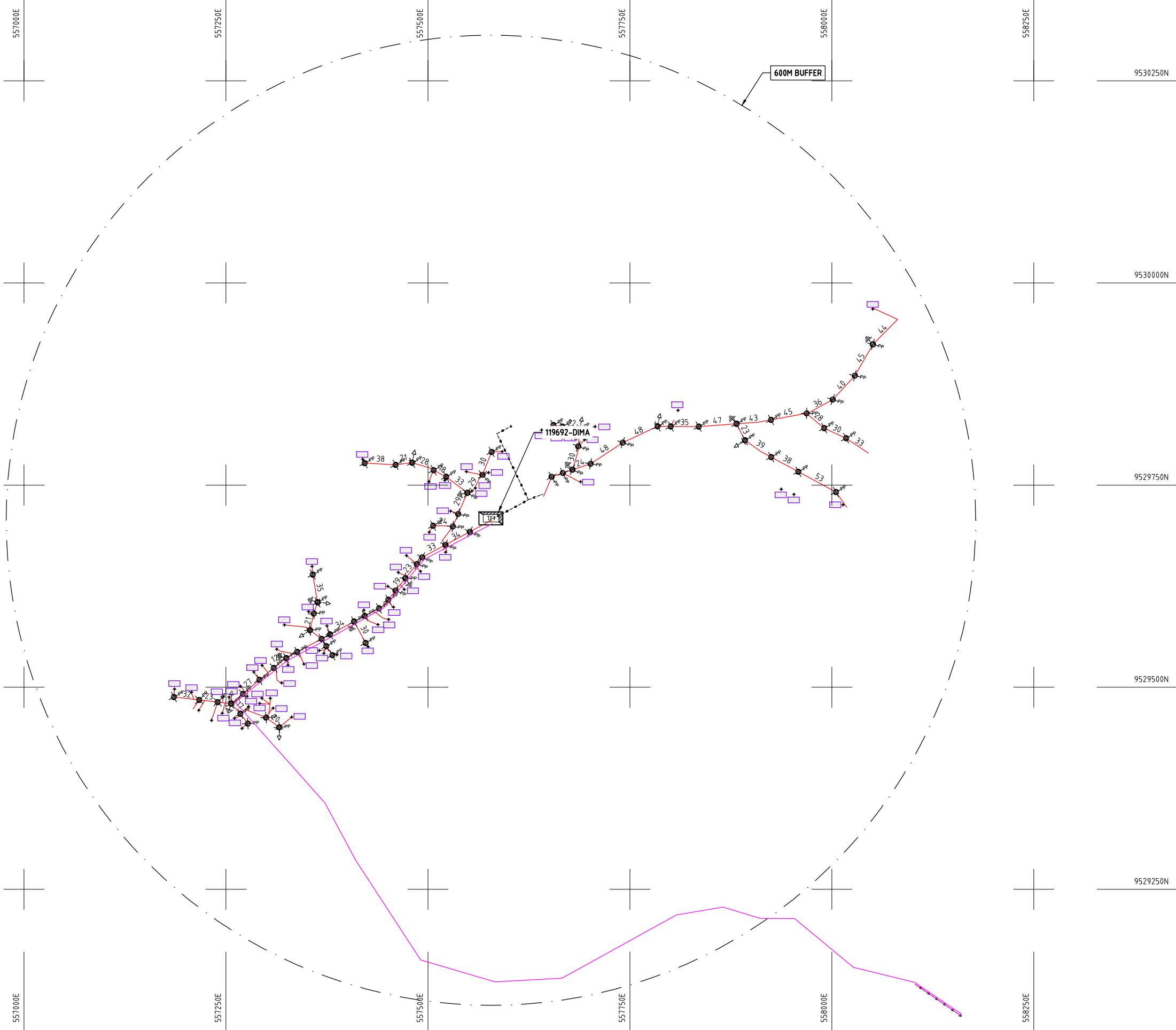
NIPPON KOEI CO., LTD







9530250N

**NOTES:**

1. EXACT LOCATIONS OF POWER POLES TO BE DETERMINED ON SITE BY THE ENGINEER.
2. CONCRETE/ WOODEN POLES TO BE DETERMINED ON SITE BY THE ENGINEER.
3. LENGTH OF POLES TO BE DETERMINED ON SITE BY THE ENGINEER.
4. PME TO BE AFTER EVERY 200m INTERVAL OR AFTER 4 SPANS.
5. POLES NOT SHOWN WHERE PME OR LV EARTH INTERSECT FOR CLARITY.

- HOUSEHOLDS/ BUILDINGS
- PROPOSED DISTRIBUTION LINE
- EXISTING 11kV LINE
- EXISTING 33kV LINE
- EXISTING DISTRIBUTION LINE
- TF1 MAXIMISATION TRANSFORMER
- TF2 EXTENSION TRANSFORMER
- OTHER OTHER EXISTING TRANSFORMER
- PP WOODEN ELECTRIC POLES
- CP CONCRETE ELECTRIC POLES
- △ I LV-EARTH
- III PME —PROTECTIVE MULTIPLE EARTHING STAY

(A3)

PROJECT:
THE PREPARATORY SURVEY
ON THE PROJECT FOR IMPROVEMENT
OF POWER DISTRIBUTION SYSTEM
IN THE REPUBLIC OF KENYA

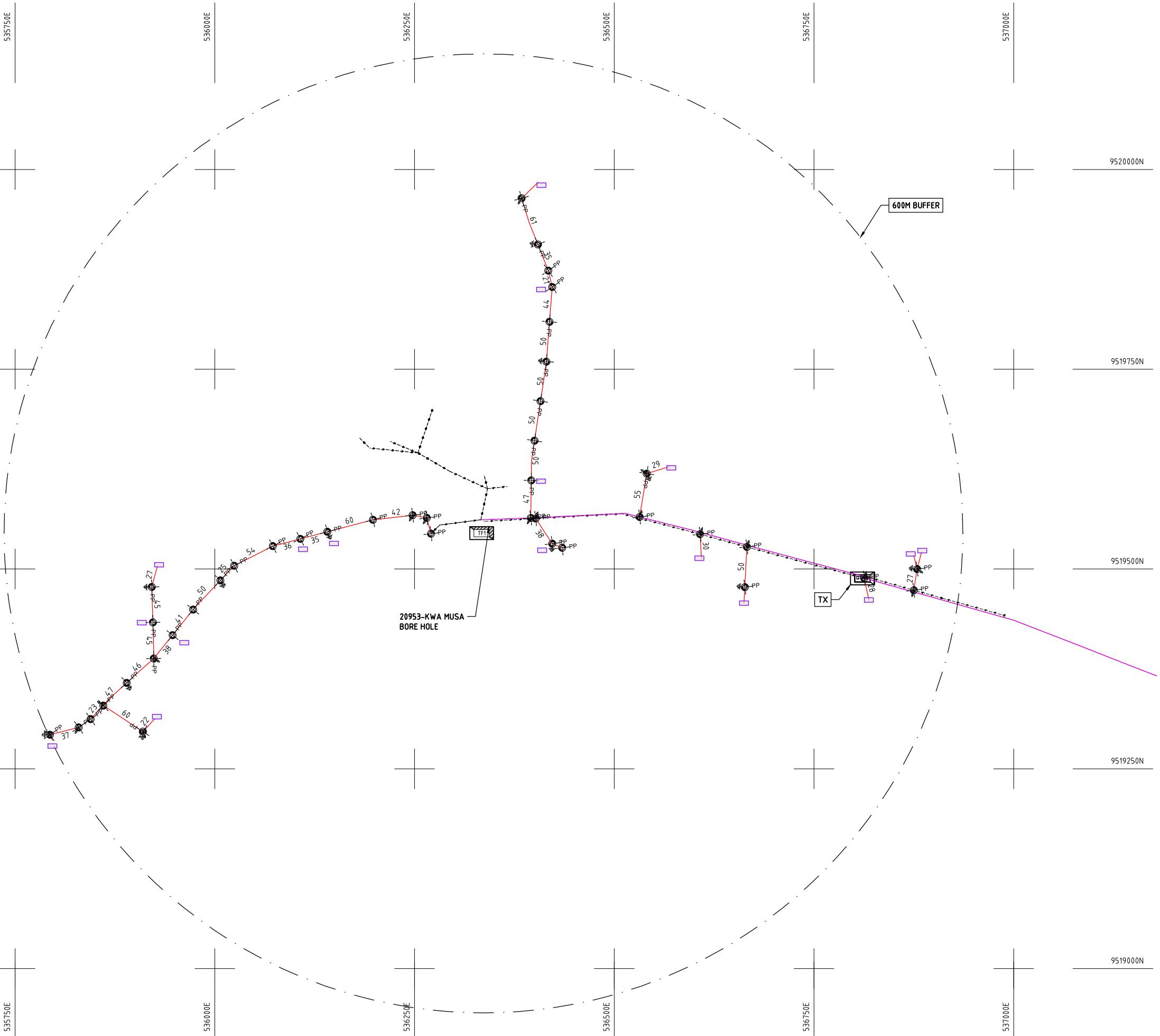
DRAWING TITLE
COUNTY: KWALE
SCHEME: MAXIMIZATION
PROJECT SITE: 119692-DIMA

DRAW. NO.
KLF-MA-26

PREPARED BY	A.AKBAR
CHECKED BY	S.MAETA
APPROVED BY	Y.TANAKA
DATE	10th SEP 2018



NIPPON KOEI CO., LTD

**NOTES:**

- EXACT LOCATIONS OF POWER POLES TO BE DETERMINED ON SITE BY THE ENGINEER.
- CONCRETE/ WOODEN POLES TO BE DETERMINED ON SITE BY THE ENGINEER.
- LENGTH OF POLES TO BE DETERMINED ON SITE BY THE ENGINEER.
- PME TO BE AFTER EVERY 200m INTERVAL OR AFTER 4 SPANS.
- POLES NOT SHOWN WHERE PME OR LV EARTH INTERSECT FOR CLARITY.

PROJECT:
THE PREPARATORY SURVEY
ON THE PROJECT FOR IMPROVEMENT
OF POWER DISTRIBUTION SYSTEM
IN THE REPUBLIC OF KENYA

DRAWING TITLE
COUNTY: KWALE
SCHEME: MAXIMIZATION
PROJECT SITE: 20953 KWA MUSA BORE HOLE

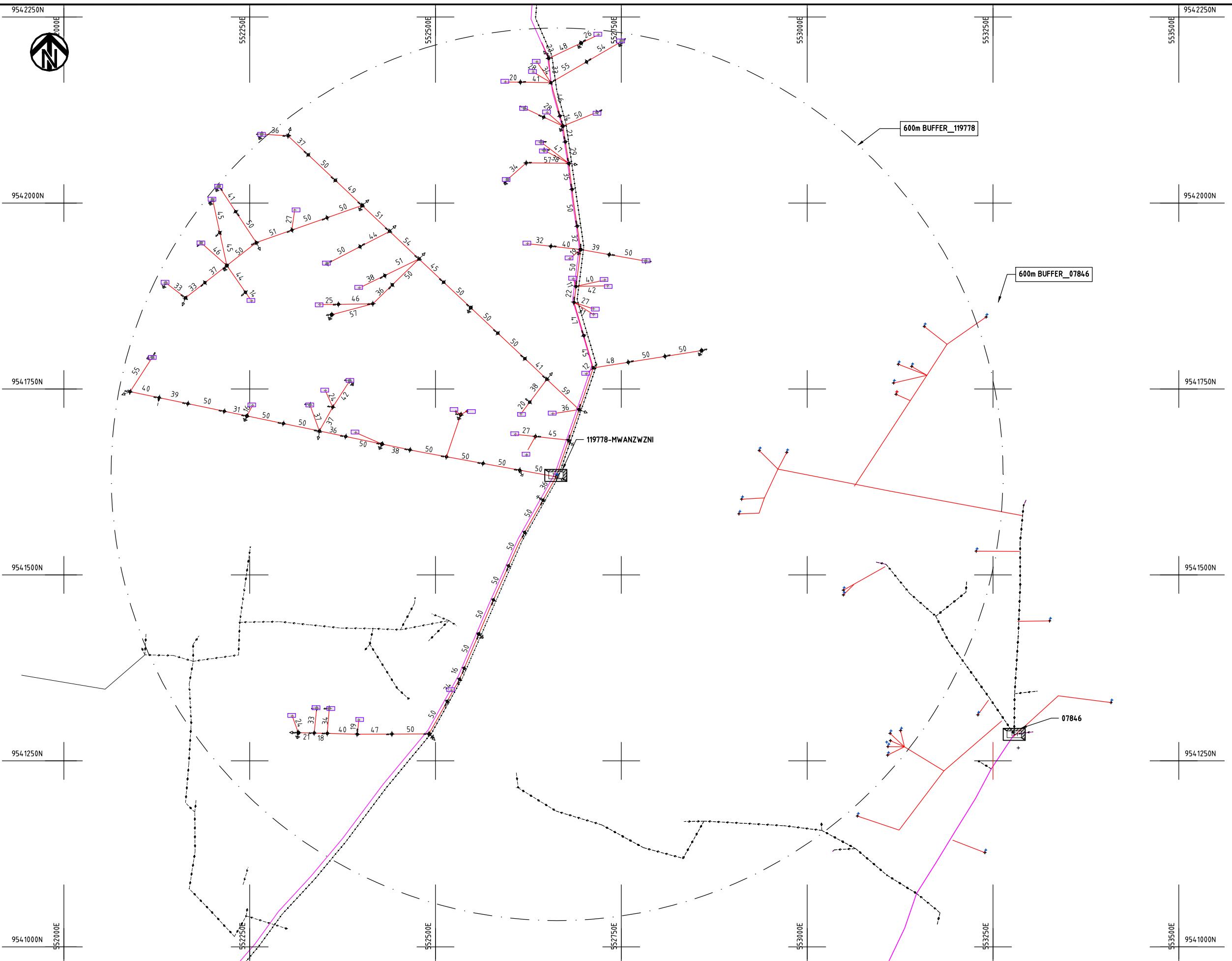
DRAW. NO.
KWL-MA-27

PREPARED BY
A.AKBAR
CHECKED BY
S.MAETA
APPROVED BY
Y.TANAKA
DATE
10th SEP 2018



NIPPON KOEI CO., LTD

(A3)

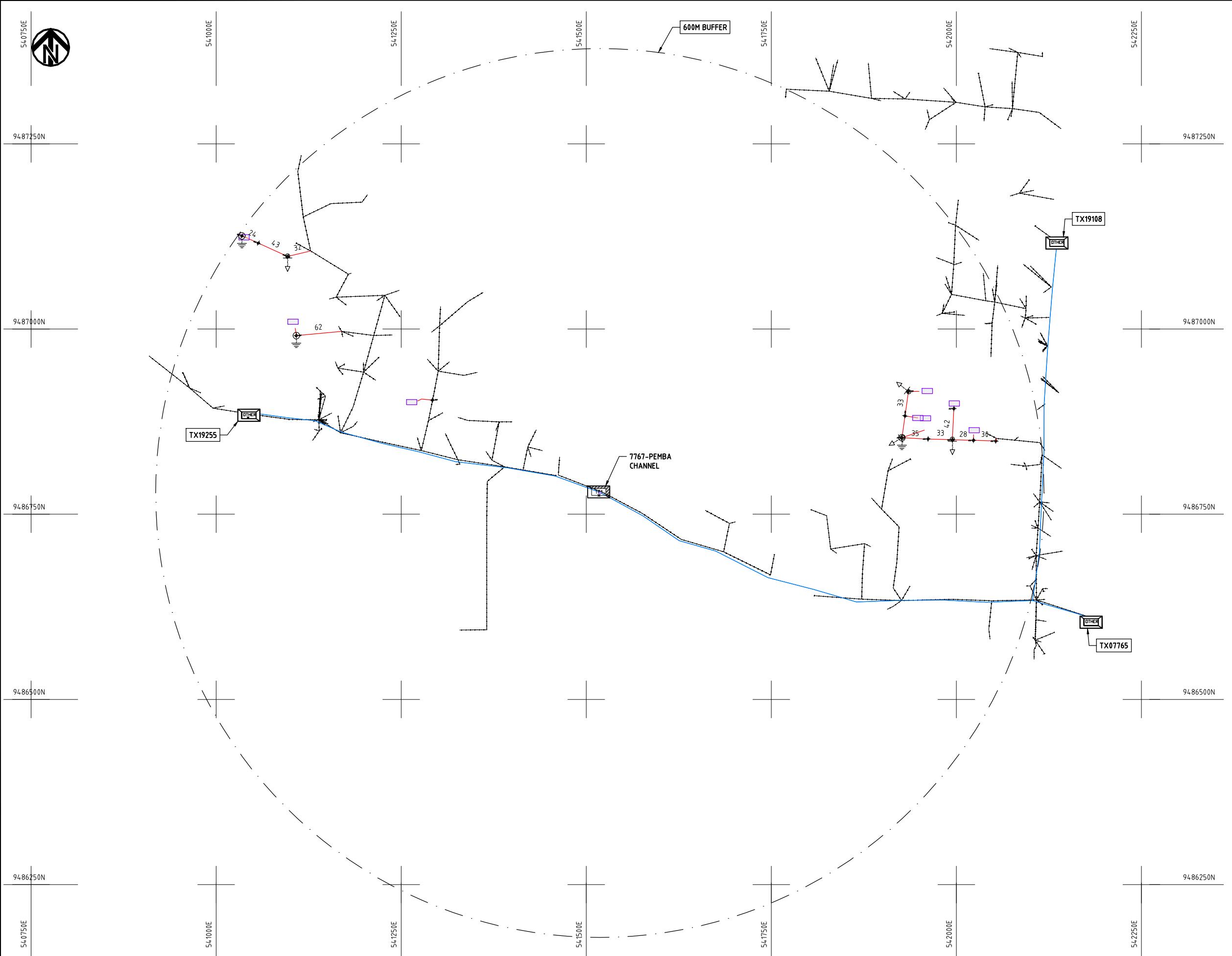


NOTES:

1. EXACT LOCATIONS OF POWER POLES TO BE DETERMINED ON SITE BY THE ENGINEER.
2. CONCRETE/ WOODEN POLES TO BE DETERMINED ON SITE BY THE ENGINEER.
3. LENGTH OF POLES TO BE DETERMINED ON SITE BY THE ENGINEER.
4. PME TO BE AFTER EVERY 200m INTERVAL OR AFTER 4 SPANS.
5. POLES NOT SHOWN WHERE PME OR LV EARTH INTERSECT FOR CLARITY.

- [Icon: Hatched Box] HOUSEHOLDS/ BUILDINGS
- [Icon: Red Line] PROPOSED DISTRIBUTION LINE
- [Icon: Pink Line] EXISTING 11kV LINE
- [Icon: Blue Line] EXISTING 33kV LINE
- [Icon: Dashed Line] EXISTING DISTRIBUTION LINE
- [Icon: Transformer] MAXIMISATION TRANSFORMER
- [Icon: Transformer] EXTENSION TRANSFORMER
- [Icon: Other] OTHER EXISTING TRANSFORMER
- [Icon: Circle with P] WOODEN ELECTRIC POLES
- [Icon: Circle with C] CONCRETE ELECTRIC POLES
- [Icon: Triangle with L] LV-EARTH
- [Icon: Circle with PME] PME —PROTECTIVE MULTIPLE EARTHING STAY

PROJECT:	THE PREPARATORY SURVEY ON THE PROJECT FOR IMPROVEMENT OF POWER DISTRIBUTION SYSTEM IN THE REPUBLIC OF KENYA	DRAWING TITLE	DRAW. NO.	PREPARED BY	A.AKBAR	NIPPON KOEI CO., LTD
		COUNTY: KWALE SCHEME: MAXIMIZATION PROJECT SITE: 119778 - MWANZWZNI	KLF-MA-28	CHECKED BY	S.MAETA	
				APPROVED BY	Y.TANAKA	
				DATE	10th SEP 2018	



NOTES:

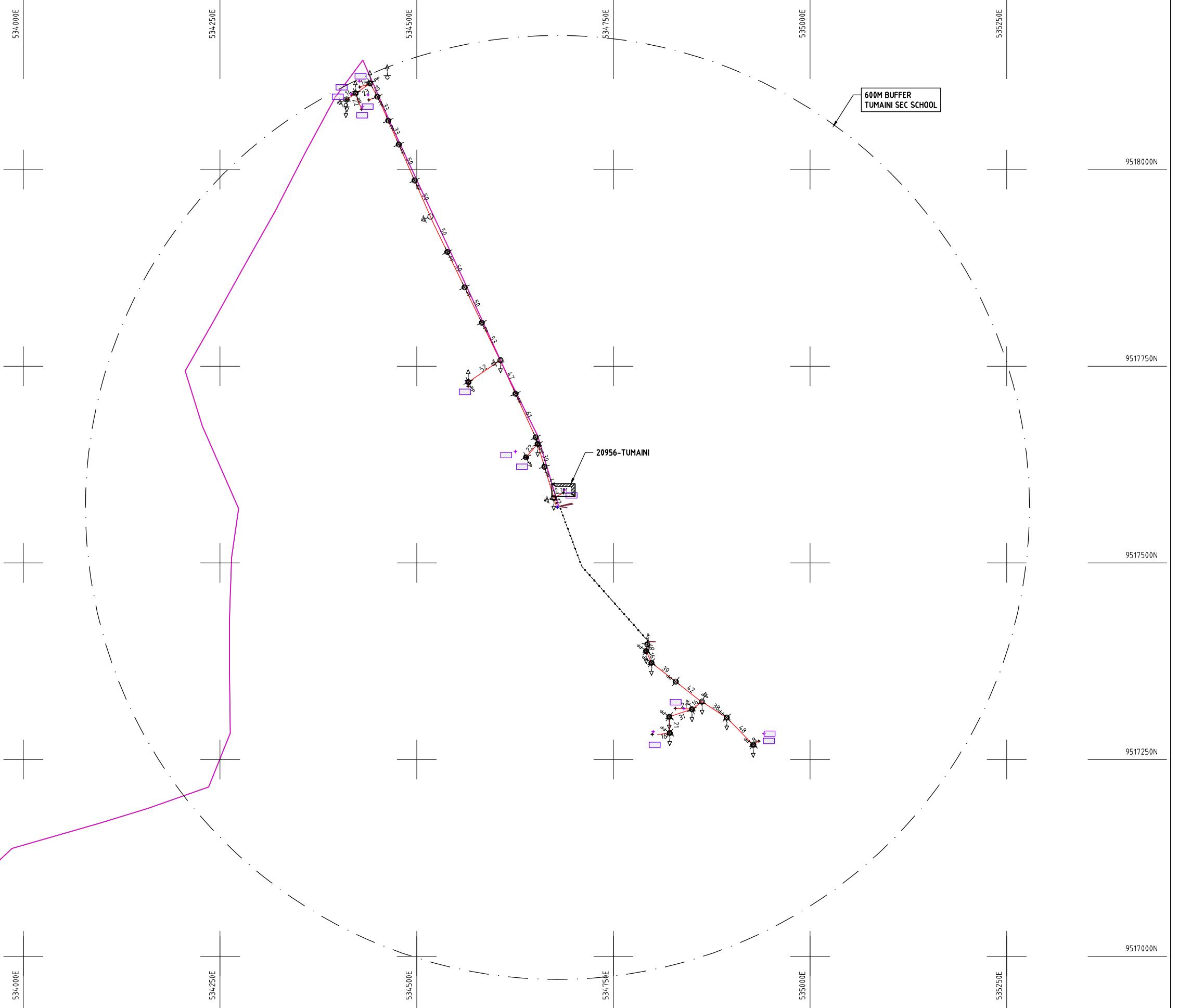
- EXACT LOCATIONS OF POWER POLES TO BE DETERMINED ON SITE BY THE ENGINEER.
- CONCRETE/ WOODEN POLES TO BE DETERMINED ON SITE BY THE ENGINEER.
- LENGTH OF POLES TO BE DETERMINED ON SITE BY THE ENGINEER.
- PME TO BE AFTER EVERY 200m INTERVAL OR AFTER 4 SPANS.
- POLES NOT SHOWN WHERE PME OR LV EARTH INTERSECT FOR CLARITY.

- [Purple square] HOUSEHOLDS/ BUILDINGS
- [Red line] PROPOSED DISTRIBUTION LINE
- [Pink line] EXISTING 11kV LINE
- [Blue line] EXISTING 33kV LINE
- [Black dashed line] EXISTING DISTRIBUTION LINE
- [Small square with TF1/TF2] MAXIMISATION TRANSFORMER
- [Small square with TF2] EXTENSION TRANSFORMER
- [Small square with OTHER] OTHER EXISTING TRANSFORMER
- [Circle with PP] WOODEN ELECTRIC POLES
- [Circle with CP] CONCRETE ELECTRIC POLES
- [Triangle with vertical line] LV-EARTH
- [Circle with three vertical lines] PME -PROTECTIVE MULTIPLE EARTHING STAY

(A3)

PROJECT:	THE PREPARATORY SURVEY ON THE PROJECT FOR IMPROVEMENT OF POWER DISTRIBUTION SYSTEM IN THE REPUBLIC OF KENYA	DRAWING TITLE	DRAW. NO.	PREPARED BY	A.AKBAR	NIPPON KOEI CO., LTD
		COUNTY: KWALE SCHEME: MAXIMIZATION PROJECT SITE: 07767 PEMBA CHANNEL	KWL-MA-29	CHECKED BY	S.MAETA	
				APPROVED BY	Y.TANAKA	
				DATE	10th SEP 2018	





NOTES:

- EXACT LOCATIONS OF POWER POLES TO BE DETERMINED ON SITE BY THE ENGINEER.
- CONCRETE/ WOODEN POLES TO BE DETERMINED ON SITE BY THE ENGINEER.
- LENGTH OF POLES TO BE DETERMINED ON SITE BY THE ENGINEER.
- PME TO BE AFTER EVERY 200m INTERVAL OR AFTER 4 SPANS.
- POLES NOT SHOWN WHERE PME OR LV EARTH INTERSECT FOR CLARITY.

- [Symbol: Purple square] HOUSEHOLDS/ BUILDINGS
- [Symbol: Red line] PROPOSED DISTRIBUTION LINE
- [Symbol: Pink line] EXISTING 11kV LINE
- [Symbol: Blue line] EXISTING 33kV LINE
- [Symbol: Black line with arrowheads] EXISTING DISTRIBUTION LINE
- [Symbol: Transformer icon] MAXIMISATION TRANSFORMER
- [Symbol: Transformer icon] EXTENSION TRANSFORMER
- [Symbol: Other icon] OTHER EXISTING TRANSFORMER
- [Symbol: Pole with circle] WOODEN ELECTRIC POLES
- [Symbol: Pole with circle and dot] CONCRETE ELECTRIC POLES
- [Symbol: Line with triangle] LV-EARTH
- [Symbol: Line with circle and double lines] PME -PROTECTIVE MULTIPLE EARTHING STAY

PROJECT:
THE PREPARATORY SURVEY
ON THE PROJECT FOR IMPROVEMENT
OF POWER DISTRIBUTION SYSTEM
IN THE REPUBLIC OF KENYA

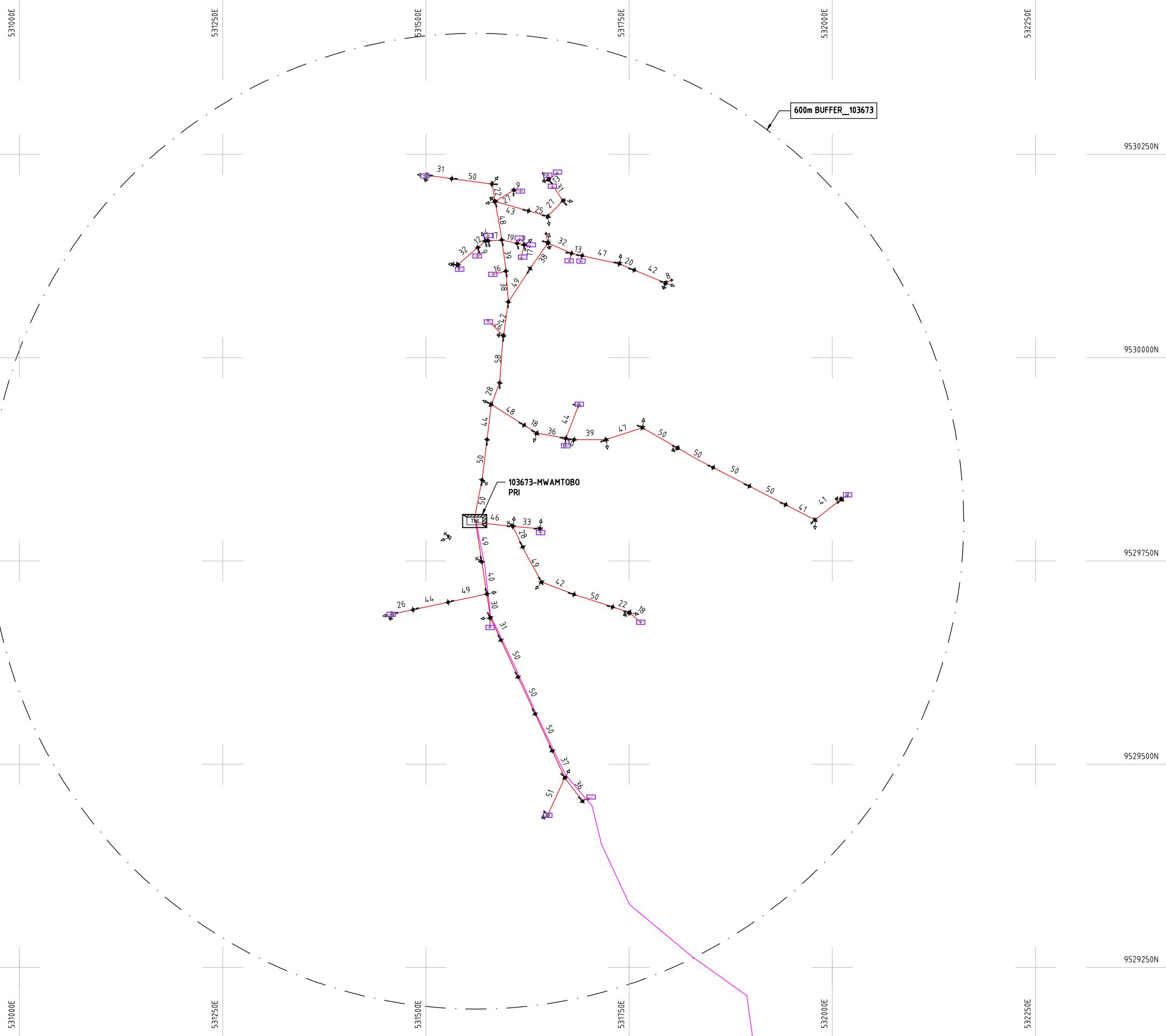
DRAWING TITLE
COUNTY: KWALE
SCHEME: MAXIMIZATION
PROJECT SITE: 20956 TUMAINI

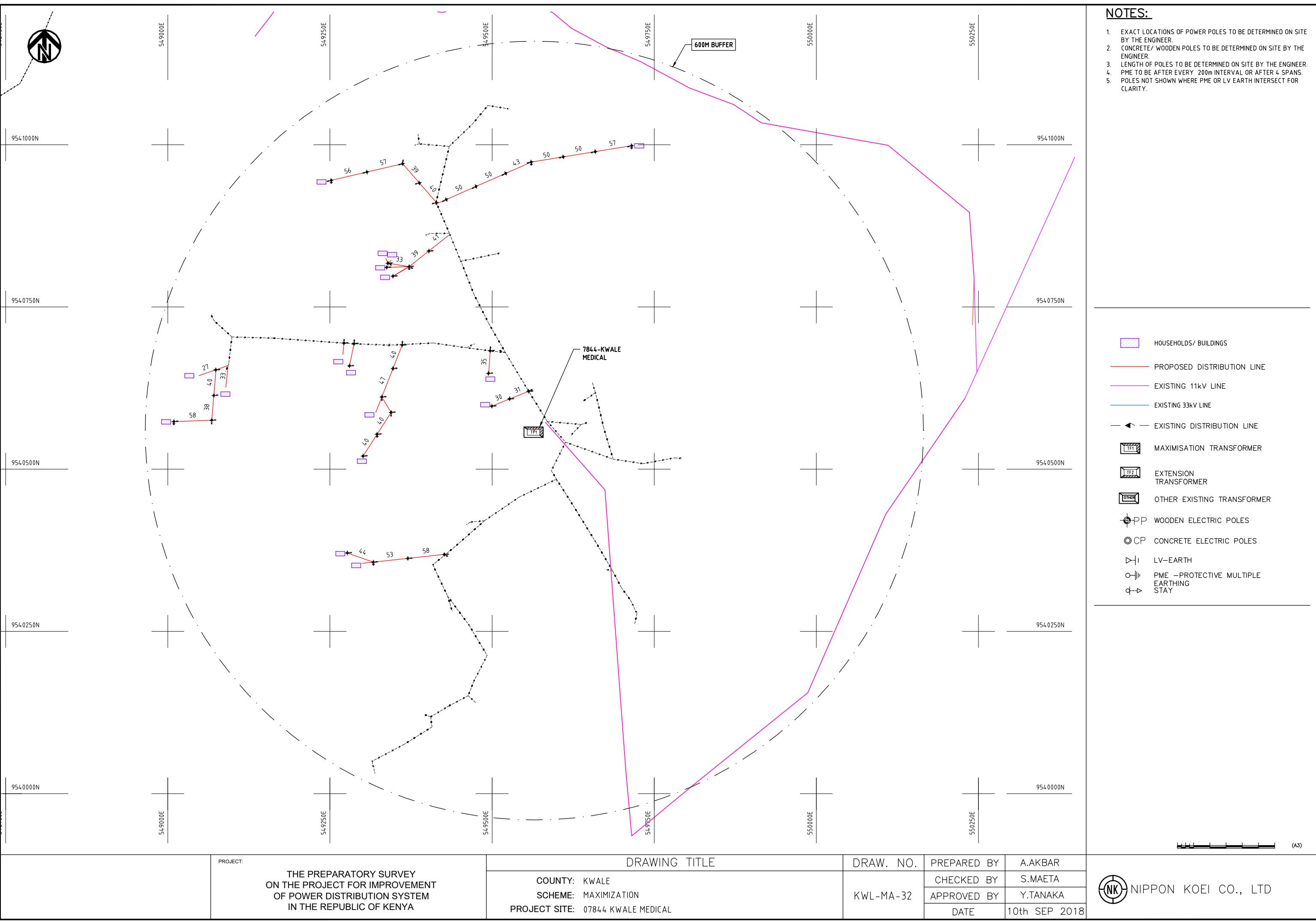
DRAW. NO.
KLF-MA-30

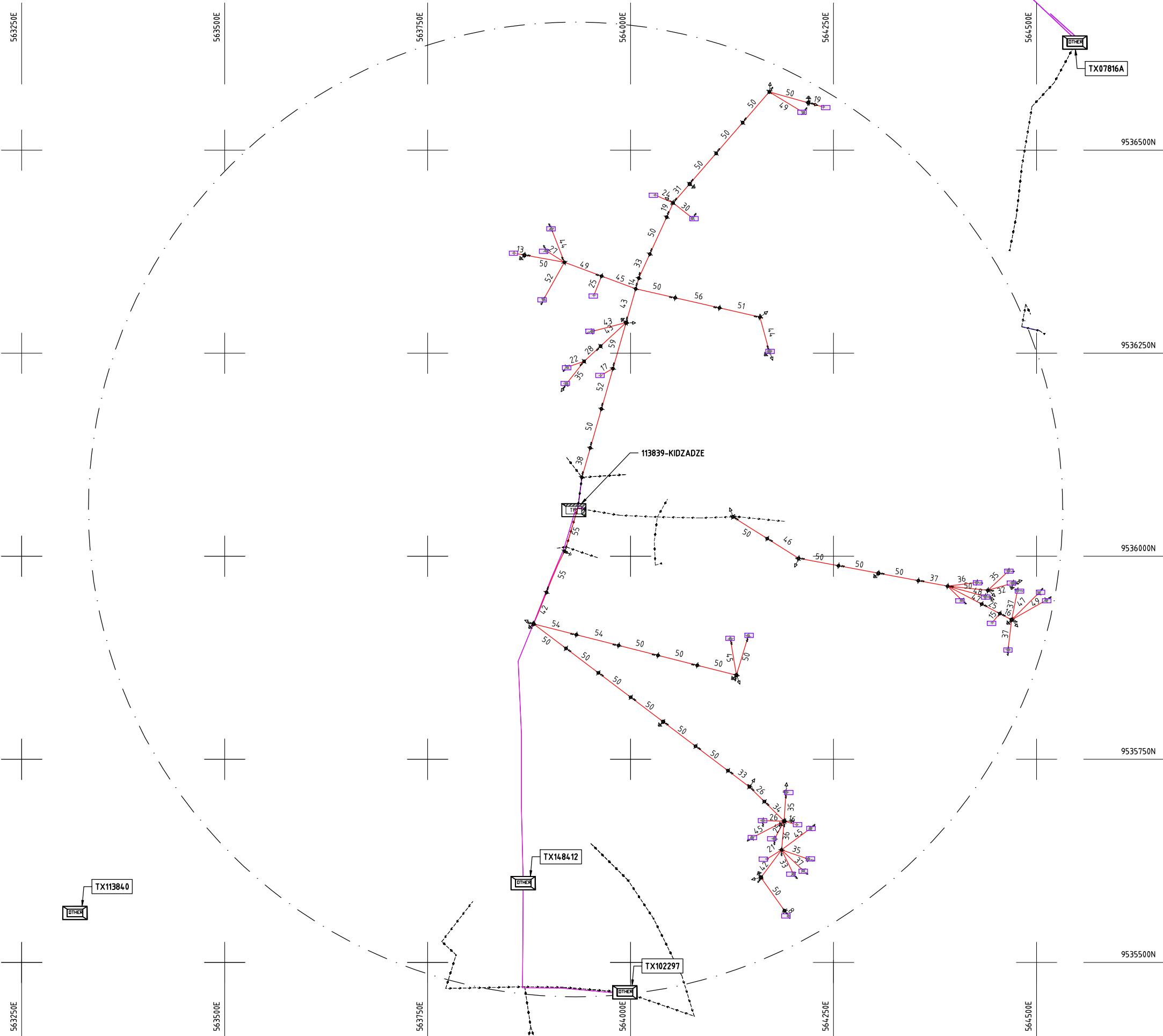
PREPARED BY
A.AKBAR
CHECKED BY
S.MAETA
APPROVED BY
Y.TANAKA
DATE
10th SEP 2018



NIPPON KOEI CO., LTD





**NOTES:**

1. EXACT LOCATIONS OF POWER POLES TO BE DETERMINED ON SITE BY THE ENGINEER.
2. CONCRETE/ WOODEN POLES TO BE DETERMINED ON SITE BY THE ENGINEER.
3. LENGTH OF POLES TO BE DETERMINED ON SITE BY THE ENGINEER.
4. PME TO BE AFTER EVERY 200m INTERVAL OR AFTER 4 SPANS.
5. POLES NOT SHOWN WHERE PME OR LV EARTH INTERSECT FOR CLARITY.

- HOUSEHOLDS/ BUILDINGS
- PROPOSED DISTRIBUTION LINE
- EXISTING 11kV LINE
- EXISTING 33kV LINE
- > EXISTING DISTRIBUTION LINE
- TF1 MAXIMISATION TRANSFORMER
- TF2 EXTENSION TRANSFORMER
- OTHER OTHER EXISTING TRANSFORMER
- PP WOODEN ELECTRIC POLES
- CP CONCRETE ELECTRIC POLES
- △ I LV-EARTH
- III PME —PROTECTIVE MULTIPLE EARTHING STAY

PROJECT:
THE PREPARATORY SURVEY
ON THE PROJECT FOR IMPROVEMENT
OF POWER DISTRIBUTION SYSTEM
IN THE REPUBLIC OF KENYA

DRAWING TITLE
COUNTY: KWALE
SCHEME: MAXIMIZATION
PROJECT SITE: 113839 - KIDZADZE

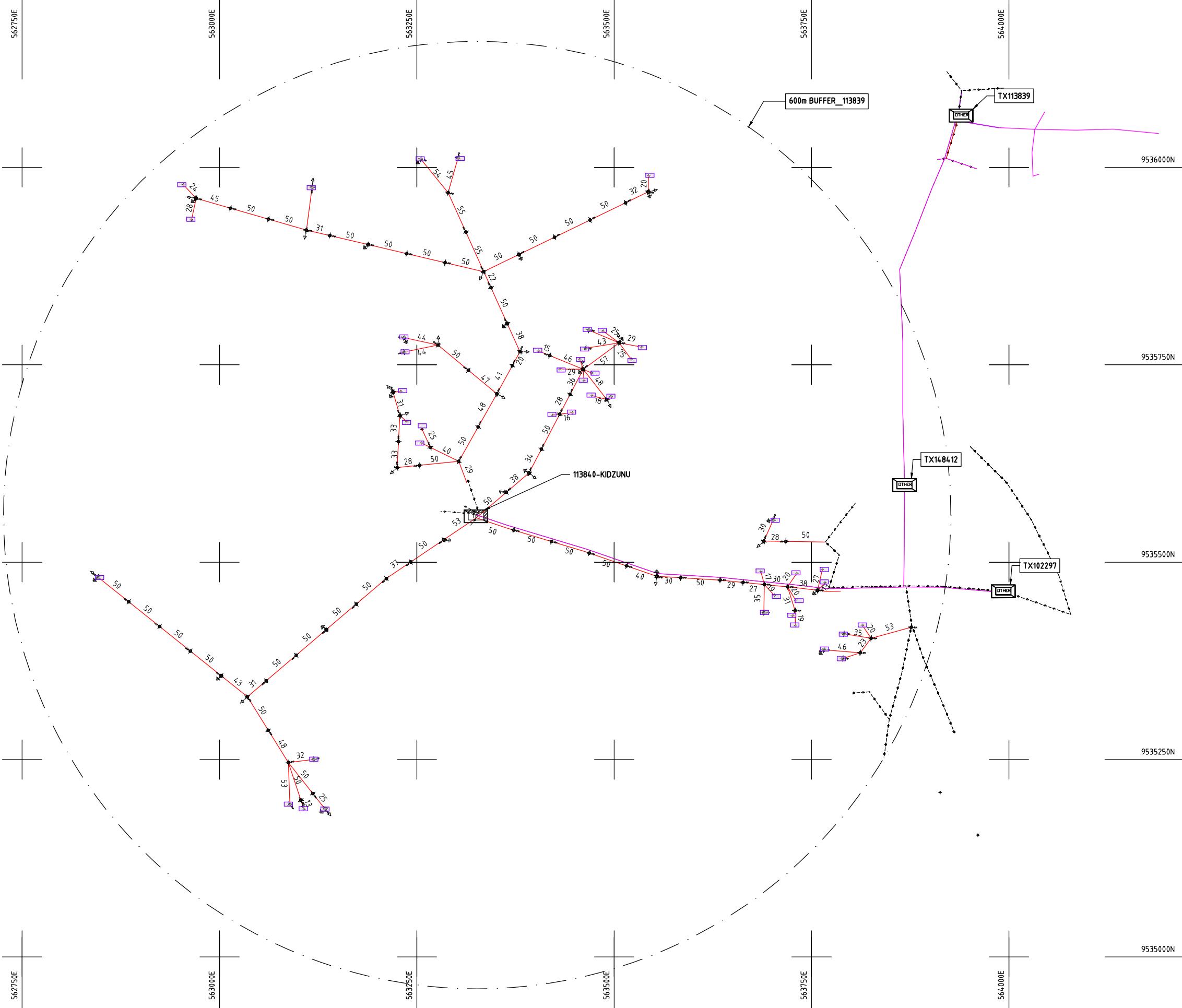
DRAW. NO.
KLF-MA-33

PREPARED BY
A.AKBAR
CHECKED BY
S.MAETA
APPROVED BY
Y.TANAKA
DATE
10th SEP 2018



NIPPON KOEI CO., LTD

(A3)



NOTES:

- EXACT LOCATIONS OF POWER POLES TO BE DETERMINED ON SITE BY THE ENGINEER.
- CONCRETE/ WOODEN POLES TO BE DETERMINED ON SITE BY THE ENGINEER.
- LENGTH OF POLES TO BE DETERMINED ON SITE BY THE ENGINEER.
- PME TO BE AFTER EVERY 200m INTERVAL OR AFTER 4 SPANS.
- POLES NOT SHOWN WHERE PME OR LV EARTH INTERSECT FOR CLARITY.

- [Purple square] HOUSEHOLDS/ BUILDINGS
- [Red line] PROPOSED DISTRIBUTION LINE
- [Pink line] EXISTING 11kV LINE
- [Blue line] EXISTING 33kV LINE
- [Black dashed line] EXISTING DISTRIBUTION LINE
- [Transformer icon] MAXIMISATION TRANSFORMER
- [Transformer icon] EXTENSION TRANSFORMER
- [Transformer icon] OTHER EXISTING TRANSFORMER
- [Wooden pole icon] WOODEN ELECTRIC POLES
- [Concrete pole icon] CONCRETE ELECTRIC POLES
- [Earth connection icon] LV-EARTH
- [PME icon] PME -PROTECTIVE MULTIPLE EARTHING STAY

PROJECT:
THE PREPARATORY SURVEY
ON THE PROJECT FOR IMPROVEMENT
OF POWER DISTRIBUTION SYSTEM
IN THE REPUBLIC OF KENYA

DRAWING TITLE
COUNTY: KWALE
SCHEME: MAXIMIZATION
PROJECT SITE: 113840 - KIDZUNU

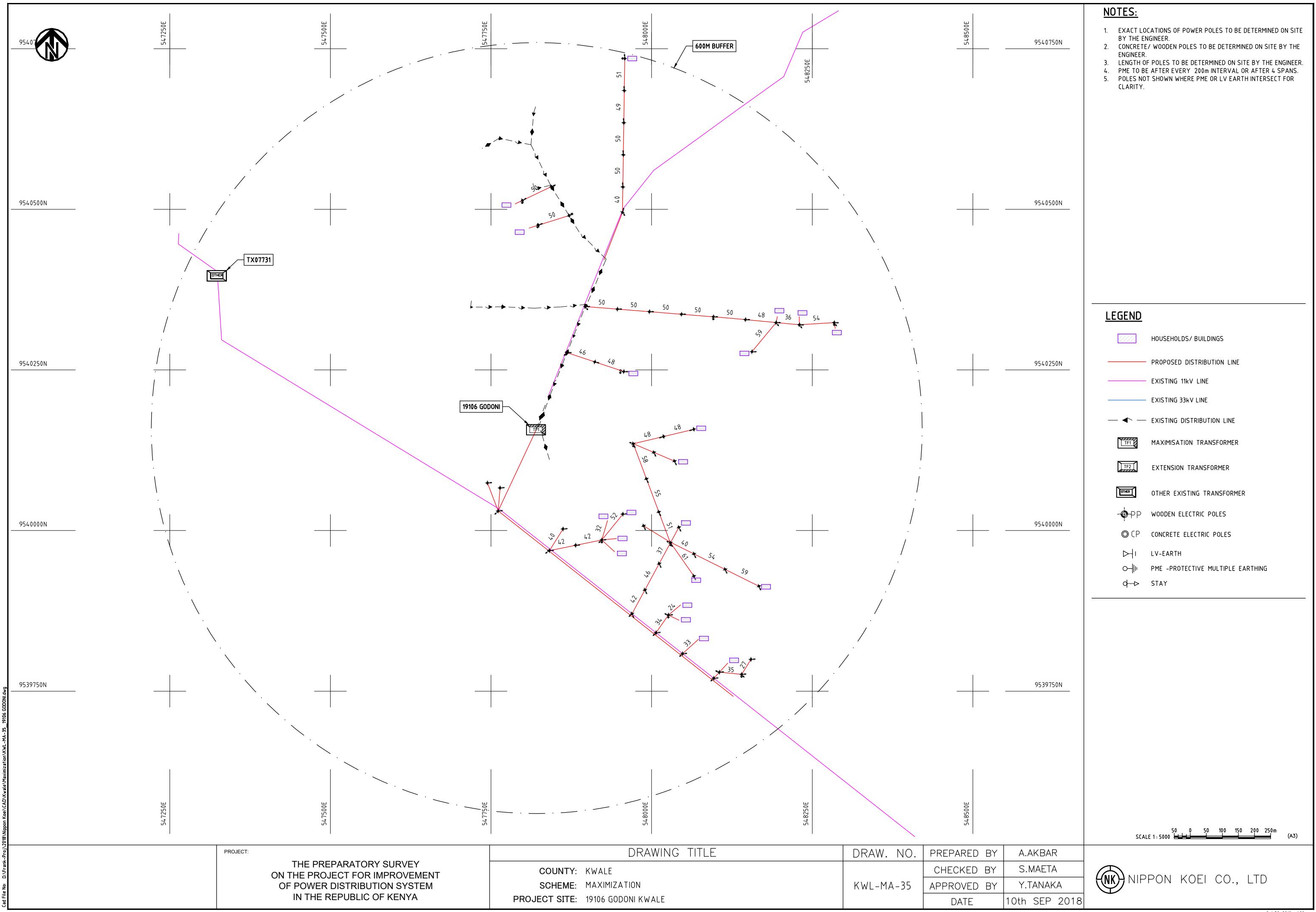
DRAW. NO.
KLF-MA-34

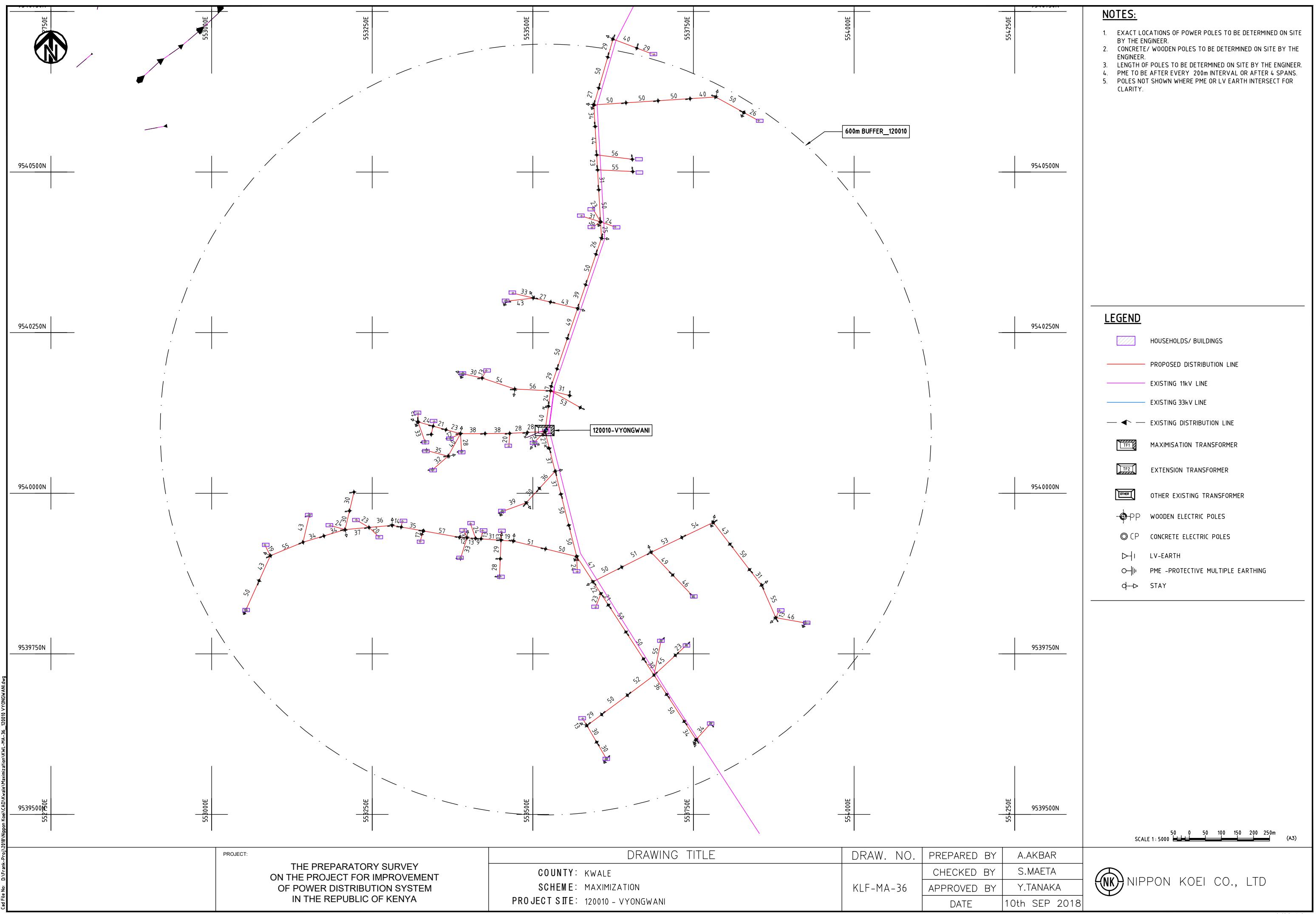
PREPARED BY
A.AKBAR
CHECKED BY
S.MAETA
APPROVED BY
Y.TANAKA
DATE
10th SEP 2018

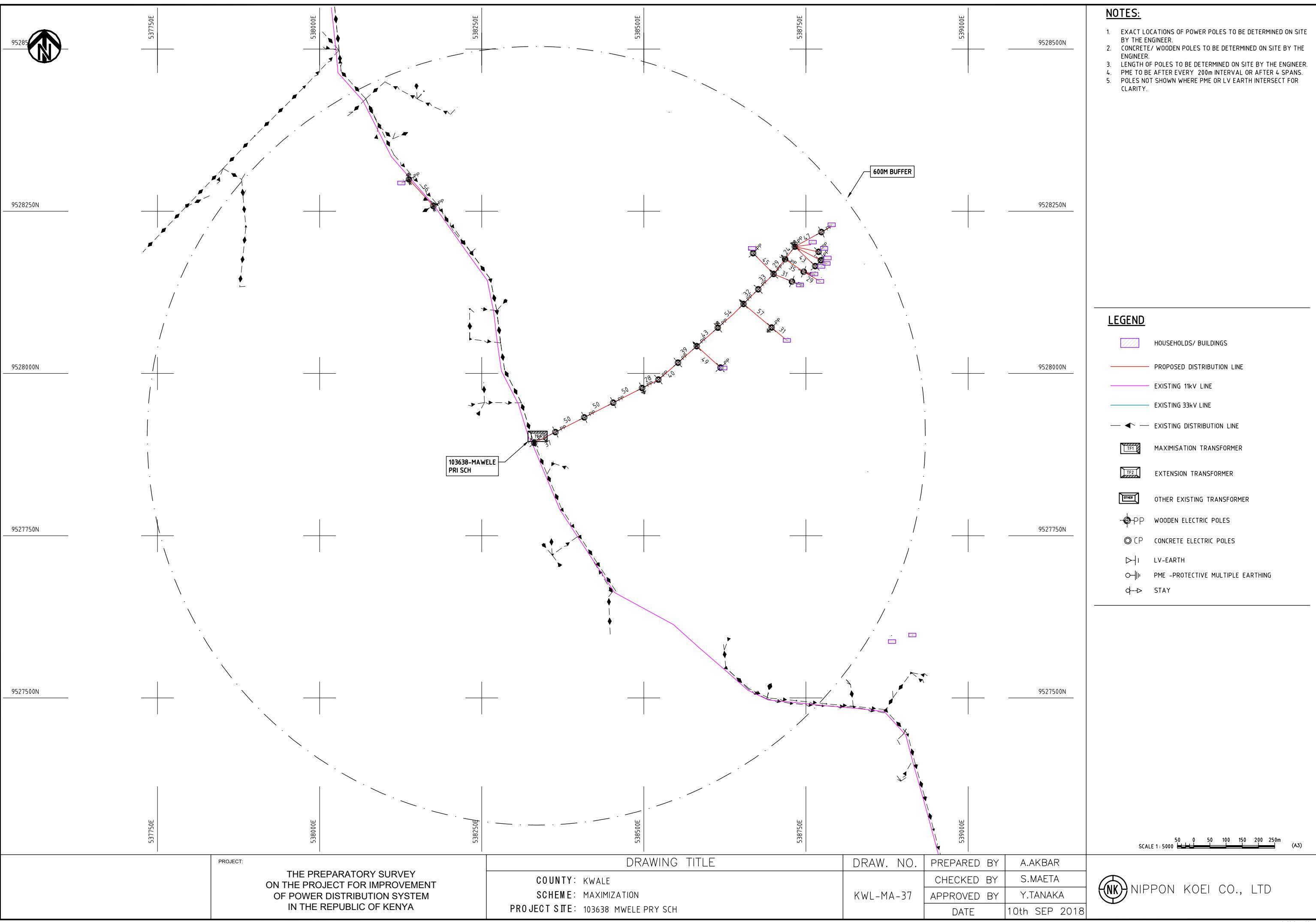


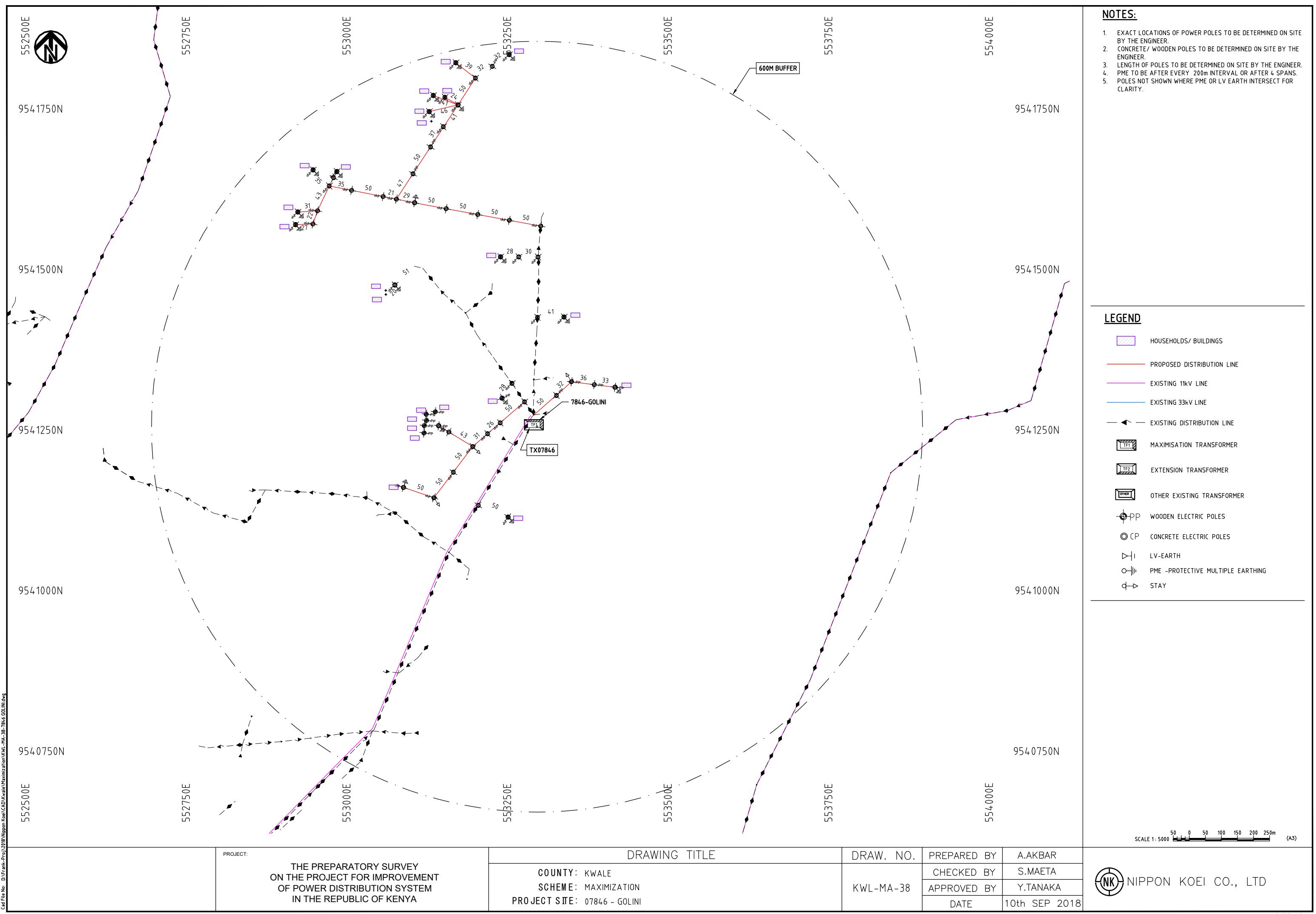
NIPPON KOEI CO., LTD

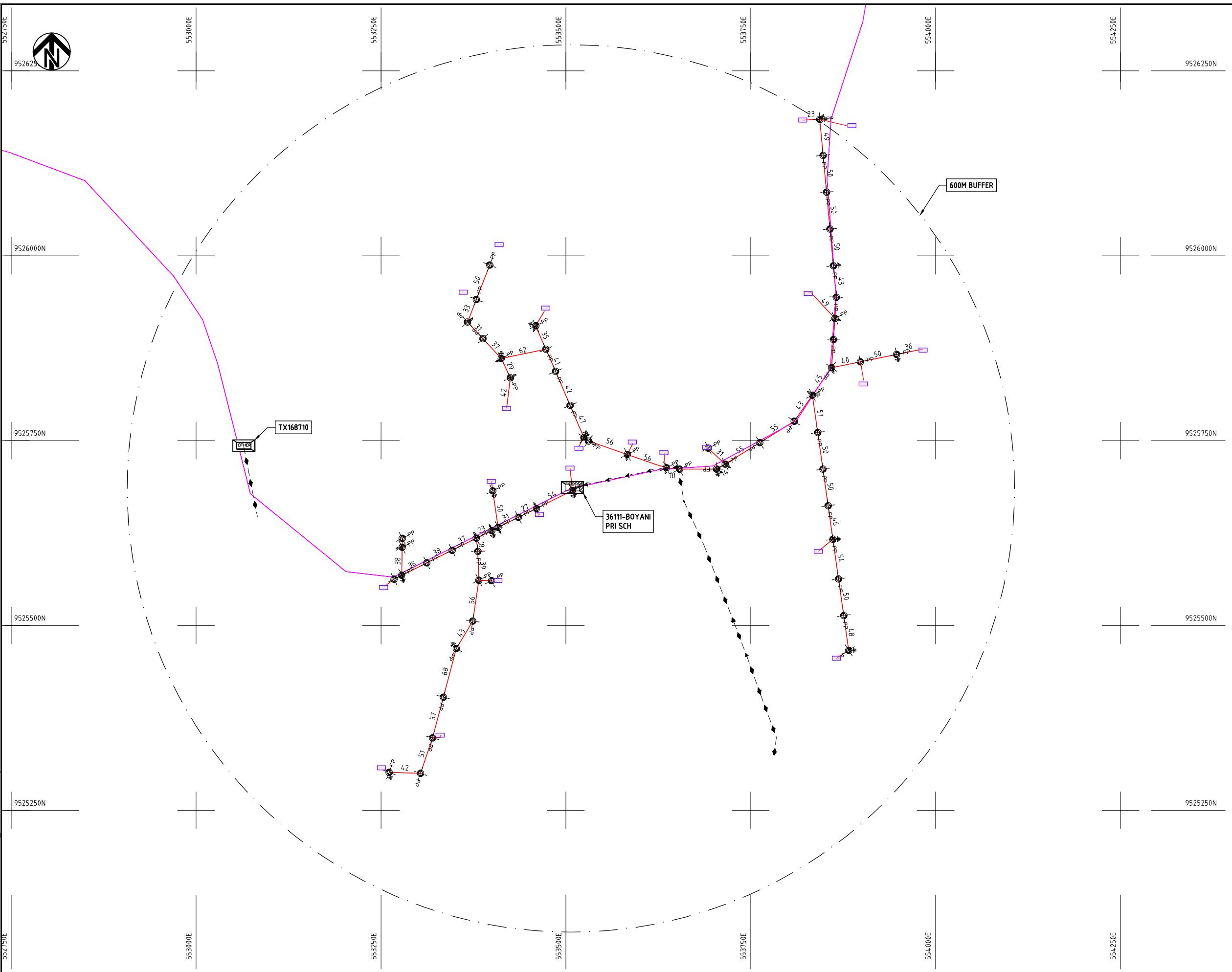
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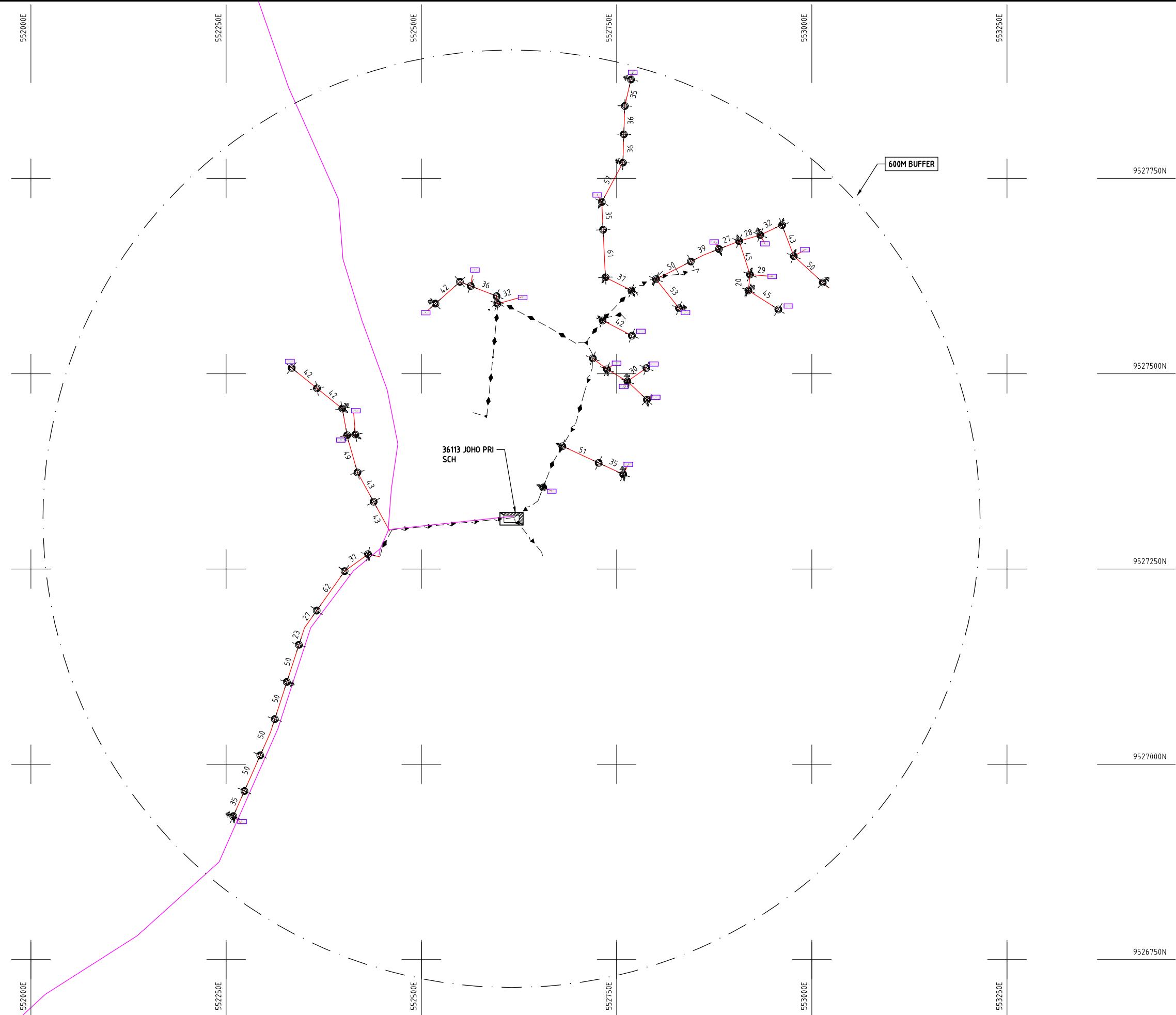
NOTES:

1. EXACT LOCATIONS OF POWER POLES TO BE DETERMINED ON SITE BY THE ENGINEER.
2. CONCRETE/ WOODEN POLES TO BE DETERMINED ON SITE BY THE ENGINEER.
3. LENGTH OF POLES TO BE DETERMINED ON SITE BY THE ENGINEER.
4. PME TO BE AFTER EVERY 200m INTERVAL OR AFTER 4 SPANS.
5. POLES NOT SHOWN WHERE PME OR LV EARTH INTERSECT FOR CLARITY.

LEGEND

- [Hatched Box] HOUSEHOLDS/ BUILDINGS
- [Red Line] PROPOSED DISTRIBUTION LINE
- [Magenta Line] EXISTING 11kV LINE
- [Blue Line] EXISTING 33kV LINE
- [Black Line with Arrowhead] EXISTING DISTRIBUTION LINE
- [Transformer Icon] MAXIMISATION TRANSFORMER
- [Transformer Icon] EXTENSION TRANSFORMER
- [Transformer Icon] OTHER EXISTING TRANSFORMER
- [Wooden Pole Icon] WOODEN ELECTRIC POLES
- [Concrete Pole Icon] CONCRETE ELECTRIC POLES
- [LV-Earth Symbol] LV-EARTH
- [PME Symbol] PME -PROTECTIVE MULTIPLE EARTHING
- [Stay Symbol] STAY

 NIPPON KOEI CO., LTD



PROJECT:
THE PREPARATORY SURVEY
ON THE PROJECT FOR IMPROVEMENT
OF POWER DISTRIBUTION SYSTEM
IN THE REPUBLIC OF KENYA

DRAWING TITLE
COUNTY: KWALE
SCHEME: MAXIMIZATION
PROJECT SITE: 36113 JOHO PRY SCH

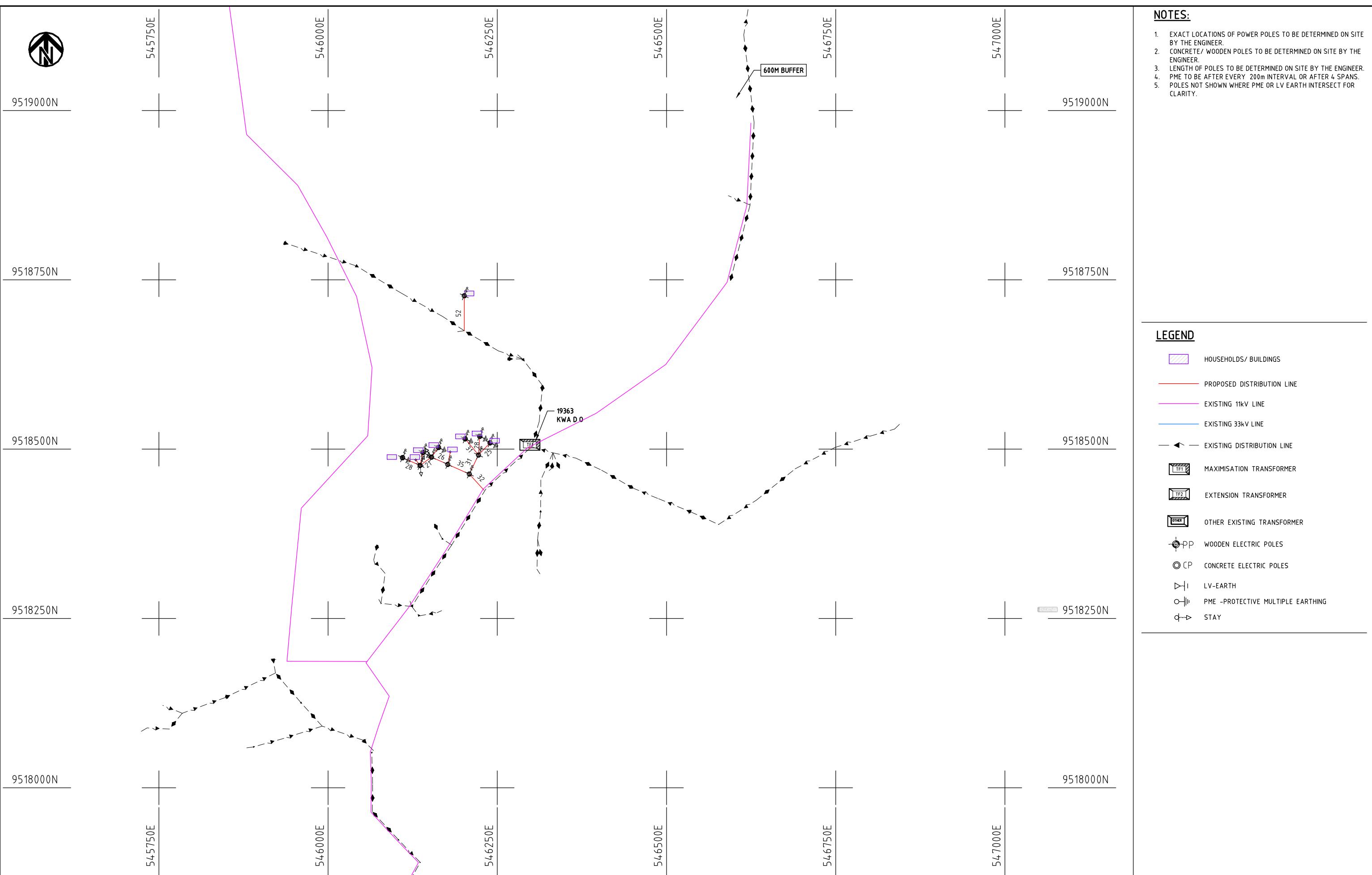
DRAW. NO.
KWL-MA-40

PREPARED BY	A.AKBAR
CHECKED BY	S.MAETA
APPROVED BY	Y.TANAKA
DATE	10th SEP 2018



NIPPON KOEI CO., LTD

SCALE 1:5000 50 0 50 100 150 200 250m (A3)





55200E

552250E

552500E

552750E

553000E

553250E

553500E

953000N

9529750N

9529500N

9529250N

9529000N

953000N

953000N

9529750N

9529750N

9529500N

9529500N

9529250N

9529250N

9529000N

9529000N

552250E

552500E

552750E

553000E

553250E

PROJECT:
THE PREPARATORY SURVEY
ON THE PROJECT FOR IMPROVEMENT
OF POWER DISTRIBUTION SYSTEM
IN THE REPUBLIC OF KENYA

DRAWING TITLE
COUNTY: KWALE
SCHEME: MAXIMIZATION
PROJECT SITE: 182656-MWANANYATI

DRAW. NO.
KWL-MA-42

PREPARED BY
A.AKBAR
CHECKED BY
S.MAETA
APPROVED BY
Y.TANAKA
DATE
10th SEP 2018



NIPPON KOEI CO., LTD

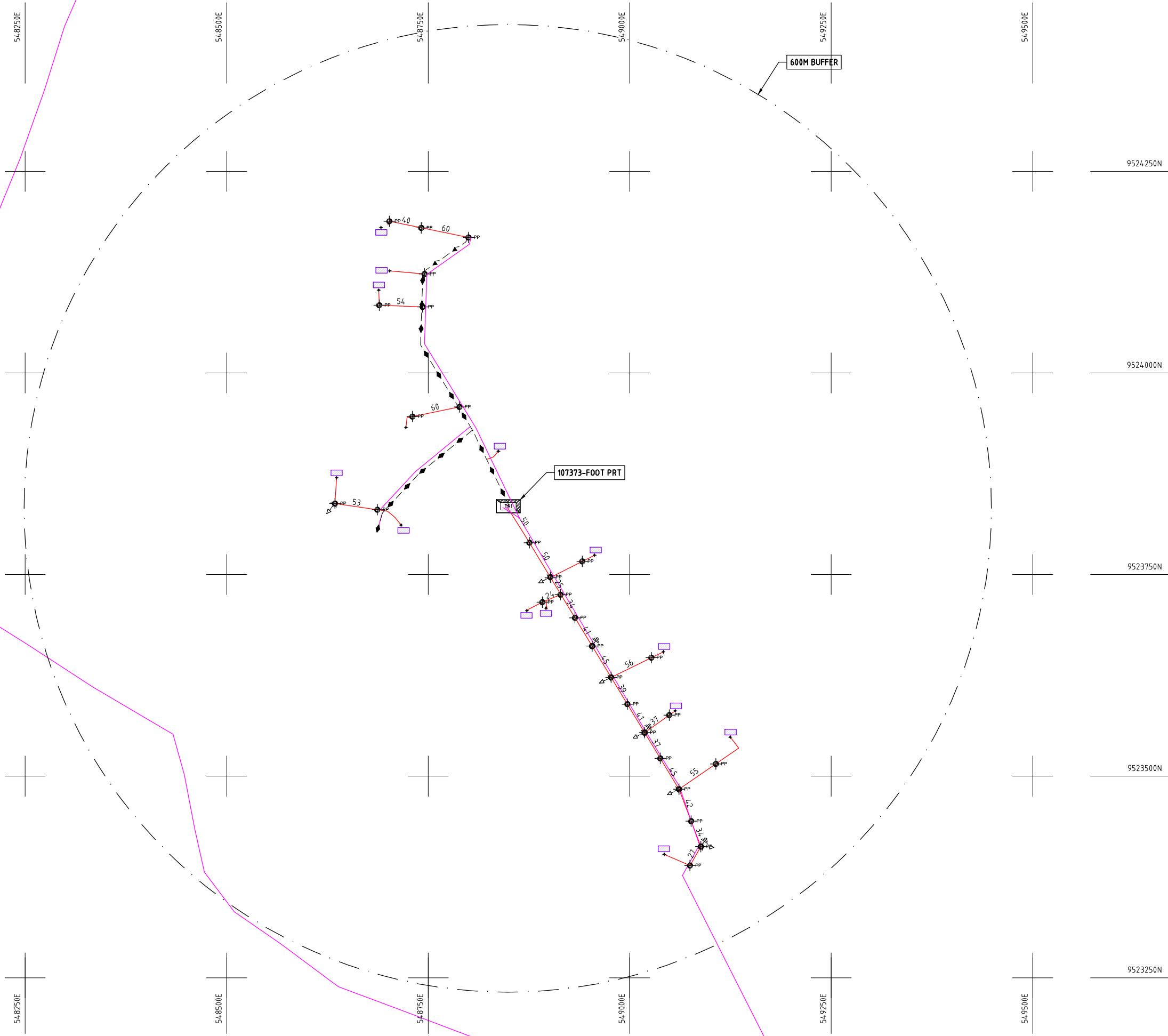
NOTES:

1. EXACT LOCATIONS OF POWER POLES TO BE DETERMINED ON SITE BY THE ENGINEER.
2. CONCRETE/ WOODEN POLES TO BE DETERMINED ON SITE BY THE ENGINEER.
3. LENGTH OF POLES TO BE DETERMINED ON SITE BY THE ENGINEER.
4. PME TO BE AFTER EVERY 200m INTERVAL OR AFTER 4 SPANS.
5. POLES NOT SHOWN WHERE PME OR LV EARTH INTERSECT FOR CLARITY.

LEGEND

- HOUSEHOLDS/ BUILDINGS
- PROPOSED DISTRIBUTION LINE
- EXISTING 11kV LINE
- EXISTING 33kV LINE
- EXISTING DISTRIBUTION LINE
- MAXIMISATION TRANSFORMER
- EXTENSION TRANSFORMER
- OTHER EXISTING TRANSFORMER
- WOODEN ELECTRIC POLES
- CONCRETE ELECTRIC POLES
- LV-EARTH
- PME -PROTECTIVE MULTIPLE EARTHING
- STAY

SCALE 1:5000 50 0 50 100 150 200 250m (A3)

**NOTES:**

- EXACT LOCATIONS OF POWER POLES TO BE DETERMINED ON SITE BY THE ENGINEER.
- CONCRETE/ WOODEN POLES TO BE DETERMINED ON SITE BY THE ENGINEER.
- LENGTH OF POLES TO BE DETERMINED ON SITE BY THE ENGINEER.
- PME TO BE AFTER EVERY 200m INTERVAL OR AFTER 4 SPANS.

LEGEND

- HOUSEHOLDS/ BUILDINGS
- PROPOSED 11kV
- PROPOSED 33kV
- PROPOSED DISTRIBUTION LINE
- EXISTING 11kV LINE
- EXISTING 33kV LINE
- EXISTING DISTRIBUTION LINE
- TF1 MAXIMISATION TRANSFORMER
- TF2 EXTENSION TRANSFORMER
- PP WOODEN ELECTRIC POLES
- CP CONCRETE ELECTRIC POLES 12M
- ◎ CP CONCRETE ELECTRIC POLES 11M
- △ I LV-EARTH
- II PME -PROTECTIVE MULTIPLE EARTHING
- ▷ STAY

NIPPON KOEI CO., LTD



9533500N

52500E

525250E

525500E

525750E

52600E

526250E

9533500N

9533250N

9533250N

9533000N

9533000N

9532750N

9532750N

9532500N

9532500N

52500E

525250E

525500E

525750E

52600E

526250E

SCALE 1:5000 50 0 50 100 150 200 250m (A3)

PROJECT:
THE PREPARATORY SURVEY
ON THE PROJECT FOR IMPROVEMENT
OF POWER DISTRIBUTION SYSTEM
IN THE REPUBLIC OF KENYA

DRAWING TITLE
COUNTY: KWALE
SCHEME: MAXIMIZATION
PROJECT SITE: 124552 - NGAURO PRI. SCHOOL

DRAW. NO.
KLF-MA-46

PREPARED BY
A.AKBAR
CHECKED BY
S.MAETA
APPROVED BY
Y.TANAKA
DATE
10th SEP 2018



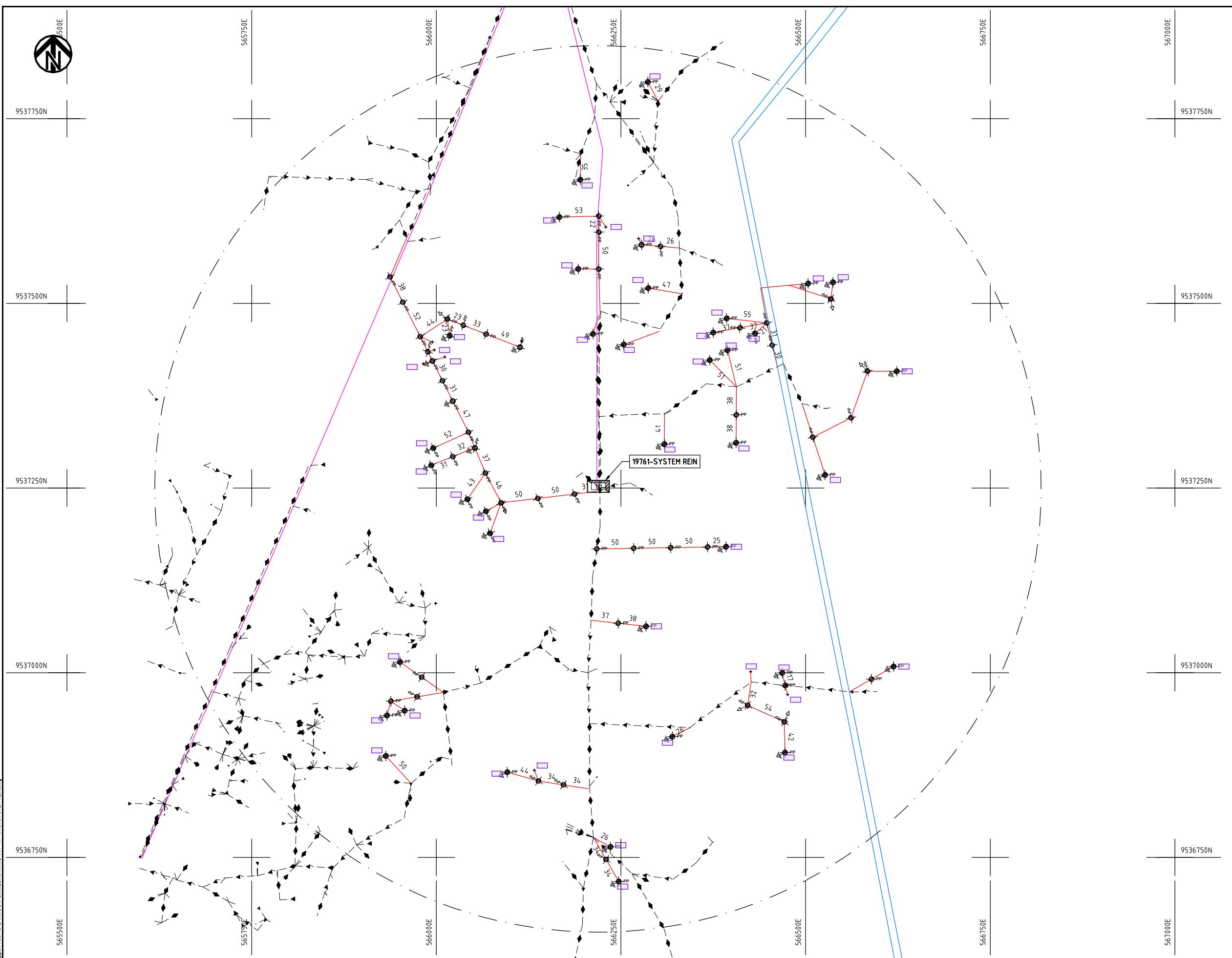
NIPPON KOEI CO., LTD

NOTES:

- EXACT LOCATIONS OF POWER POLES TO BE DETERMINED ON SITE BY THE ENGINEER.
- CONCRETE/ WOODEN POLES TO BE DETERMINED ON SITE BY THE ENGINEER.
- LENGTH OF POLES TO BE DETERMINED ON SITE BY THE ENGINEER.
- PME TO BE AFTER EVERY 200m INTERVAL OR AFTER 4 SPANS.
- POLES NOT SHOWN WHERE PME OR LV EARTH INTERSECT FOR CLARITY.

LEGEND

- HOUSEHOLDS/ BUILDINGS
- PROPOSED DISTRIBUTION LINE
- EXISTING 11kV LINE
- EXISTING 33kV LINE
- EXISTING DISTRIBUTION LINE
- MAXIMISATION TRANSFORMER
- EXTENSION TRANSFORMER
- OTHER EXISTING TRANSFORMER
- WOODEN ELECTRIC POLES
- CONCRETE ELECTRIC POLES
- LV-EARTH
- PME -PROTECTIVE MULTIPLE EARTHING
- STAY



NOTES:

1. EXACT LOCATIONS OF POWER POLES TO BE DETERMINED ON SITE BY THE ENGINEER.
 2. CONCRETE/ WOODEN POLES TO BE DETERMINED ON SITE BY THE ENGINEER.
 3. LENGTH OF POLES TO BE DETERMINED ON SITE BY THE ENGINEER.
 4. PME TO BE AFTER EVERY 200m INTERVAL OR AFTER 4 SPANS.
 5. POLES NOT SHOWN WHERE PME OR LV EARTH INTERSECT FOR CLARITY.

LEGEND

 HOUSEHOLDS/ BUILDINGS

 PROPOSED DISTRIBUTION LINE

 EXISTING 11kV LINE

 EXISTING 33kV LINE

 EXISTING DISTRIBUTION LINE

 MAXIMISATION TRANSFORMER

 EXTENSION TRANSFORMER

 OTHER EXISTING TRANSFORMER

 WOODEN ELECTRIC POLES

 CONCRETE ELECTRIC POLES

 LV-EARTH

 PME -PROTECTIVE MULTIPLE EARTHING

 STAY

SCALE 1 : 5000

50 0 50 100 150 200 250m

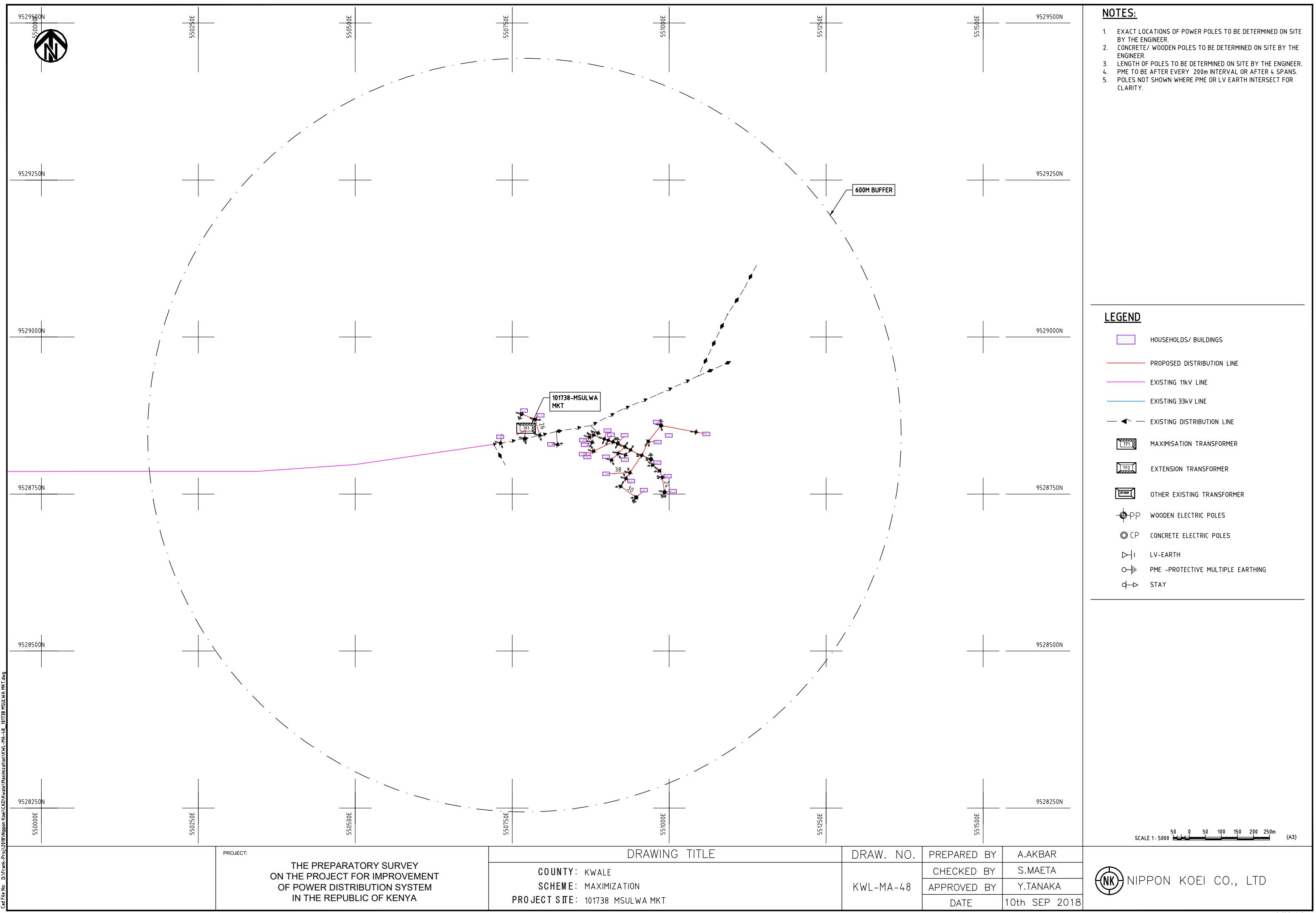
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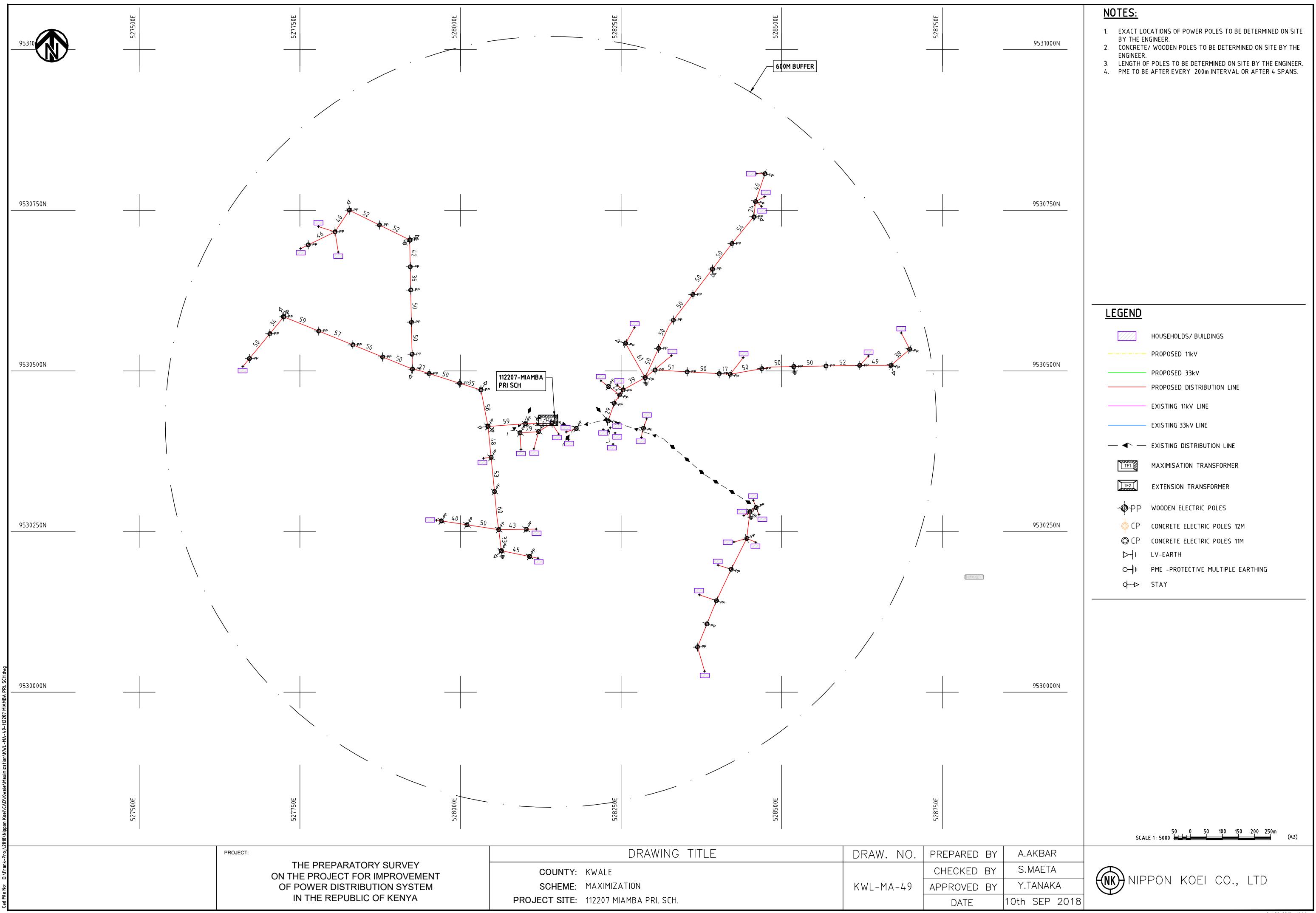
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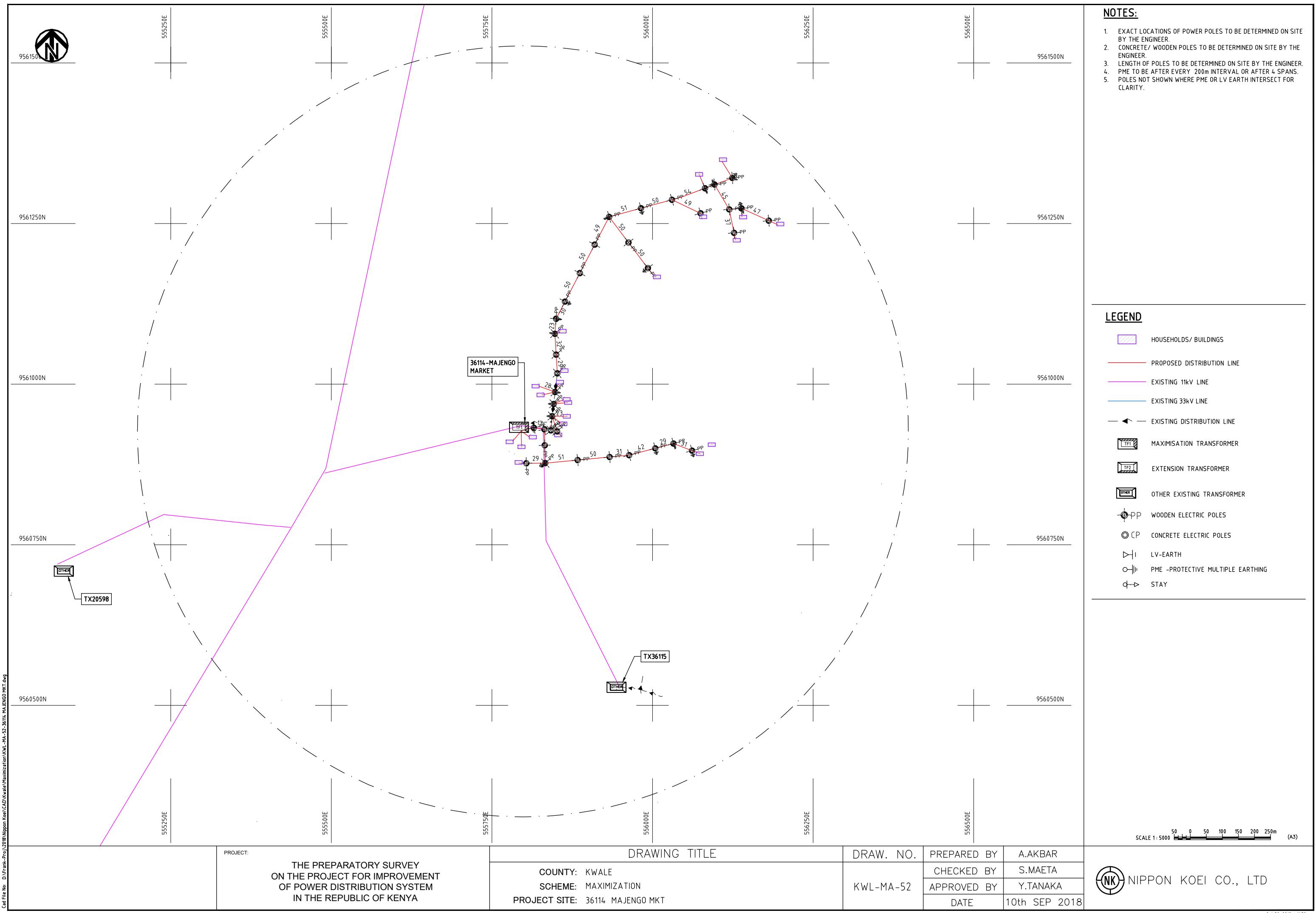
PROJECT: THE PREPARATORY SURVEY ON THE PROJECT FOR IMPROVEMENT OF POWER DISTRIBUTION SYSTEM IN THE REPUBLIC OF KENYA	DRAWING TITLE	DRAW. NO.	PREPARED BY	A.AKBAR
	COUNTY: KWALE	KWL-MA-47	CHECKED BY	S.MAETA
	SCHEME: MAXIMIZATION		APPROVED BY	Y.TANAKA
	PROJECT SITE: 19761 - SYSTEM REIN		DATE	10th SEP 2018

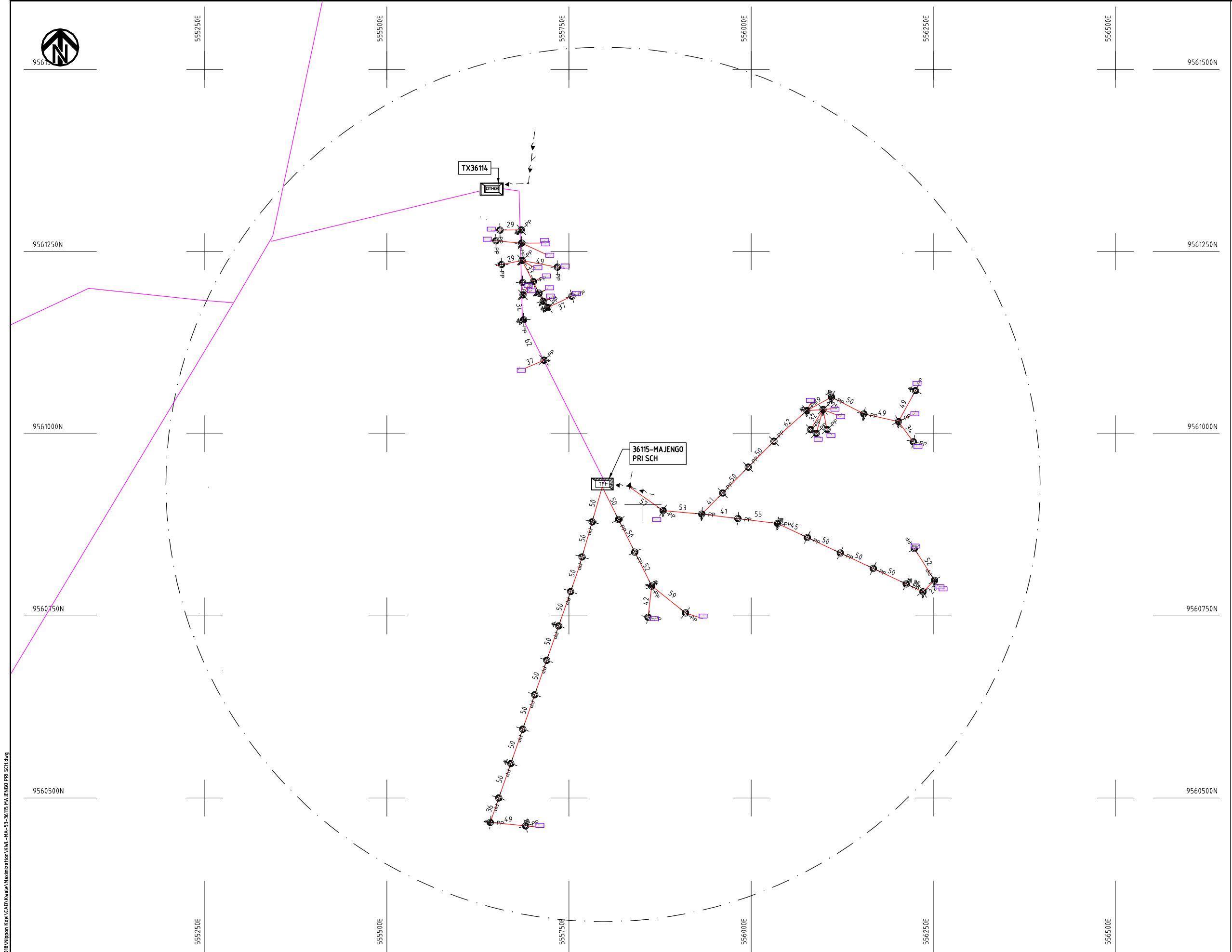


 NIPPON KOEI CO., LTD









NOTES:

1. EXACT LOCATIONS OF POWER POLES TO BE DETERMINED ON SITE BY THE ENGINEER.
 2. CONCRETE/ WOODEN POLES TO BE DETERMINED ON SITE BY THE ENGINEER.
 3. LENGTH OF POLES TO BE DETERMINED ON SITE BY THE ENGINEER.
 4. PME TO BE AFTER EVERY 200m INTERVAL OR AFTER 4 SPANS.
 5. POLES NOT SHOWN WHERE PME OR LV EARTH INTERSECT FOR CLARITY.

LEGEND

	HOUSEHOLDS/ BUILDINGS
	PROPOSED DISTRIBUTION LINE
	EXISTING 11kV LINE
	EXISTING 33kV LINE
	EXISTING DISTRIBUTION LINE
	MAXIMISATION TRANSFORMER
	EXTENSION TRANSFORMER
	OTHER EXISTING TRANSFORMER
	WOODEN ELECTRIC POLES
	CONCRETE ELECTRIC POLES
	LV-EARTH
	PME -PROTECTIVE MULTIPLE EARTHING
	STAY

SCALE 1 : 5000 (A)

PROJECT: THE PREPARATORY SURVEY
ON THE PROJECT FOR IMPROVEMENT
OF POWER DISTRIBUTION SYSTEM
IN THE REPUBLIC OF KENYA

DRAWING TITLE

DRAW. NO.

PARED BY A.AKBAR

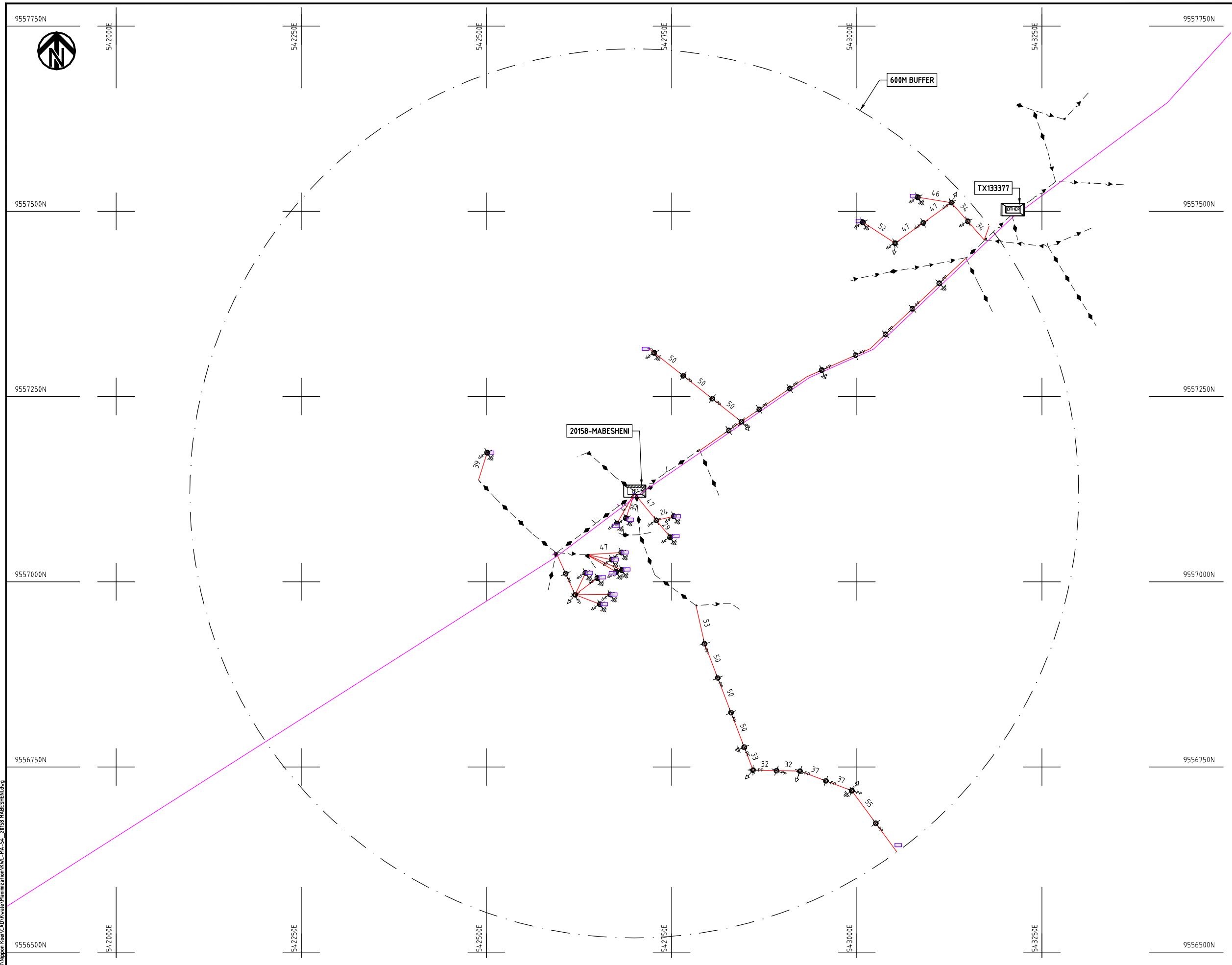
1

CHECKED BY S.MAETA

KWL-MA-53

ROVED BY Y.TANAKA

 NIPPON KOEI CO., LTD



NOTES:

1. EXACT LOCATIONS OF POWER POLES TO BE DETERMINED ON SITE BY THE ENGINEER.
 2. CONCRETE/ WOODEN POLES TO BE DETERMINED ON SITE BY THE ENGINEER.
 3. LENGTH OF POLES TO BE DETERMINED ON SITE BY THE ENGINEER.
 4. PME TO BE AFTER EVERY 200m INTERVAL OR AFTER 4 SPANS.
 5. POLES NOT SHOWN WHERE PME OR LV EARTH INTERSECT FOR CLARITY.

LEGEND

 HOUSEHOLDS/ BUILDINGS
 PROPOSED DISTRIBUTION LINE
 EXISTING 11kV LINE
 EXISTING 33kV LINE
 EXISTING DISTRIBUTION LINE

 MAXIMISATION TRANSFORMER

 EXTENSION TRANSFORMER

 OTHER EXISTING TRANSFORMER

 WOODEN ELECTRIC POLES

 CP CONCRETE ELECTRIC POLES

 LV-EARTH

 PME -PROTECTIVE MULTIPLE EARTHING

 STAY

SCALE 1 : 5000

9

PROJECT:

**THE PREPARATORY SURVEY
ON THE PROJECT FOR IMPROVEMENT
OF POWER DISTRIBUTION SYSTEM
IN THE REPUBLIC OF KENYA**

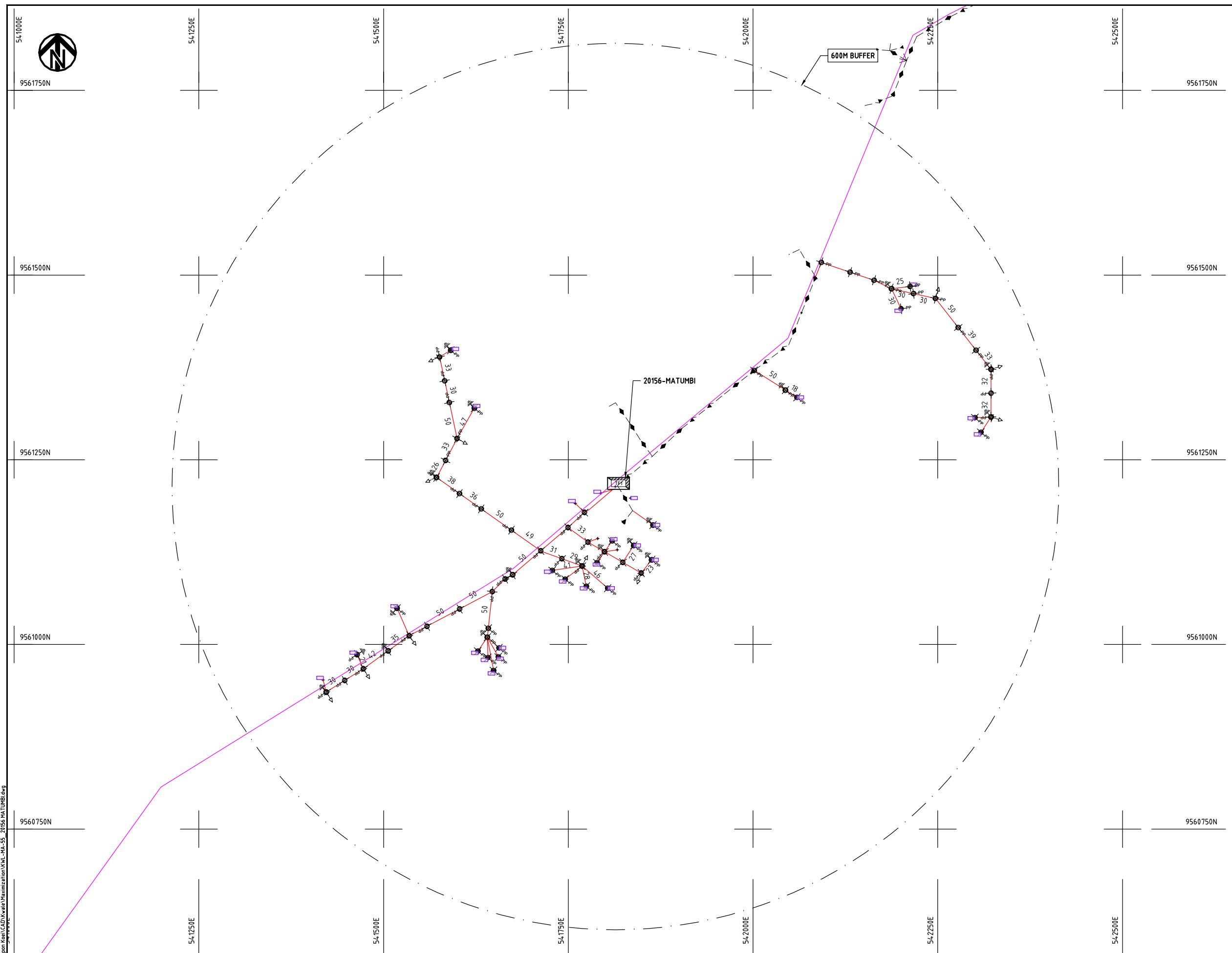
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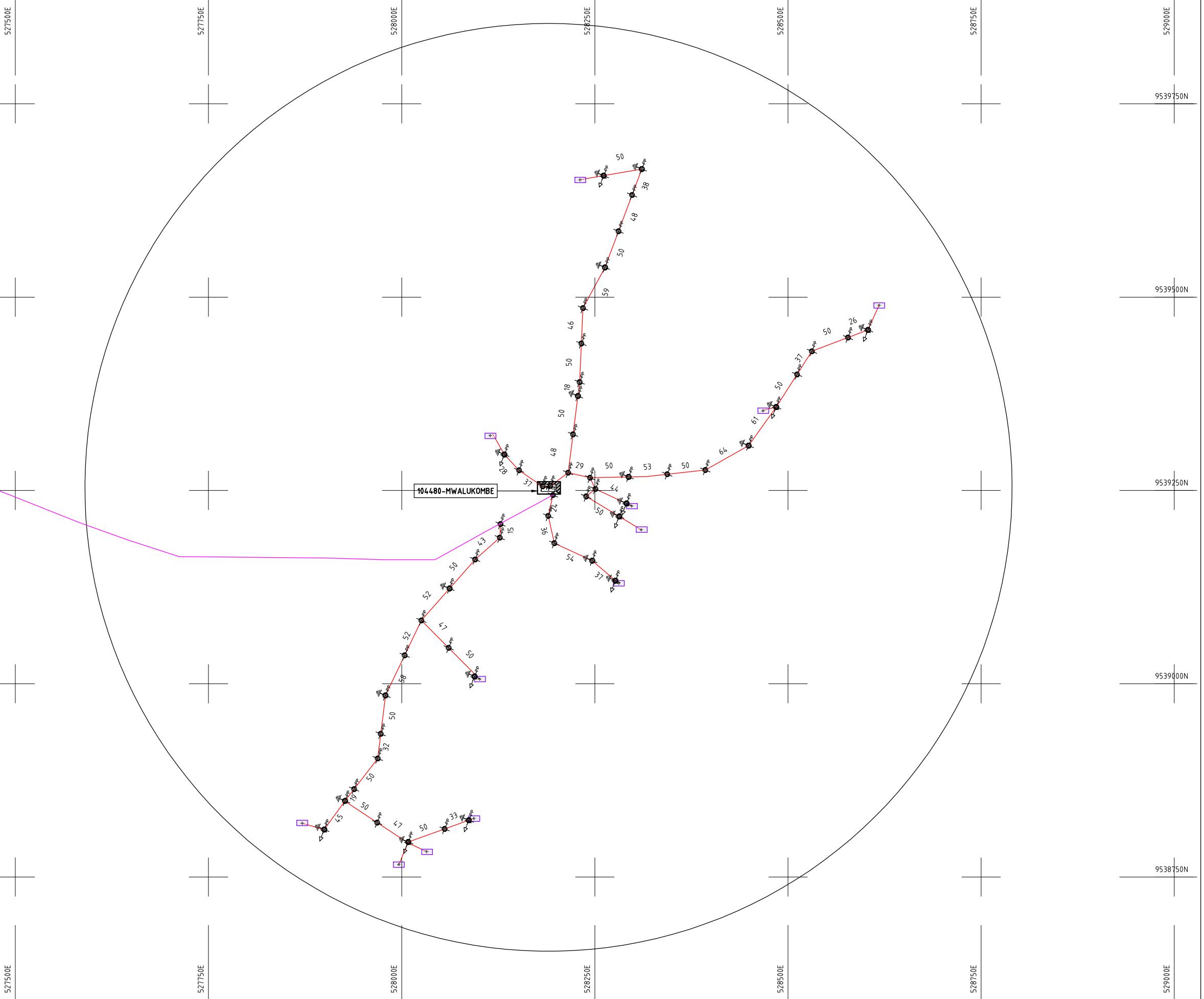
DRAW.

NO.	PREPARED BY	A.AKBAR
-54	CHECKED BY	S.MAETA
	APPROVED BY	Y.TANAKA
	DATE	10th SEP 2018



 NIPPON KOEI CO., LTD



**NOTES:**

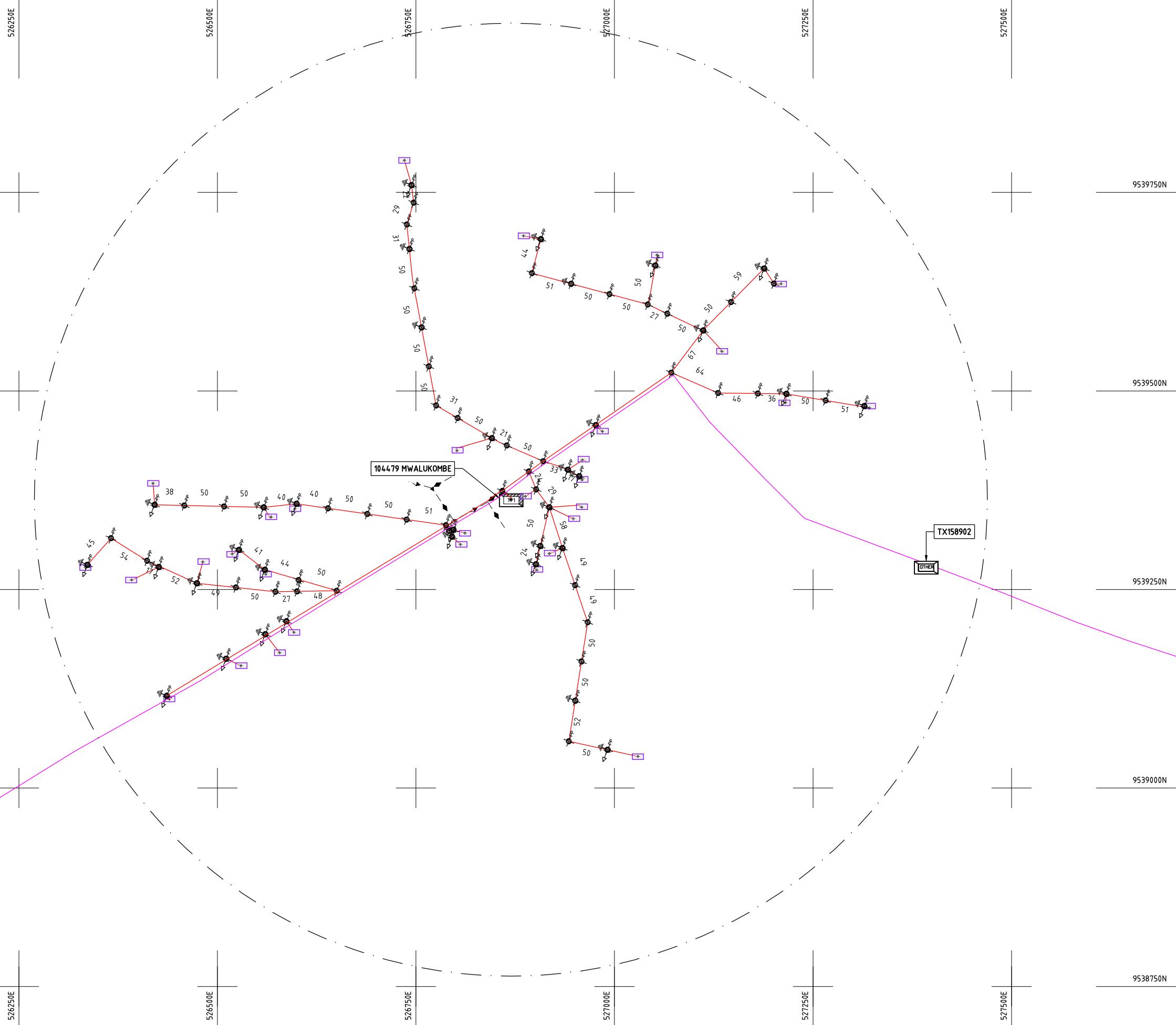
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- CONCRETE/ WOODEN POLES TO BE DETERMINED ON SITE BY THE ENGINEER.
- LENGTH OF POLES TO BE DETERMINED ON SITE BY THE ENGINEER.
- PME TO BE AFTER EVERY 200m INTERVAL OR AFTER 4 SPANS.

LEGEND

- HOUSEHOLDS / BUILDINGS
- PROPOSED 11kV
- PROPOSED 33kV
- PROPOSED DISTRIBUTION LINE
- EXISTING 11kV LINE
- EXISTING 33kV LINE
- EXISTING DISTRIBUTION LINE
- MAXIMISATION TRANSFORMER
- EXTENSION TRANSFORMER
- WOODEN ELECTRIC POLES (PP)
- CONCRETE ELECTRIC POLES 12M (CP)
- CONCRETE ELECTRIC POLES 11M (CP)
- LV-EARTH
- PME -PROTECTIVE MULTIPLE EARTHING
- STAY

NIPPON KOEI CO., LTD

Oct 30, 2018 - 1159am

**NOTES:**

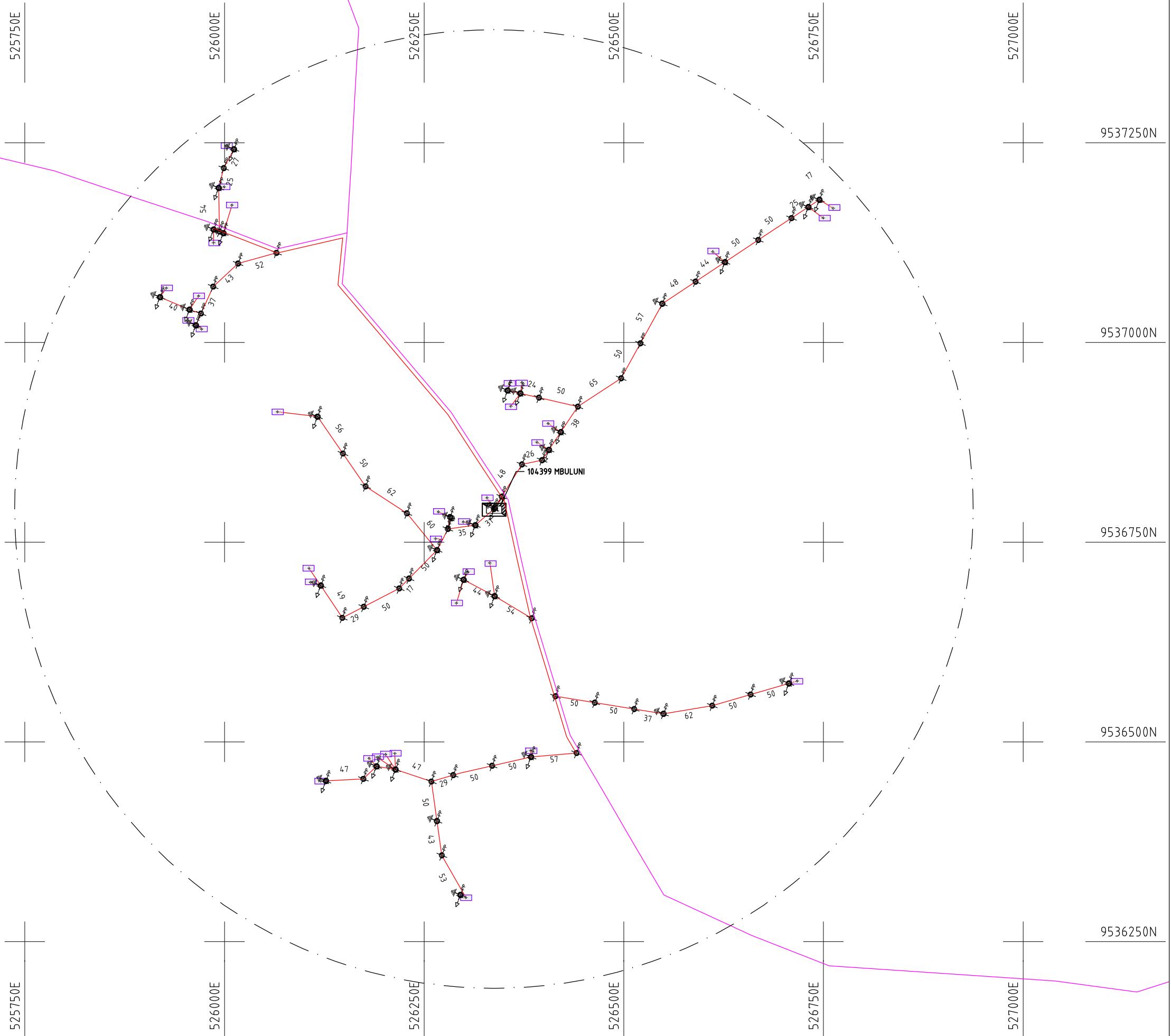
- EXACT LOCATIONS OF POWER POLES TO BE DETERMINED ON SITE BY THE ENGINEER.
- CONCRETE/ WOODEN POLES TO BE DETERMINED ON SITE BY THE ENGINEER.
- LENGTH OF POLES TO BE DETERMINED ON SITE BY THE ENGINEER.
- PME TO BE AFTER EVERY 200m INTERVAL OR AFTER 4 SPANS.

LEGEND

- | | |
|--|-----------------------------------|
| | HOUSEHOLDS / BUILDINGS |
| | PROPOSED 11kV |
| | PROPOSED 33kV |
| | PROPOSED DISTRIBUTION LINE |
| | EXISTING 11kV LINE |
| | EXISTING 33kV LINE |
| | EXISTING DISTRIBUTION LINE |
| | MAXIMISATION TRANSFORMER |
| | EXTENSION TRANSFORMER |
| | WOODEN ELECTRIC POLES |
| | CONCRETE ELECTRIC POLES 12M |
| | CONCRETE ELECTRIC POLES 11M |
| | LV-EARTH |
| | PME -PROTECTIVE MULTIPLE EARTHING |
| | STAY |

NIPPON KOEI CO., LTD

SCALE 1:5000 50 0 50 100 150 200 250m (A3)

**NOTES:**

- EXACT LOCATIONS OF POWER POLES TO BE DETERMINED ON SITE BY THE ENGINEER.
- CONCRETE/ WOODEN POLES TO BE DETERMINED ON SITE BY THE ENGINEER.
- LENGTH OF POLES TO BE DETERMINED ON SITE BY THE ENGINEER.
- PME TO BE AFTER EVERY 200m INTERVAL OR AFTER 4 SPANS.

LEGEND

- HOUSEHOLDS/ BUILDINGS
- PROPOSED 11kV
- PROPOSED 33kV
- PROPOSED DISTRIBUTION LINE
- EXISTING 11kV LINE
- EXISTING 33kV LINE
- EXISTING DISTRIBUTION LINE
- MAXIMISATION TRANSFORMER
- EXTENSION TRANSFORMER
- WOODEN ELECTRIC POLES
- CP CONCRETE ELECTRIC POLES 12M
- CP CONCRETE ELECTRIC POLES 11M
- LV-EARTH
- PME -PROTECTIVE MULTIPLE EARTHING
- STAY

NIPPON KOEI CO., LTD



533750E

9547500N

9547250N

9547000N

9546750N

9546500N

534000E

534000E

534250E

534500E

534750E

535000E

9547500N

9547250N

9547000N

9546750N

9546500N

PROJECT:
THE PREPARATORY SURVEY
ON THE PROJECT FOR IMPROVEMENT
OF POWER DISTRIBUTION SYSTEM
IN THE REPUBLIC OF KENYA

DRAWING TITLE
COUNTY: KWALE
SCHEME: MAXIMIZATION
PROJECT SITE: 125511 TUMAINI PRI SCHOOL

DRAW. NO.
KWL-MA-59

PREPARED BY
A.AKBAR
CHECKED BY
S.MAETA
APPROVED BY
Y.TANAKA
DATE
10th SEP 2018

NOTES:

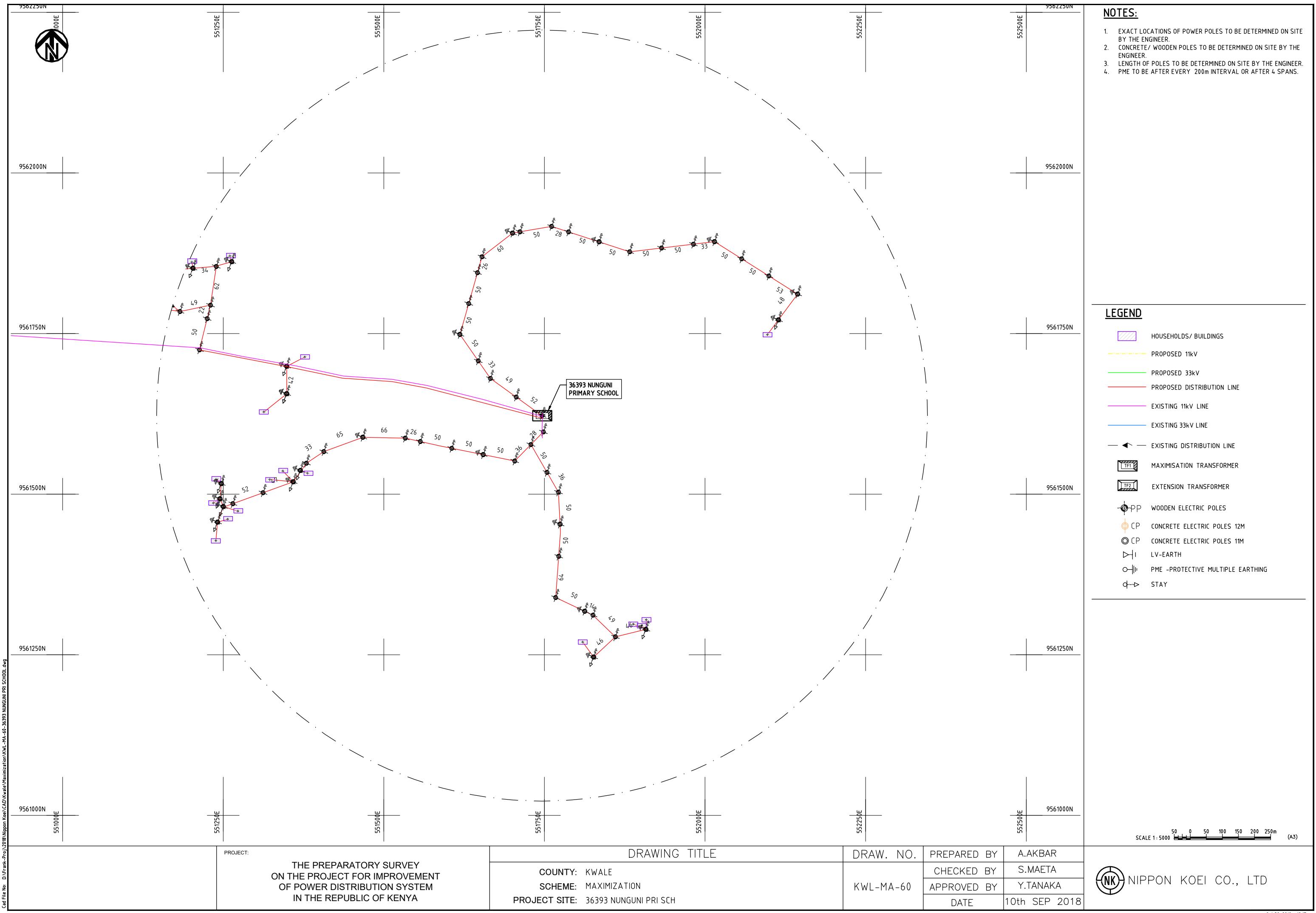
- EXACT LOCATIONS OF POWER POLES TO BE DETERMINED ON SITE BY THE ENGINEER.
- CONCRETE/ WOODEN POLES TO BE DETERMINED ON SITE BY THE ENGINEER.
- LENGTH OF POLES TO BE DETERMINED ON SITE BY THE ENGINEER.
- PME TO BE AFTER EVERY 200m INTERVAL OR AFTER 4 SPANS.

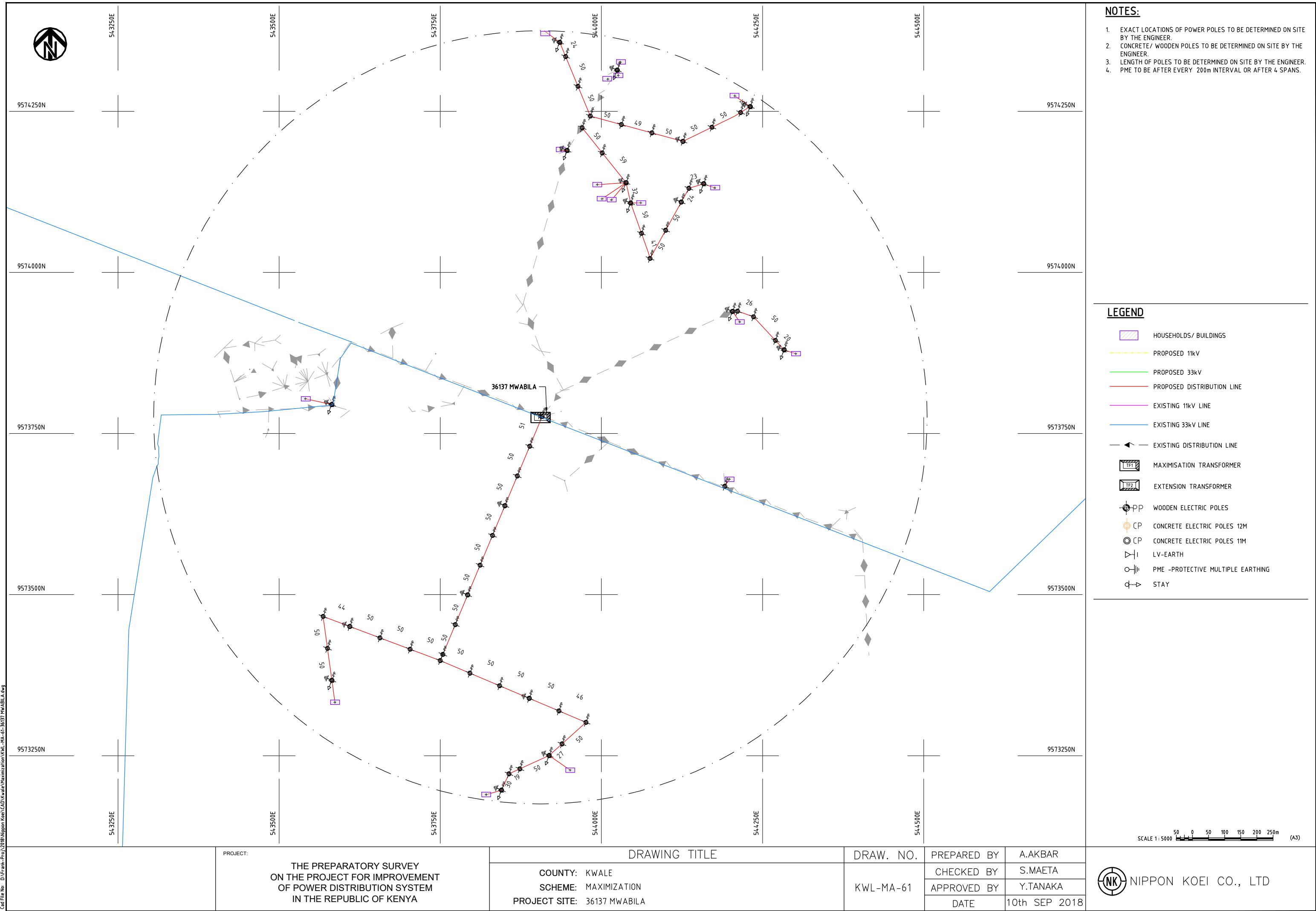
LEGEND

- HOUSEHOLDS/ BUILDINGS
- PROPOSED 11kV
- PROPOSED 33kV
- PROPOSED DISTRIBUTION LINE
- EXISTING 11kV LINE
- EXISTING 33kV LINE
- EXISTING DISTRIBUTION LINE
- MAXIMISATION TRANSFORMER
- EXTENSION TRANSFORMER
- WOODEN ELECTRIC POLES
- CP CONCRETE ELECTRIC POLES 12M
- CP CONCRETE ELECTRIC POLES 11M
- LV-EARTH
- PME -PROTECTIVE MULTIPLE EARTHING
- STAY

NIPPON KOEI CO., LTD

SCALE 1:5000 50 0 50 100 150 200 250m (A3)





NOTES:

1. EXACT LOCATIONS OF POWER POLES TO BE DETERMINED ON SITE BY THE ENGINEER.
 2. CONCRETE/ WOODEN POLES TO BE DETERMINED ON SITE BY THE ENGINEER.
 3. LENGTH OF POLES TO BE DETERMINED ON SITE BY THE ENGINEER.
 4. PME TO BE AFTER EVERY 200m INTERVAL OR AFTER 4 SPANS.

LEGEND

 HOUSEHOLDS/ BUILDINGS

 PROPOSED 11kV

 PROPOSED 33kV

 PROPOSED DISTRIBUTION LINE

 EXISTING 11kV LINE

 EXISTING 33kV LINE

 EXISTING DISTRIBUTION LINE

 MAXIMISATION TRANSFORMER

 EXTENSION TRANSFORMER

 PP WOODEN ELECTRIC POLES

 CP CONCRETE ELECTRIC POLES 12M

 CP CONCRETE ELECTRIC POLES 11M

 LV-EARTH

 PME -PROTECTIVE MULTIPLE EARTHING

 STAY

SCALE 1 : 5000

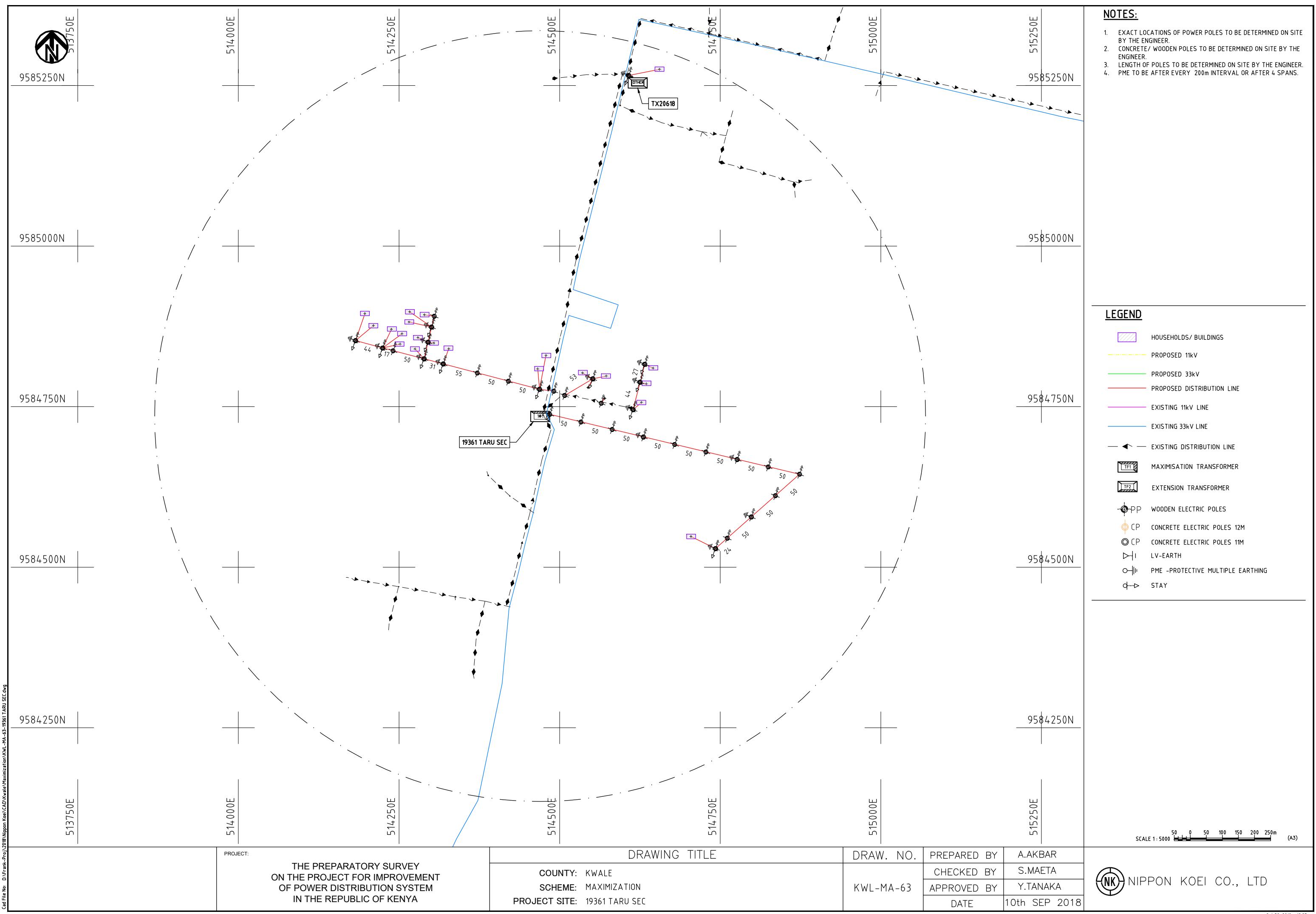
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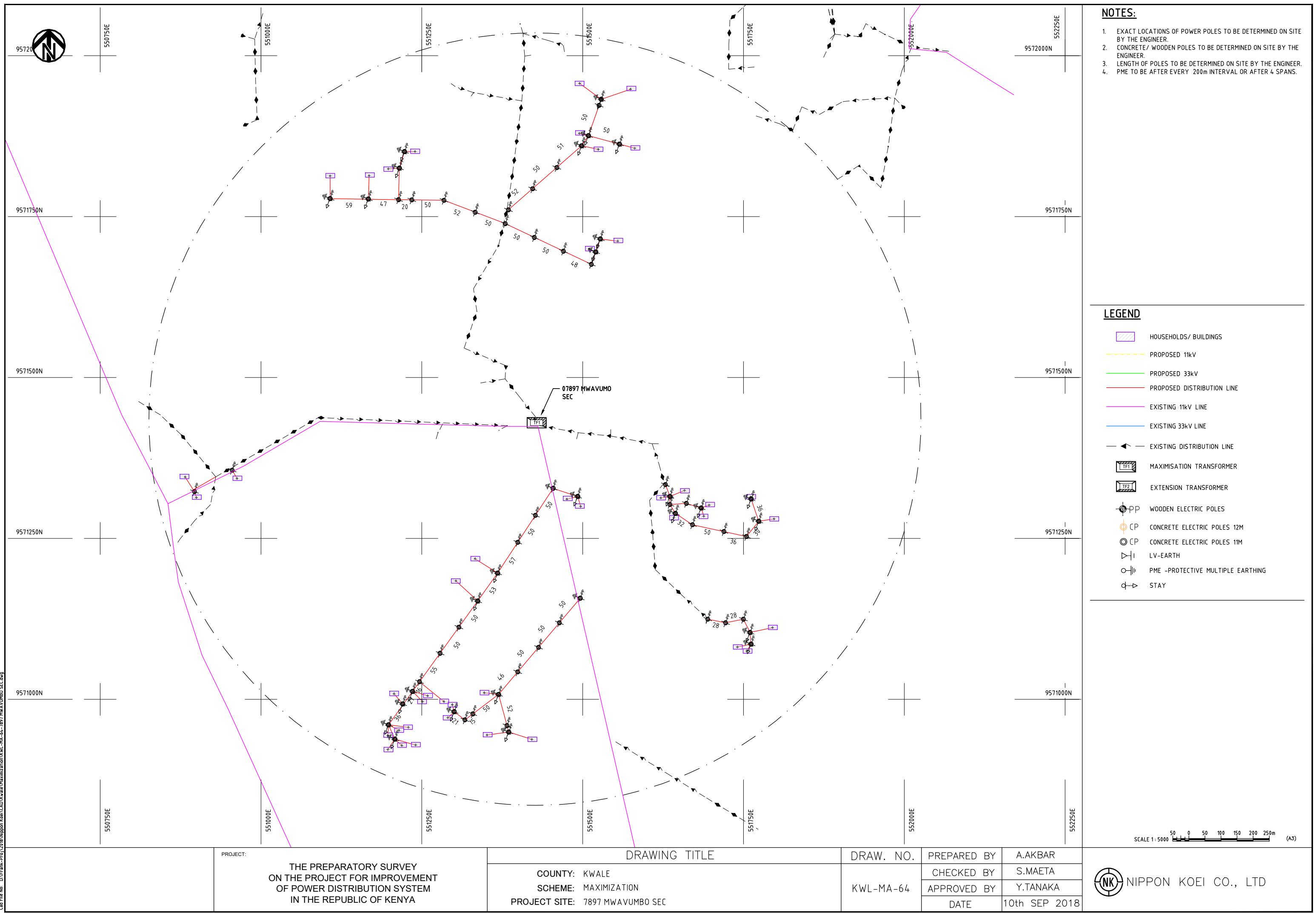
PROJECT: THE PREPARATORY SURVEY
ON THE PROJECT FOR IMPROVEMENT
OF POWER DISTRIBUTION SYSTEM
IN THE REPUBLIC OF KENYA

DRAWING TITLE

	DRAW. NO.	
	KWL-MA-61	

REPAARED BY	A.AKBAR
CHECKED BY	S.MAETA
APPROVED BY	Y.TANAKA
DATE	10th SEP 2018







9542750N

9542400N

9542050N

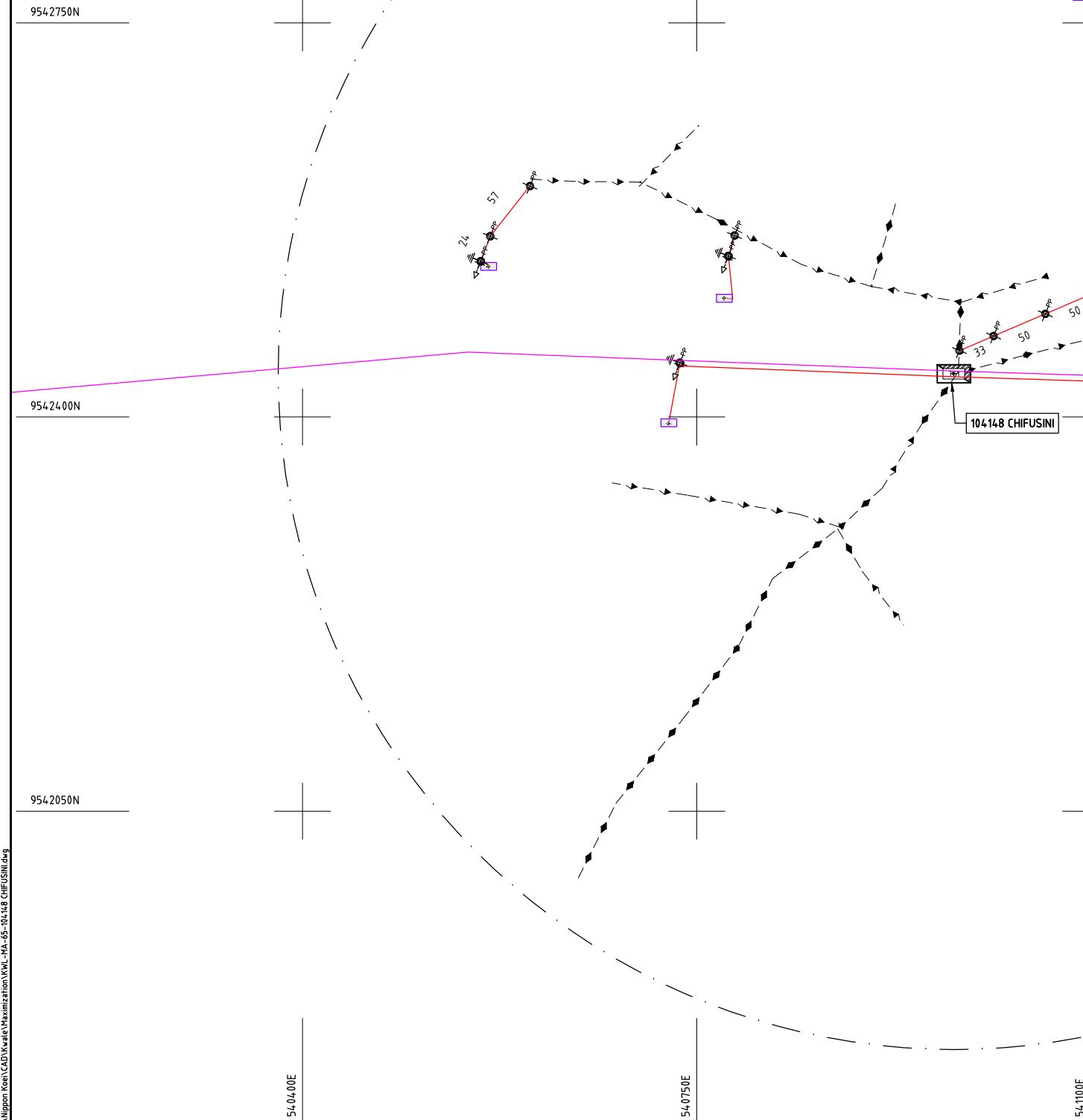
540400E

540750E

541100E

541450E

541800E



9542750N

9542400N

9542050N

541800E

SCALE 1:5000 50 0 50 100 150 200 250m (A3)

NOTES:

- EXACT LOCATIONS OF POWER POLES TO BE DETERMINED ON SITE BY THE ENGINEER.
- CONCRETE/ WOODEN POLES TO BE DETERMINED ON SITE BY THE ENGINEER.
- LENGTH OF POLES TO BE DETERMINED ON SITE BY THE ENGINEER.
- PME TO BE AFTER EVERY 200m INTERVAL OR AFTER 4 SPANS.

LEGEND

	HOUSEHOLDS/ BUILDINGS
	PROPOSED 11kV
	PROPOSED 33kV
	PROPOSED DISTRIBUTION LINE
	EXISTING 11kV LINE
	EXISTING 33kV LINE
	EXISTING DISTRIBUTION LINE
	MAXIMISATION TRANSFORMER
	EXTENSION TRANSFORMER
	WOODEN ELECTRIC POLES
	CONCRETE ELECTRIC POLES 12M
	CONCRETE ELECTRIC POLES 11M
	LV-EARTH
	PME -PROTECTIVE MULTIPLE EARTHING
	STAY

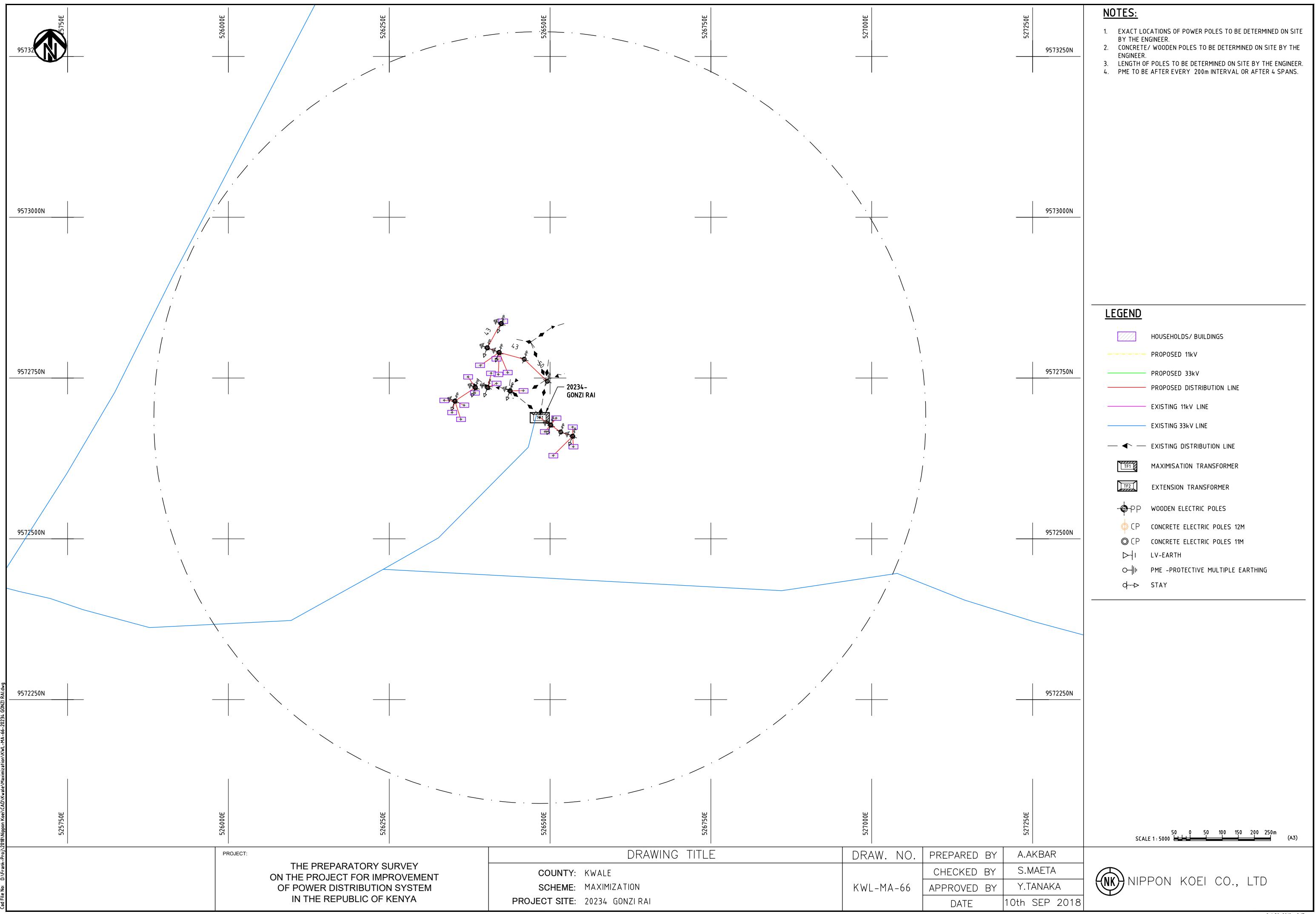
PROJECT:
THE PREPARATORY SURVEY
ON THE PROJECT FOR IMPROVEMENT
OF POWER DISTRIBUTION SYSTEM
IN THE REPUBLIC OF KENYA

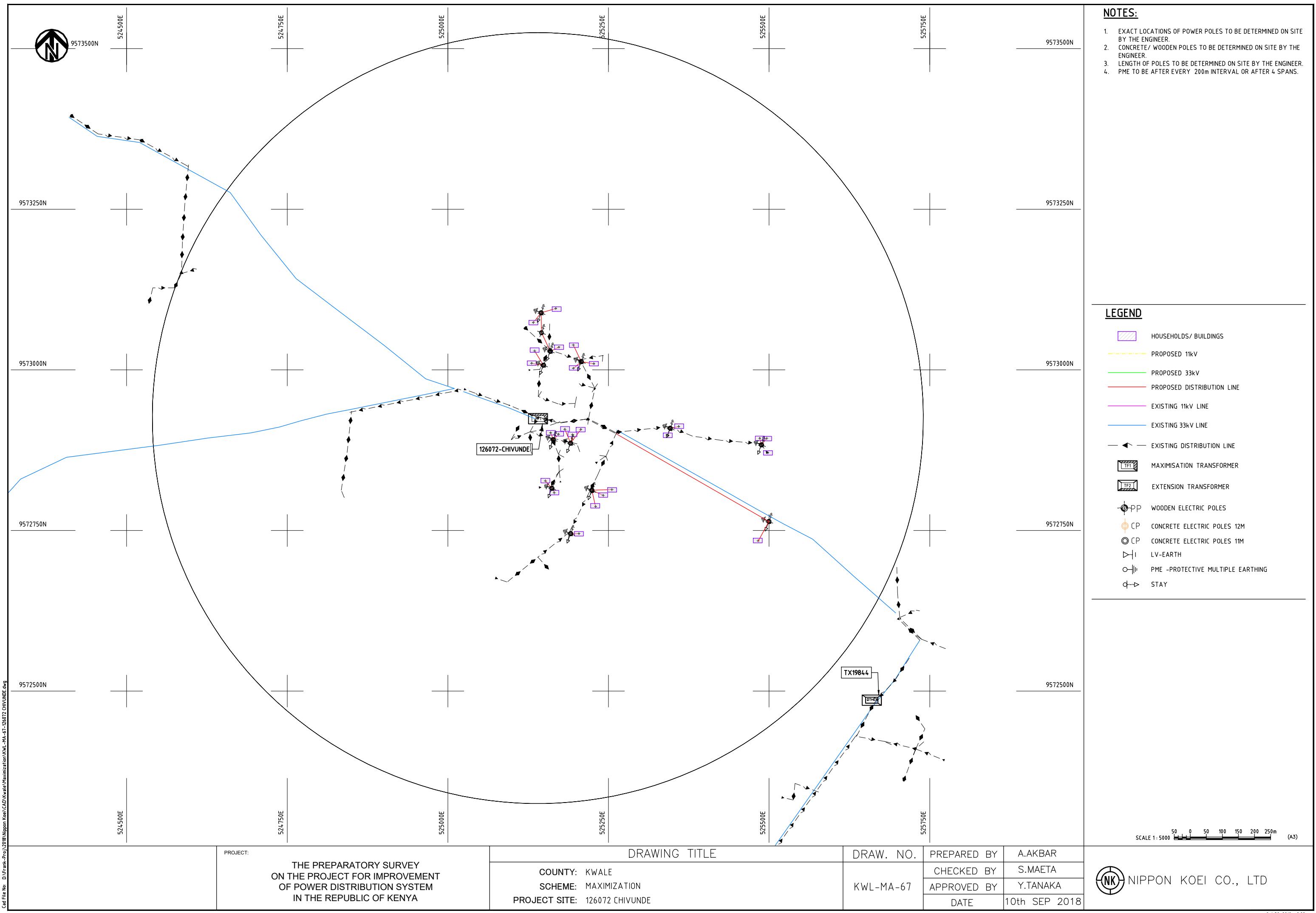
DRAWING TITLE
COUNTY: KWALE
SCHEME: MAXIMIZATION
PROJECT SITE: 104148 CHIFUSINI

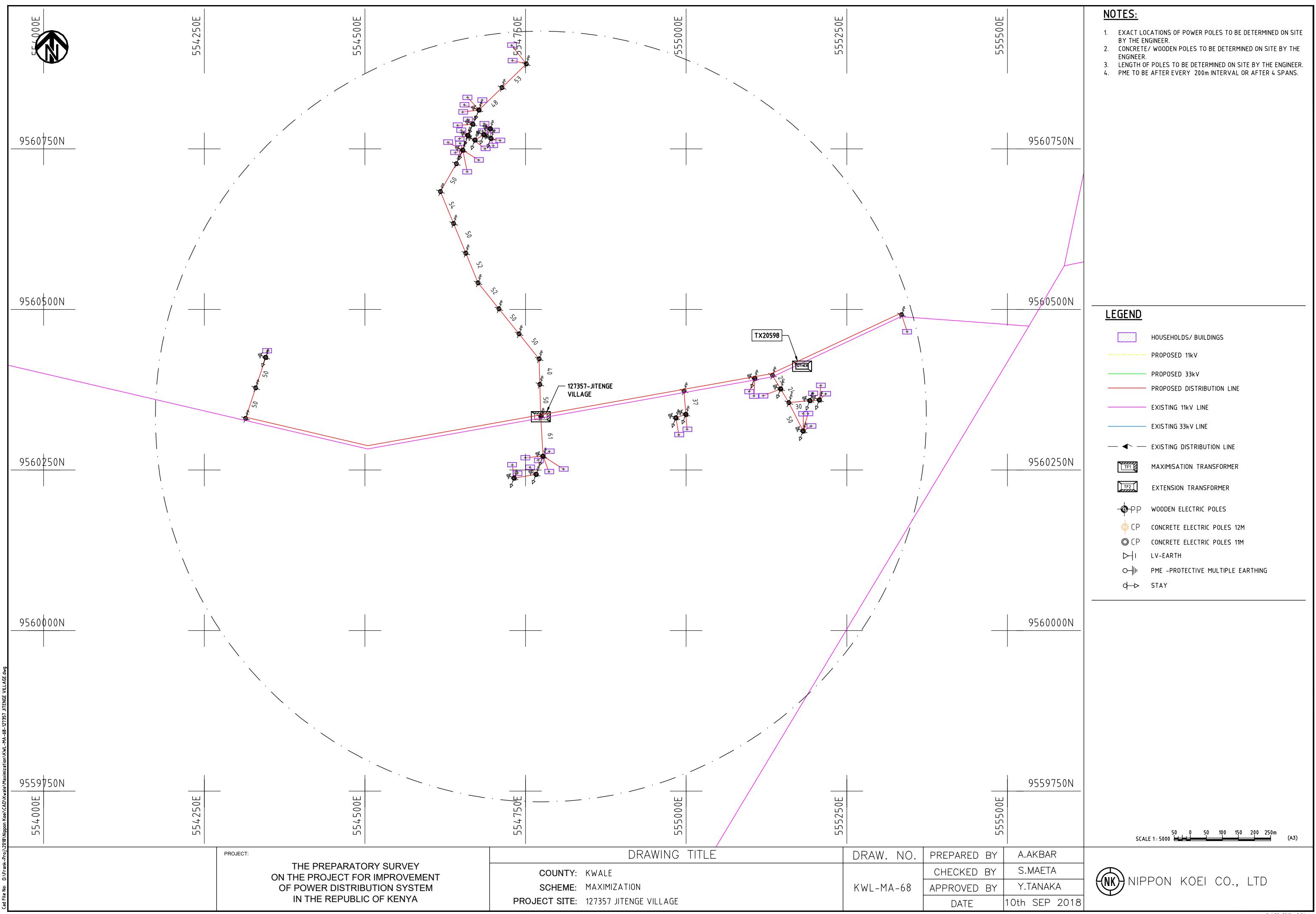
DRAW. NO. KWL-MA-65
PREPARED BY A.AKBAR
CHECKED BY S.MAETA
APPROVED BY Y.TANAKA
DATE 10th SEP 2018

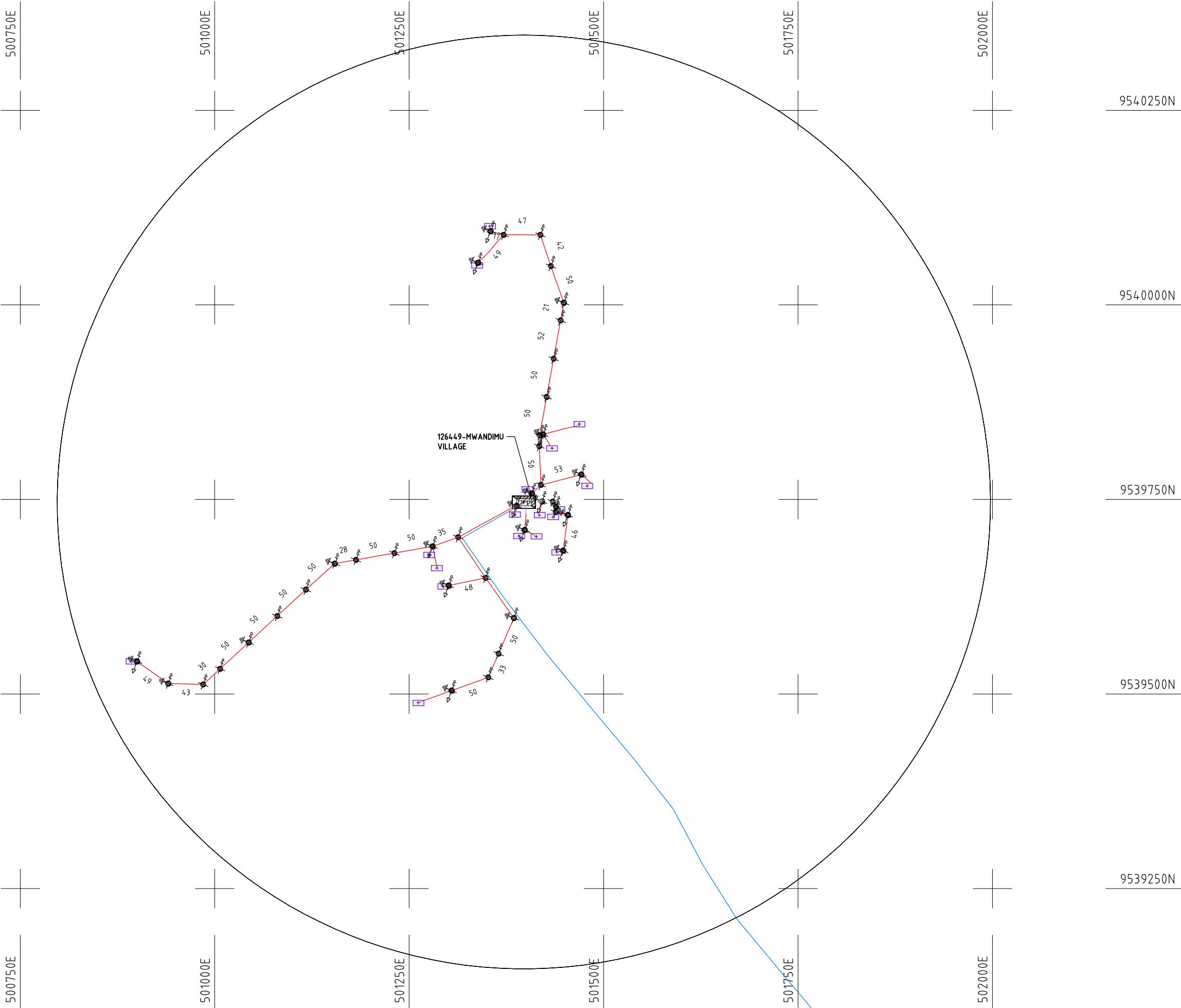


NIPPON KOEI CO., LTD







**NOTES:**

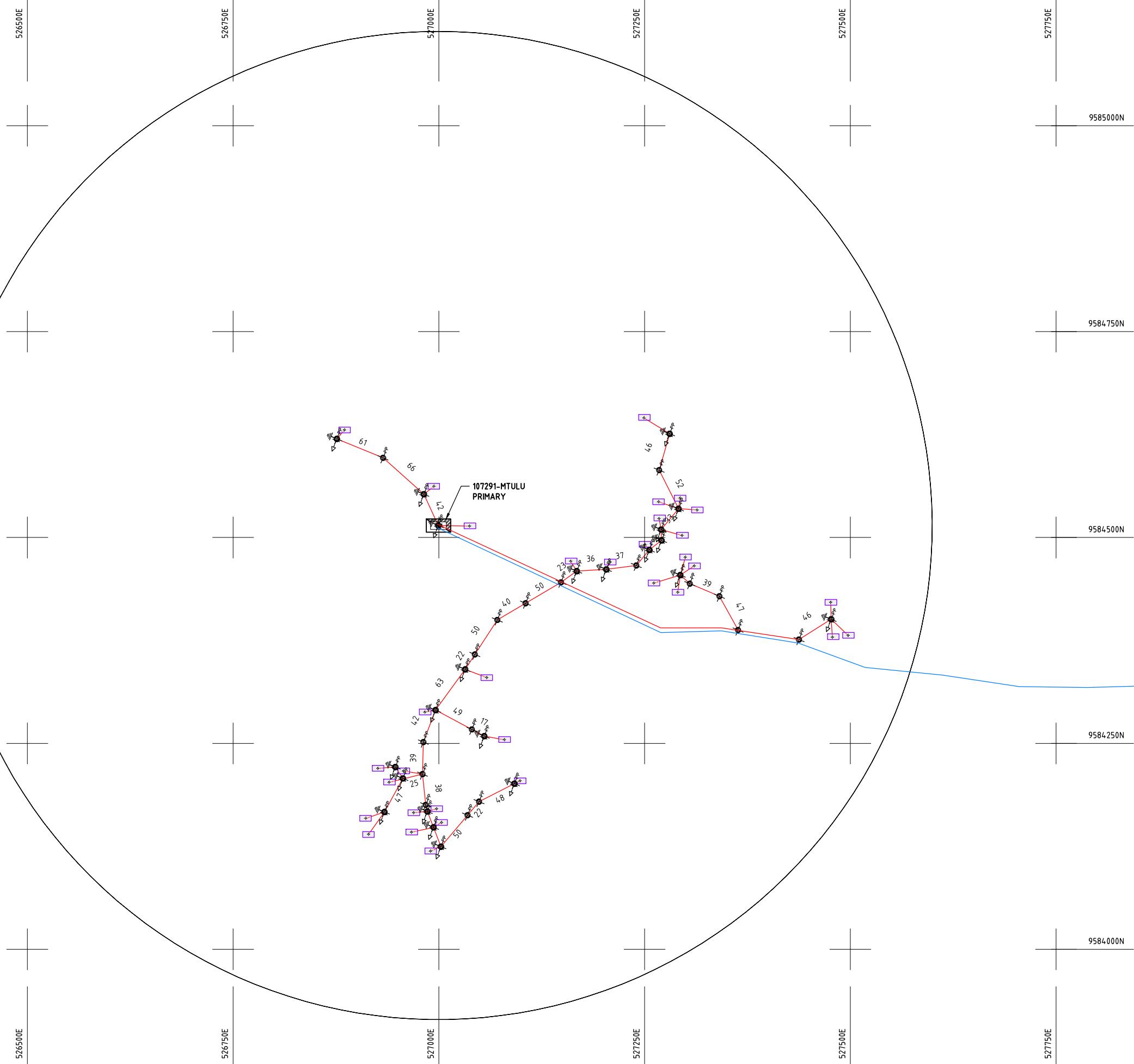
- EXACT LOCATIONS OF POWER POLES TO BE DETERMINED ON SITE BY THE ENGINEER.
- CONCRETE/ WOODEN POLES TO BE DETERMINED ON SITE BY THE ENGINEER.
- LENGTH OF POLES TO BE DETERMINED ON SITE BY THE ENGINEER.
- PME TO BE AFTER EVERY 200m INTERVAL OR AFTER 4 SPANS.

LEGEND

- HOUSEHOLDS / BUILDINGS
- PROPOSED 11kV
- PROPOSED 33kV
- PROPOSED DISTRIBUTION LINE
- EXISTING 11kV LINE
- EXISTING 33kV LINE
- > EXISTING DISTRIBUTION LINE
- TF1 MAXIMISATION TRANSFORMER
- TF2 EXTENSION TRANSFORMER
- PP WOODEN ELECTRIC POLES
- CP CONCRETE ELECTRIC POLES 12M
- ◎ CP CONCRETE ELECTRIC POLES 11M
- △ I LV-EARTH
- II PME -PROTECTIVE MULTIPLE EARTHING
- ▷ STAY

SCALE 1:5000 50 0 50 100 150 200 250m (A3)



**LEGEND**

- HOUSEHOLDS / BUILDINGS
- PROPOSED 11kV
- PROPOSED 33kV
- PROPOSED DISTRIBUTION LINE
- EXISTING 11kV LINE
- EXISTING 33kV LINE
- EXISTING DISTRIBUTION LINE
- MAXIMISATION TRANSFORMER
- EXTENSION TRANSFORMER
- WOODEN ELECTRIC POLES
- CONCRETE ELECTRIC POLES 12M
- CONCRETE ELECTRIC POLES 11M
- LV-EARTH
- PME -PROTECTIVE MULTIPLE EARTHING
- STAY

SCALE 1:5000 50 0 50 100 150 200 250m (A3)

PROJECT:
THE PREPARATORY SURVEY
ON THE PROJECT FOR IMPROVEMENT
OF POWER DISTRIBUTION SYSTEM
IN THE REPUBLIC OF KENYA

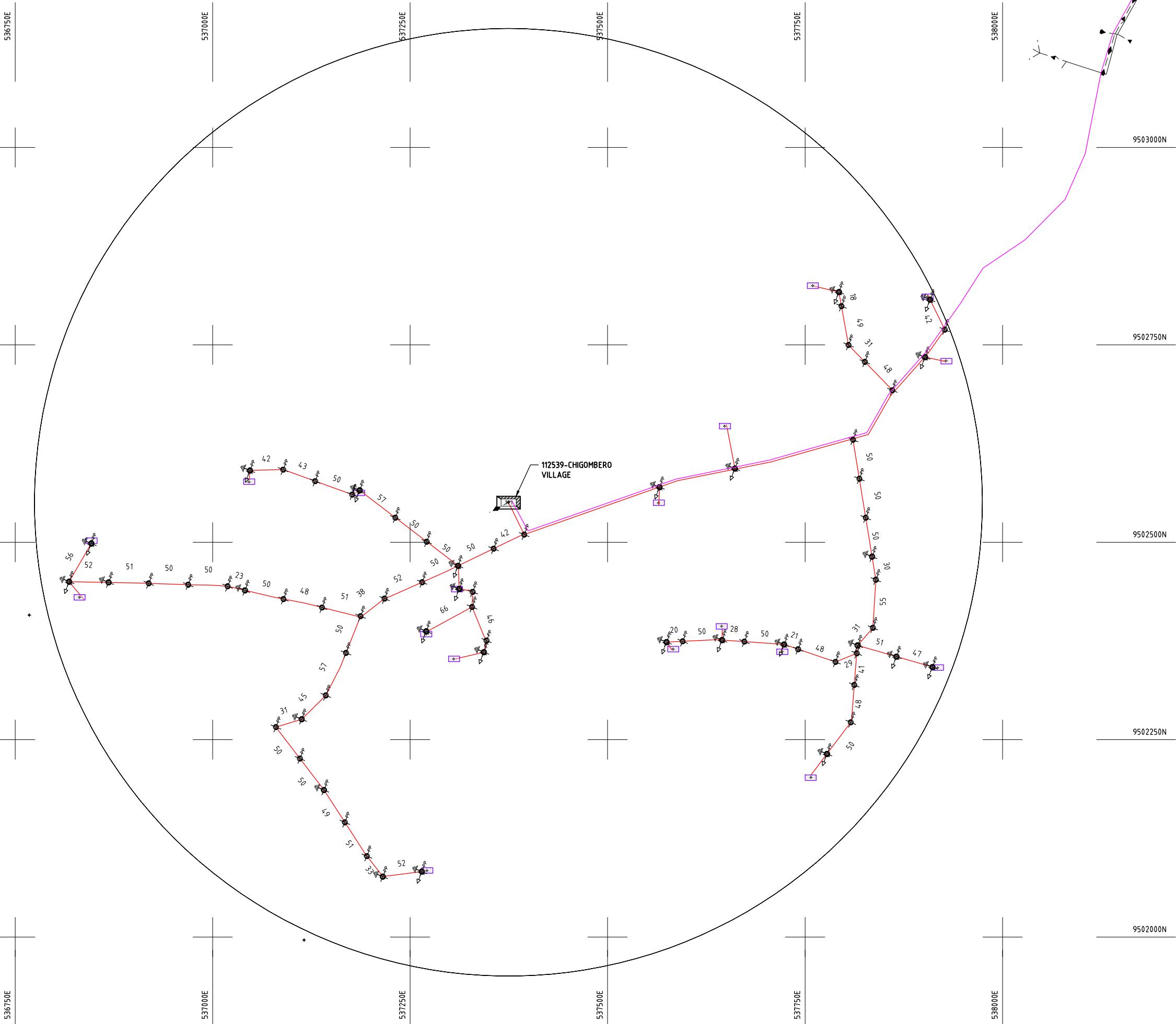
DRAWING TITLE
COUNTY: KWALE
SCHEME: MAXIMIZATION
PROJECT SITE: 107291 MUTULU PRI SCH

DRAW. NO.
KWL-MA-70

PREPARED BY	A.AKBAR
CHECKED BY	S.MAETA
APPROVED BY	Y.TANAKA
DATE	10th SEP 2018

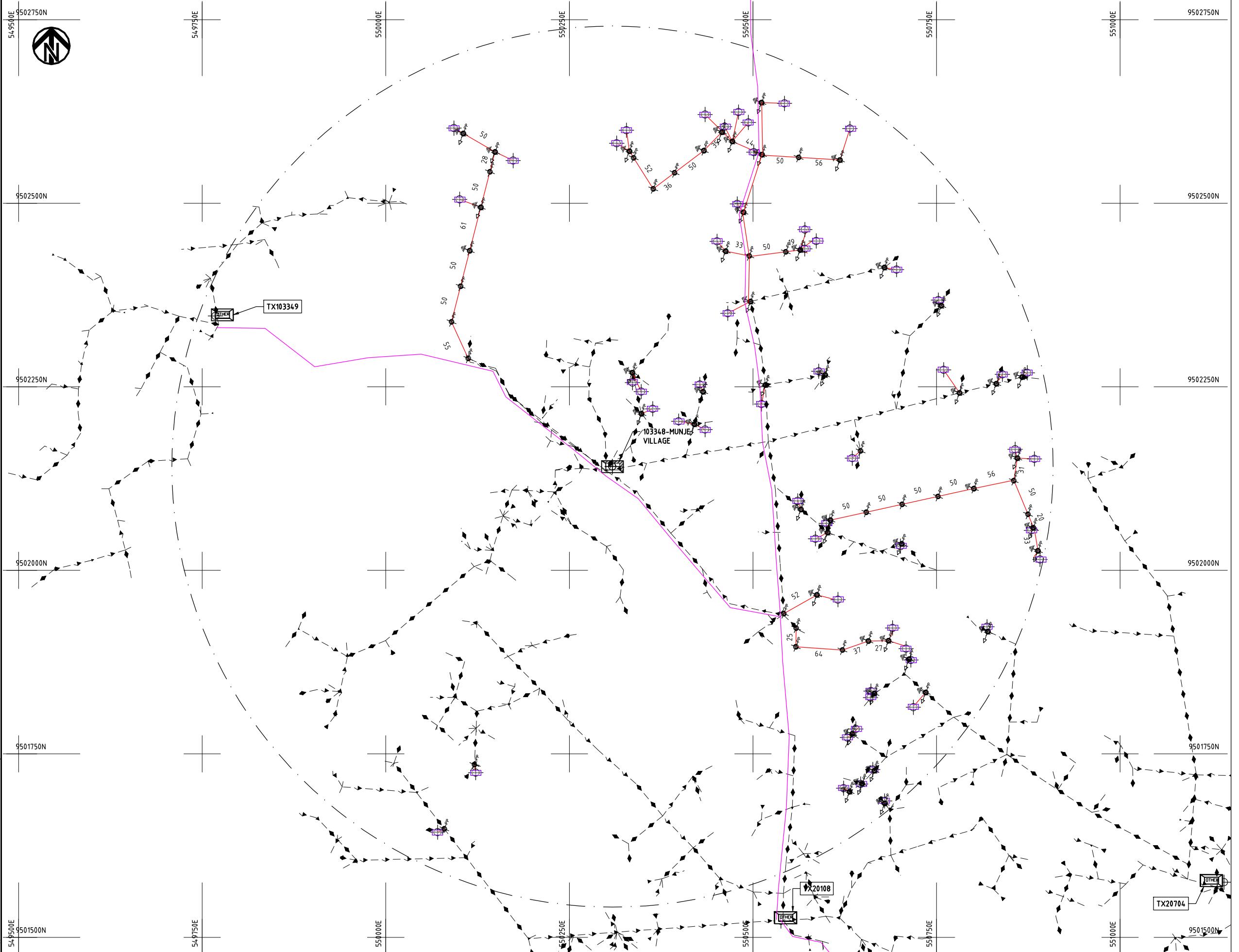


NIPPON KOEI CO., LTD

**LEGEND**

- [Symbol: Hatched square] HOUSEHOLDS / BUILDINGS
- [Symbol: Yellow dashed line] PROPOSED 11kV
- [Symbol: Green solid line] PROPOSED 33kV
- [Symbol: Red solid line] PROPOSED DISTRIBUTION LINE
- [Symbol: Pink solid line] EXISTING 11kV LINE
- [Symbol: Blue solid line] EXISTING 33kV LINE
- [Symbol: Black line with arrows] EXISTING DISTRIBUTION LINE
- [Symbol: Transformer icon] MAXIMISATION TRANSFORMER
- [Symbol: Transformer icon] EXTENSION TRANSFORMER
- [Symbol: Pole with stay] WOODEN ELECTRIC POLES
- [Symbol: Circle with dot] CONCRETE ELECTRIC POLES 12M
- [Symbol: Circle with dot] CONCRETE ELECTRIC POLES 11M
- [Symbol: Triangle with line] LV-EARTH
- [Symbol: Open circle with vertical line] PME -PROTECTIVE MULTIPLE EARTHING
- [Symbol: Open square with diagonal line] STAY





NOTES:

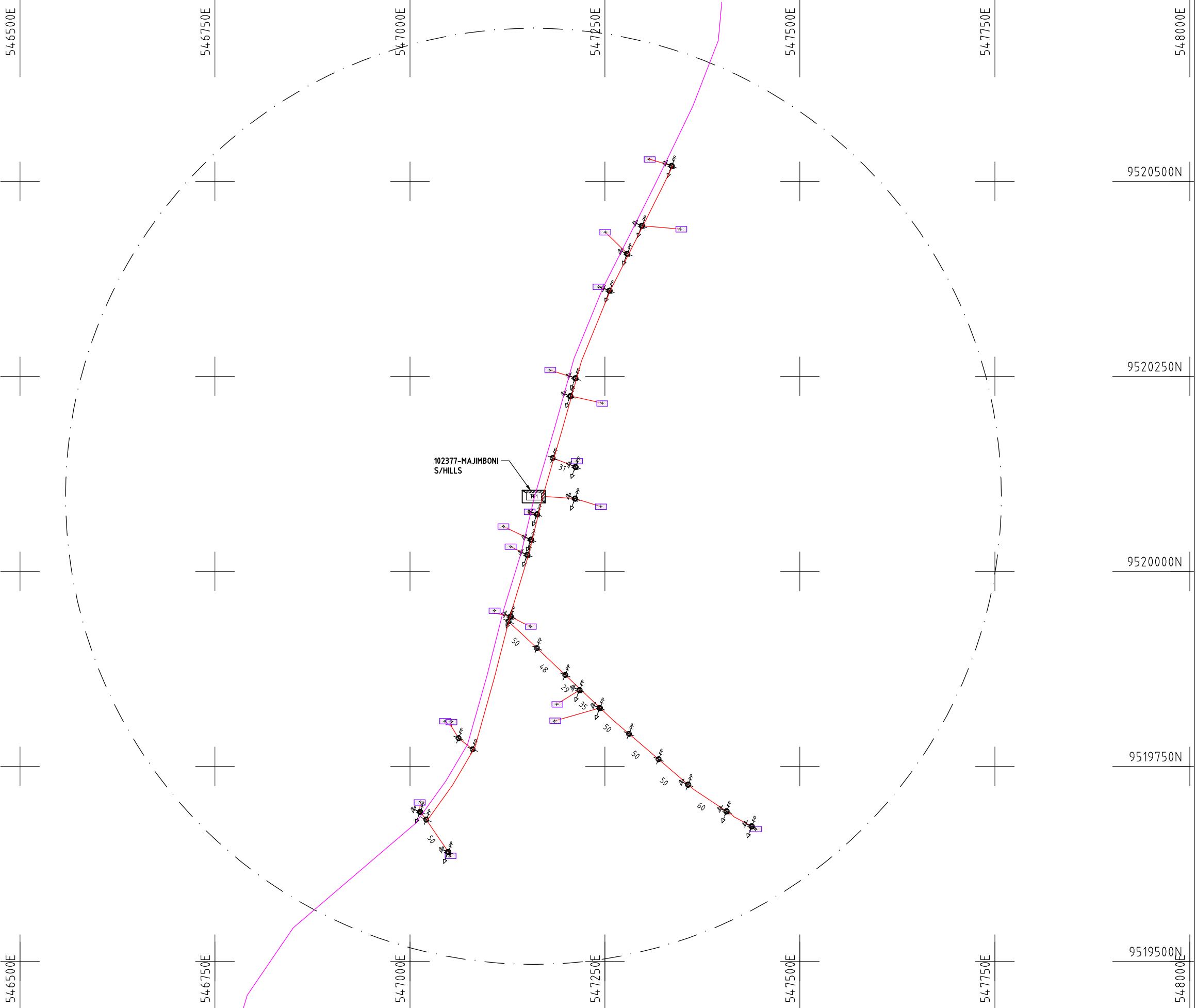
- EXACT LOCATIONS OF POWER POLES TO BE DETERMINED ON SITE BY THE ENGINEER.
- CONCRETE/ WOODEN POLES TO BE DETERMINED ON SITE BY THE ENGINEER.
- LENGTH OF POLES TO BE DETERMINED ON SITE BY THE ENGINEER.
- PME TO BE AFTER EVERY 200m INTERVAL OR AFTER 4 SPANS.

LEGEND

- [Hatched Box] HOUSEHOLDS / BUILDINGS
- [Yellow Line] PROPOSED 11kV
- [Green Line] PROPOSED 33kV
- [Red Line] PROPOSED DISTRIBUTION LINE
- [Pink Line] EXISTING 11kV LINE
- [Blue Line] EXISTING 33kV LINE
- [Dashed Line] EXISTING DISTRIBUTION LINE
- [Transformer Icon] MAXIMISATION TRANSFORMER
- [Transformer Icon] EXTENSION TRANSFORMER
- [Wooden Pole Icon] WOODEN ELECTRIC POLES
- [Concrete Pole 12m Icon] CONCRETE ELECTRIC POLES 12M
- [Concrete Pole 11m Icon] CONCRETE ELECTRIC POLES 11M
- [Triangle with dot] LV-EARTH
- [Open Circle with vertical line] PME -PROTECTIVE MULTIPLE EARTHING
- [Open Square with diagonal line] STAY

NIPPON KOEI CO., LTD
Oct 30, 2018 - 2:39pm



**NOTES:**

- EXACT LOCATIONS OF POWER POLES TO BE DETERMINED ON SITE BY THE ENGINEER.
- CONCRETE/ WOODEN POLES TO BE DETERMINED ON SITE BY THE ENGINEER.
- LENGTH OF POLES TO BE DETERMINED ON SITE BY THE ENGINEER.
- PME TO BE AFTER EVERY 200m INTERVAL OR AFTER 4 SPANS.

LEGEND

- HOUSEHOLDS / BUILDINGS
- PROPOSED 11kV
- PROPOSED 33kV
- PROPOSED DISTRIBUTION LINE
- EXISTING 11kV LINE
- EXISTING 33kV LINE
- EXISTING DISTRIBUTION LINE
- MAXIMISATION TRANSFORMER
- EXTENSION TRANSFORMER
- WOODEN ELECTRIC POLES
- CONCRETE ELECTRIC POLES 12M
- CONCRETE ELECTRIC POLES 11M
- LV-EARTH
- PME -PROTECTIVE MULTIPLE EARTHING
- STAY

NIPPON KOEI CO., LTD
Oct 30, 2018 - 2:40pm



535750E

536000E

536250E

536500E

536750E

537000E

9518250N

9518000N

9517750N

9517500N

9517250N

9518250N

9518000N

9517750N

9517500N

9517250N

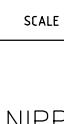
NOTES:

- EXACT LOCATIONS OF POWER POLES TO BE DETERMINED ON SITE BY THE ENGINEER.
- CONCRETE/ WOODEN POLES TO BE DETERMINED ON SITE BY THE ENGINEER.
- LENGTH OF POLES TO BE DETERMINED ON SITE BY THE ENGINEER.
- PME TO BE AFTER EVERY 200m INTERVAL OR AFTER 4 SPANS.

LEGEND

- HOUSEHOLDS/ BUILDINGS
- PROPOSED 11kV
- PROPOSED 33kV
- PROPOSED DISTRIBUTION LINE
- EXISTING 11kV LINE
- EXISTING 33kV LINE
- EXISTING DISTRIBUTION LINE
- MAXIMISATION TRANSFORMER
- EXTENSION TRANSFORMER
- WOODEN ELECTRIC POLES
- CP CONCRETE ELECTRIC POLES 12M
- CP CONCRETE ELECTRIC POLES 11M
- LV-EARTH
- PME -PROTECTIVE MULTIPLE EARTHING
- STAY

NIPPON KOEI CO., LTD



Oct 30, 2018 - 2:43pm

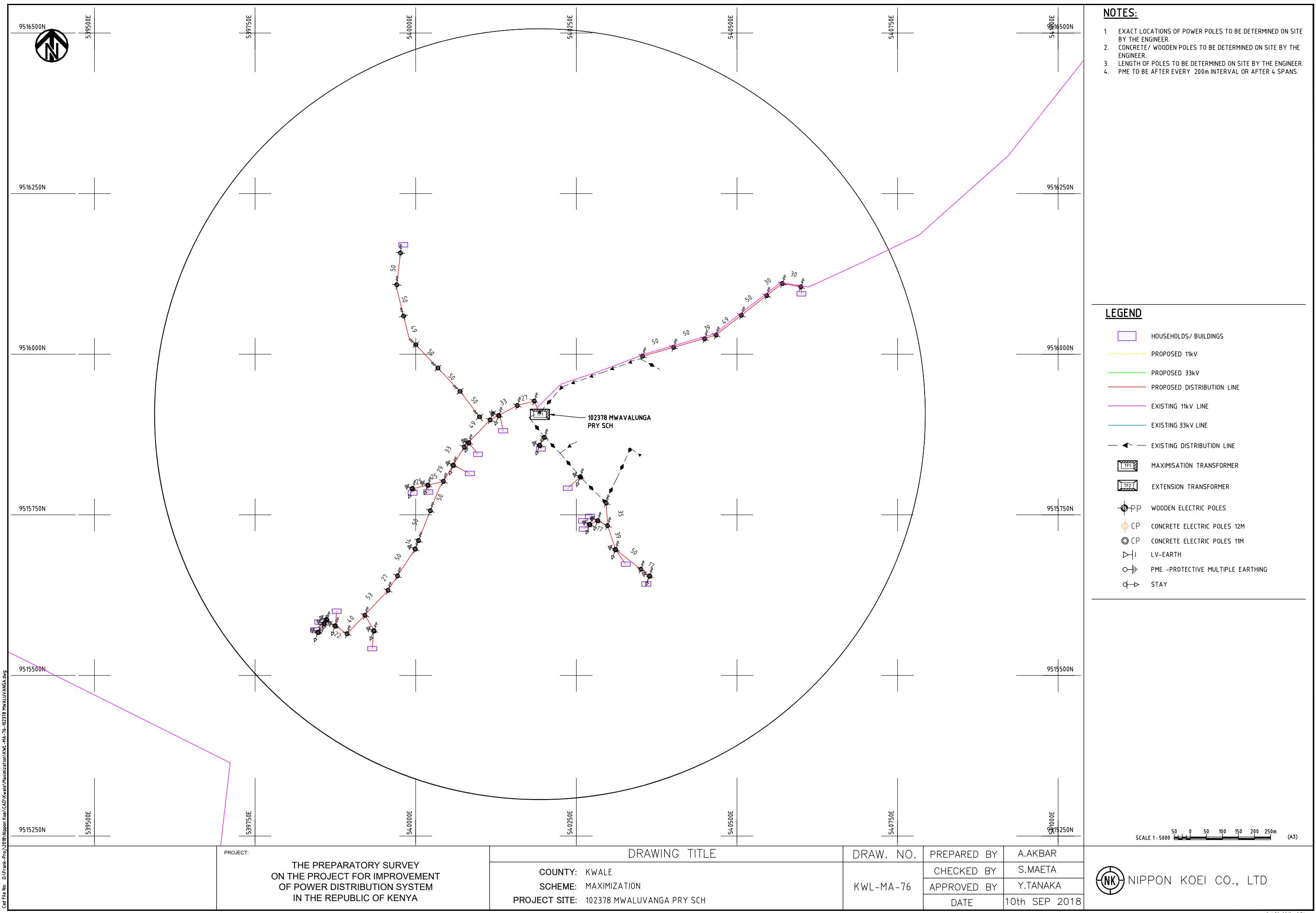
PROJECT:
THE PREPARATORY SURVEY
ON THE PROJECT FOR IMPROVEMENT
OF POWER DISTRIBUTION SYSTEM
IN THE REPUBLIC OF KENYA

DRAWING TITLE
COUNTY: KWALE
SCHEME: MAXIMIZATION
PROJECT SITE: 102376 LUKORE

DRAW. NO. A.AKBAR
KWL-MA-75
DRAW. NO. APPROVED BY Y.TANAKA
DATE 10th SEP 2018

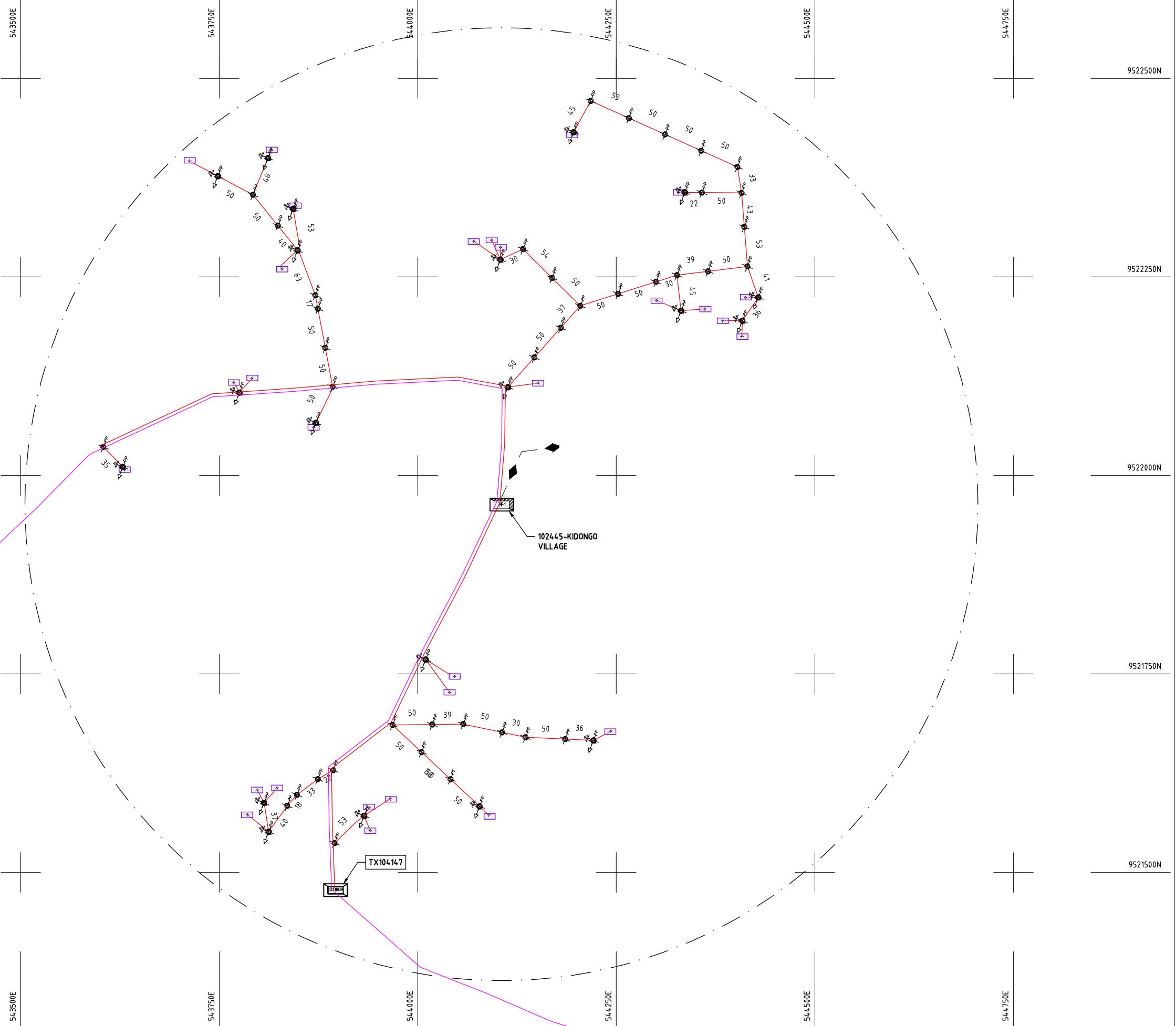
CHECKED BY S.MAETA
APPROVED BY Y.TANAKA
DATE 10th SEP 2018

SCALE 1:5000 50 0 50 100 150 200 250m (A3)





9522500N

**NOTES:**

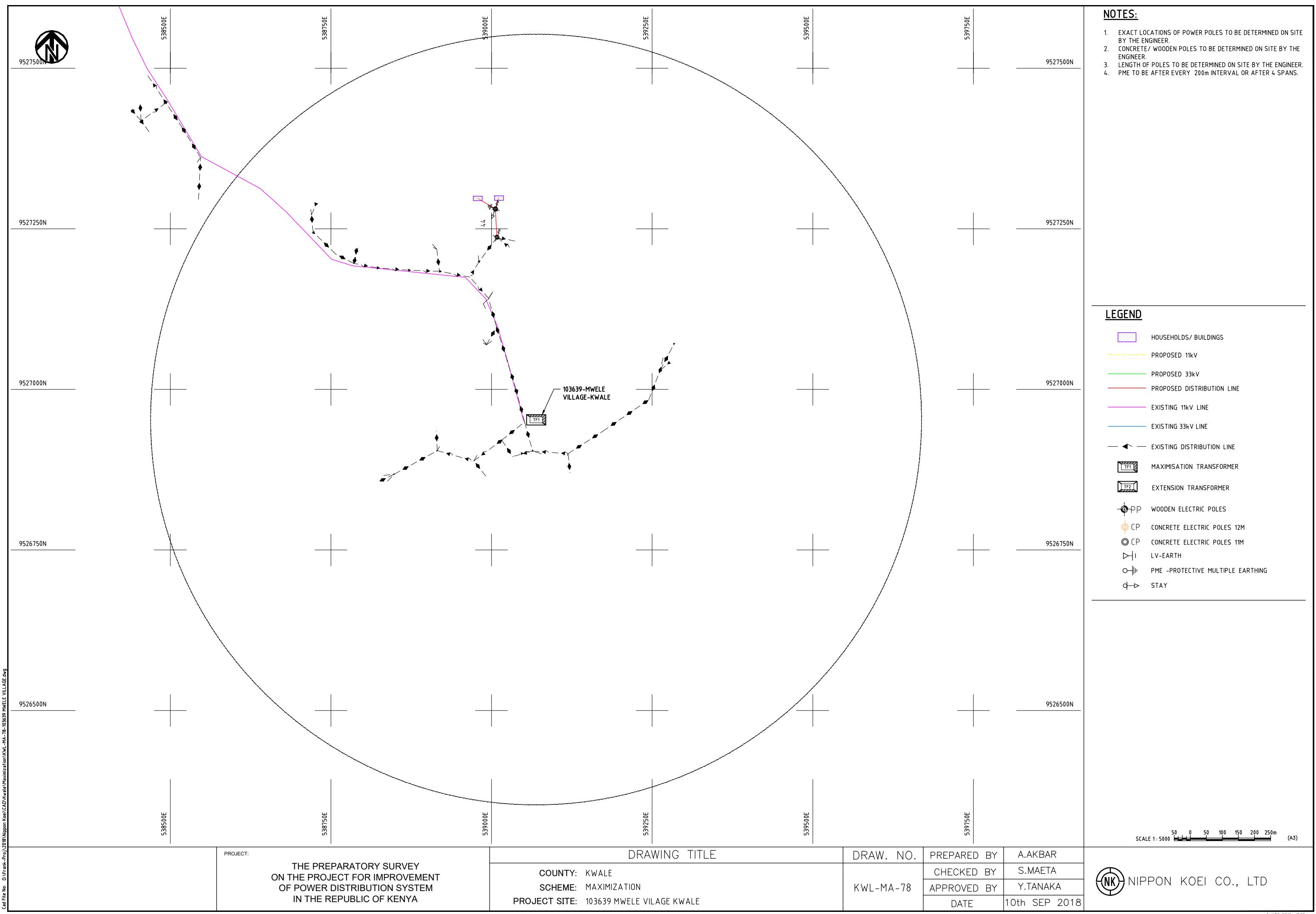
- EXACT LOCATIONS OF POWER POLES TO BE DETERMINED ON SITE BY THE ENGINEER.
- CONCRETE/ WOODEN POLES TO BE DETERMINED ON SITE BY THE ENGINEER.
- LENGTH OF POLES TO BE DETERMINED ON SITE BY THE ENGINEER.
- PME TO BE AFTER EVERY 200m INTERVAL OR AFTER 4 SPANS.

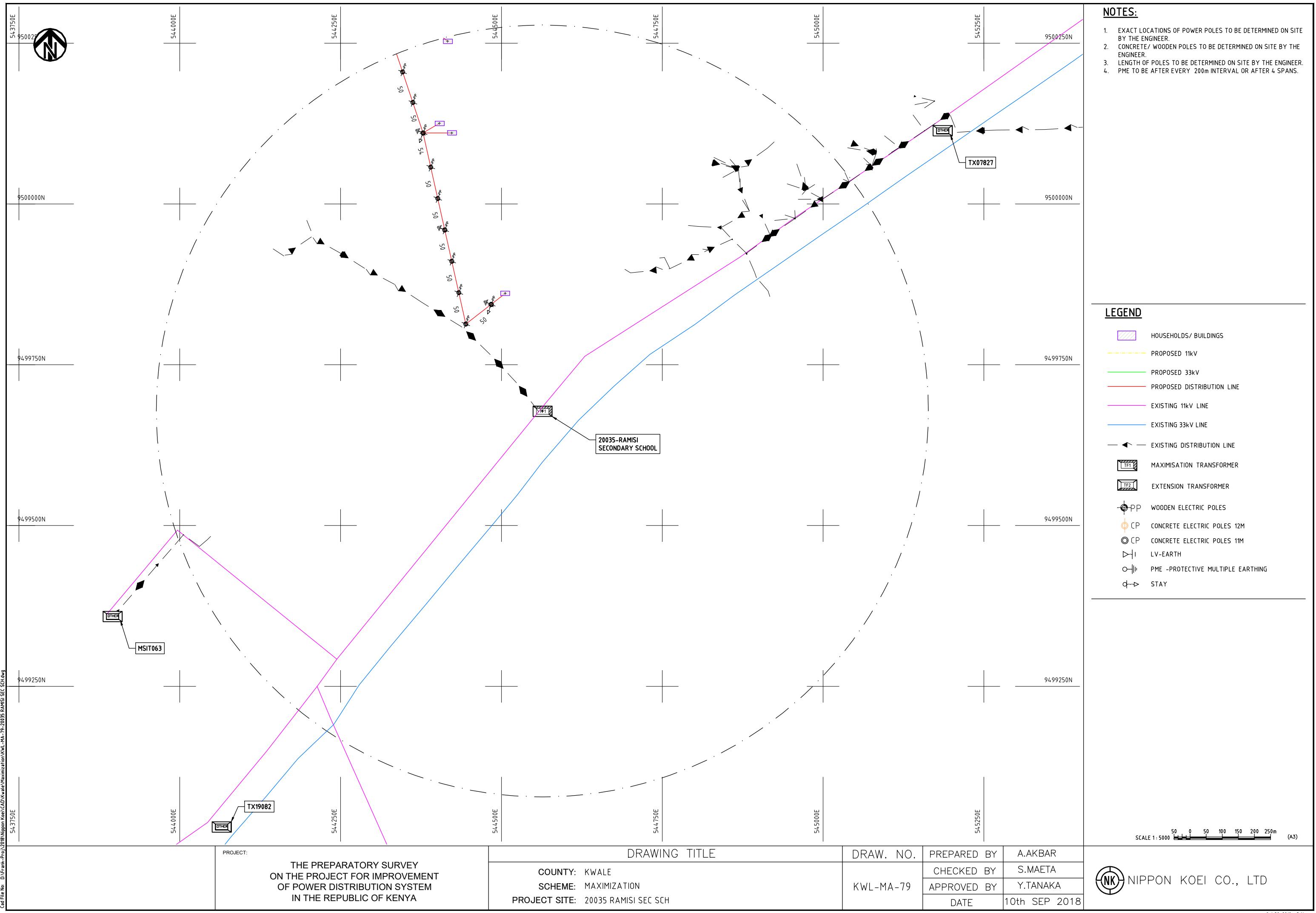
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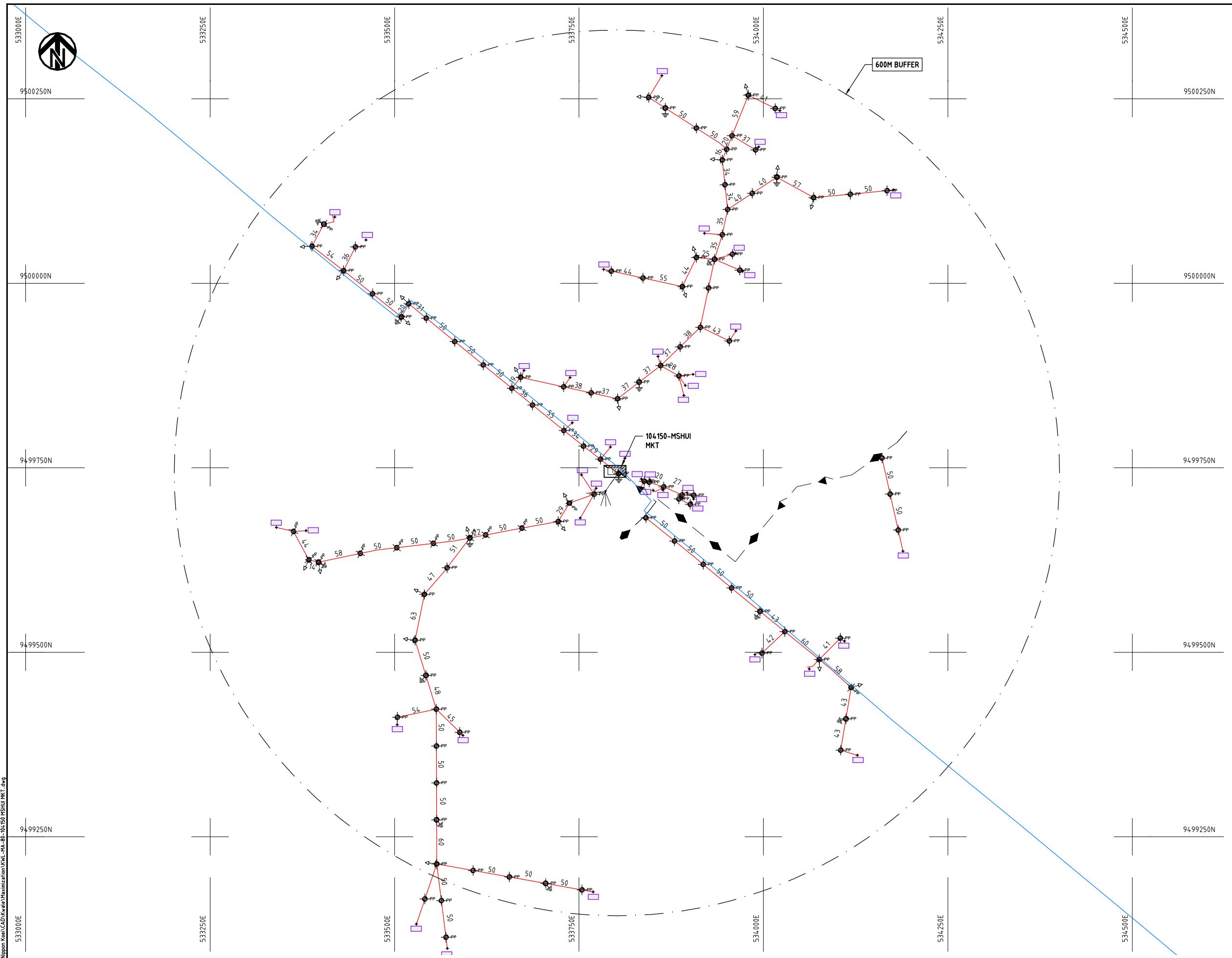
- HOUSEHOLDS/ BUILDINGS
- PROPOSED 11kV
- PROPOSED 33kV
- PROPOSED DISTRIBUTION LINE
- EXISTING 11kV LINE
- EXISTING 33kV LINE
- EXISTING DISTRIBUTION LINE
- MAXIMISATION TRANSFORMER
- EXTENSION TRANSFORMER
- WOODEN ELECTRIC POLES
- CONCRETE ELECTRIC POLES 12M
- CONCRETE ELECTRIC POLES 11M
- LV-EARTH
- PME -PROTECTIVE MULTIPLE EARTHING
- STAY

NIPPON KOEI CO., LTD

SCALE 1:5000 50 0 50 100 150 200 250m (A3)







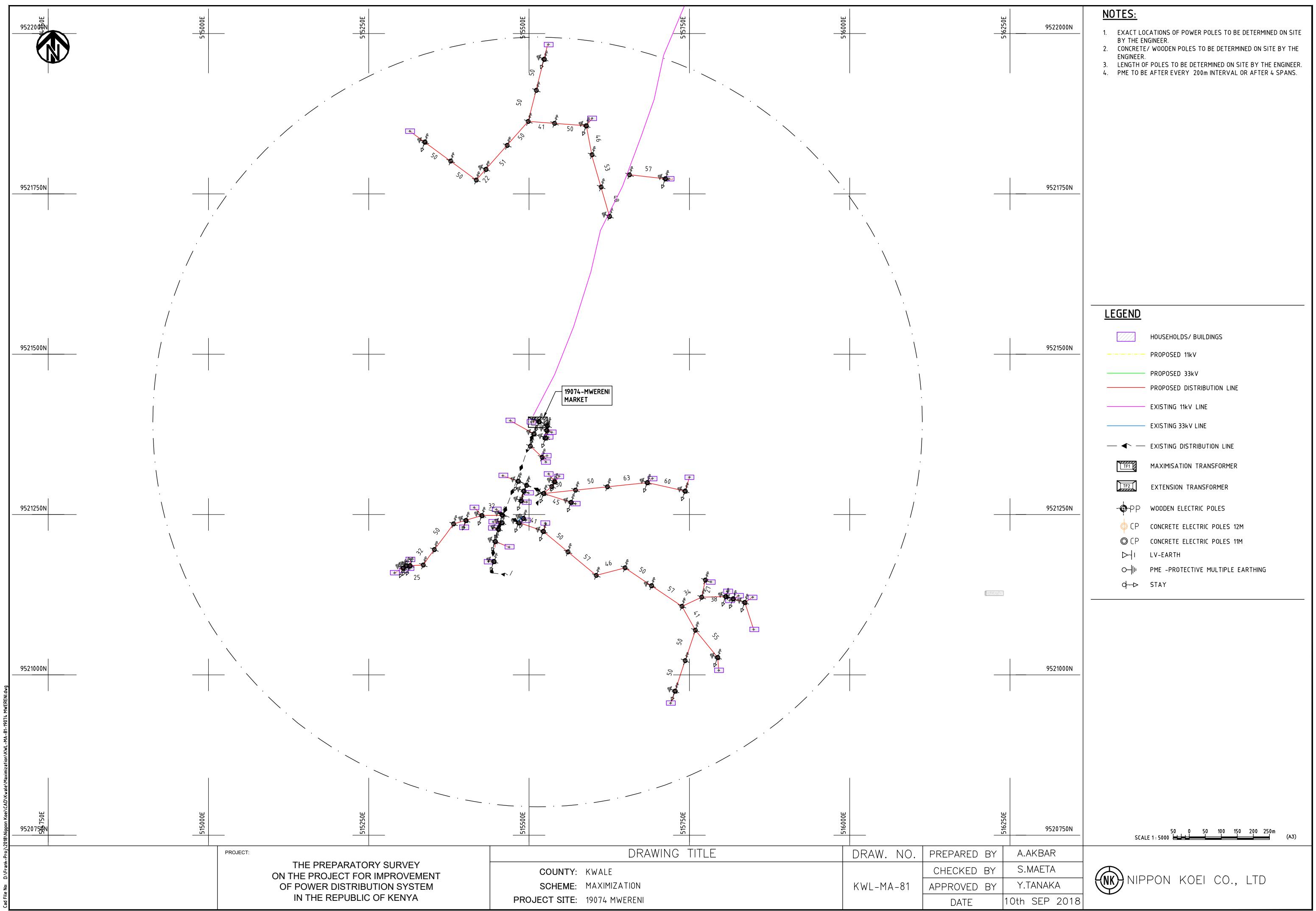
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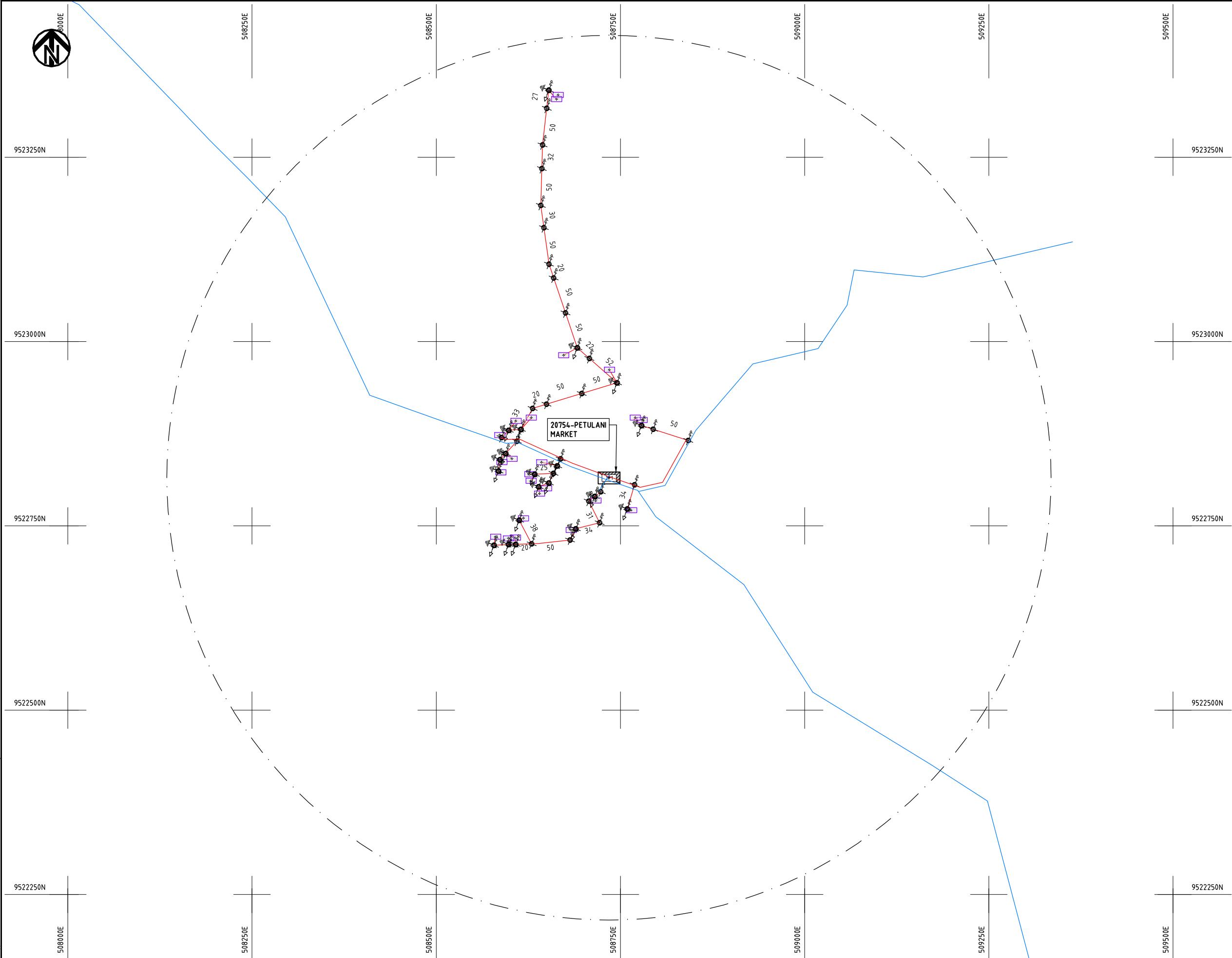
- EXACT LOCATIONS OF POWER POLES TO BE DETERMINED ON SITE BY THE ENGINEER.
- CONCRETE/ WOODEN POLES TO BE DETERMINED ON SITE BY THE ENGINEER.
- LENGTH OF POLES TO BE DETERMINED ON SITE BY THE ENGINEER.
- PME TO BE AFTER EVERY 200m INTERVAL OR AFTER 4 SPANS.

LEGEND

- [Icon] HOUSEHOLDS / BUILDINGS
- [Icon] PROPOSED 11kV
- [Icon] PROPOSED 33kV
- [Icon] PROPOSED DISTRIBUTION LINE
- [Icon] EXISTING 11kV LINE
- [Icon] EXISTING 33kV LINE
- [Icon] EXISTING DISTRIBUTION LINE
- [Icon] MAXIMISATION TRANSFORMER
- [Icon] EXTENSION TRANSFORMER
- [Icon] PP WOODEN ELECTRIC POLES
- [Icon] CP CONCRETE ELECTRIC POLES 12M
- [Icon] CP CONCRETE ELECTRIC POLES 11M
- [Icon] LV-EARTH
- [Icon] PME -PROTECTIVE MULTIPLE EARTHING
- [Icon] STAY

 NIPPON KOEI CO., LTD



**LEGEND**

- [Symbol: Hatched Box] HOUSEHOLDS / BUILDINGS
- [Symbol: Yellow Line] PROPOSED 11kV
- [Symbol: Green Line] PROPOSED 33kV
- [Symbol: Red Line] PROPOSED DISTRIBUTION LINE
- [Symbol: Pink Line] EXISTING 11kV LINE
- [Symbol: Blue Line] EXISTING 33kV LINE
- [Symbol: Existing Distribution Line] EXISTING DISTRIBUTION LINE
- [Symbol: Transformer TF1] MAXIMISATION TRANSFORMER
- [Symbol: Transformer TF2] EXTENSION TRANSFORMER
- [Symbol: Pole with stay] WOODEN ELECTRIC POLES
- [Symbol: Circle with dot CP] CONCRETE ELECTRIC POLES 12M
- [Symbol: Circle with dot CP] CONCRETE ELECTRIC POLES 11M
- [Symbol: Triangle with vertical line] LV-EARTH
- [Symbol: Open circle with vertical line] PME -PROTECTIVE MULTIPLE EARTHING
- [Symbol: Open square with vertical line] STAY

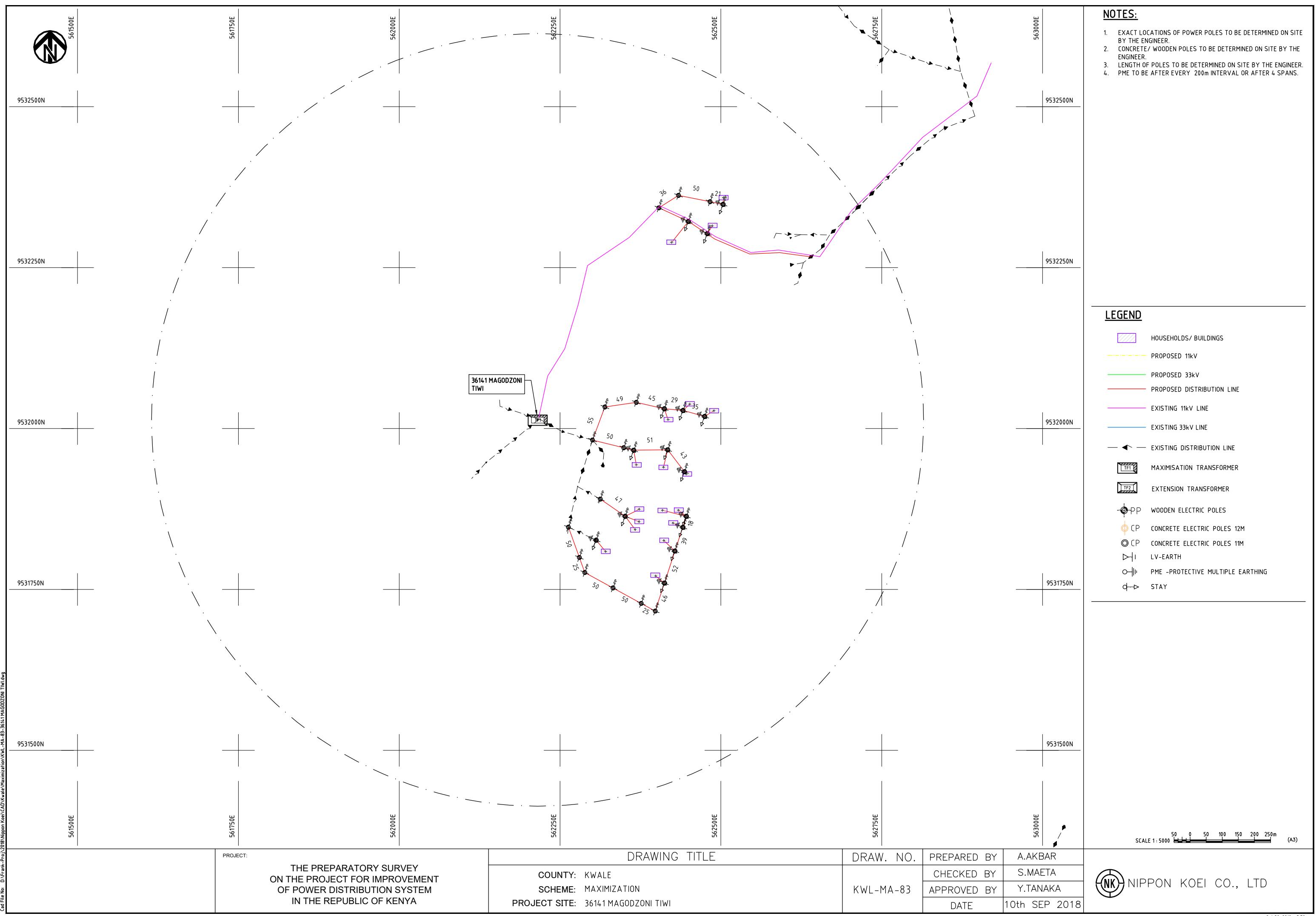
NIPPON KOEI CO., LTD

PROJECT:
THE PREPARATORY SURVEY
ON THE PROJECT FOR IMPROVEMENT
OF POWER DISTRIBUTION SYSTEM
IN THE REPUBLIC OF KENYA

DRAWING TITLE
COUNTY: KWALE
SCHEME: MAXIMIZATION
PROJECT SITE: 20754 PETULANI MARKET

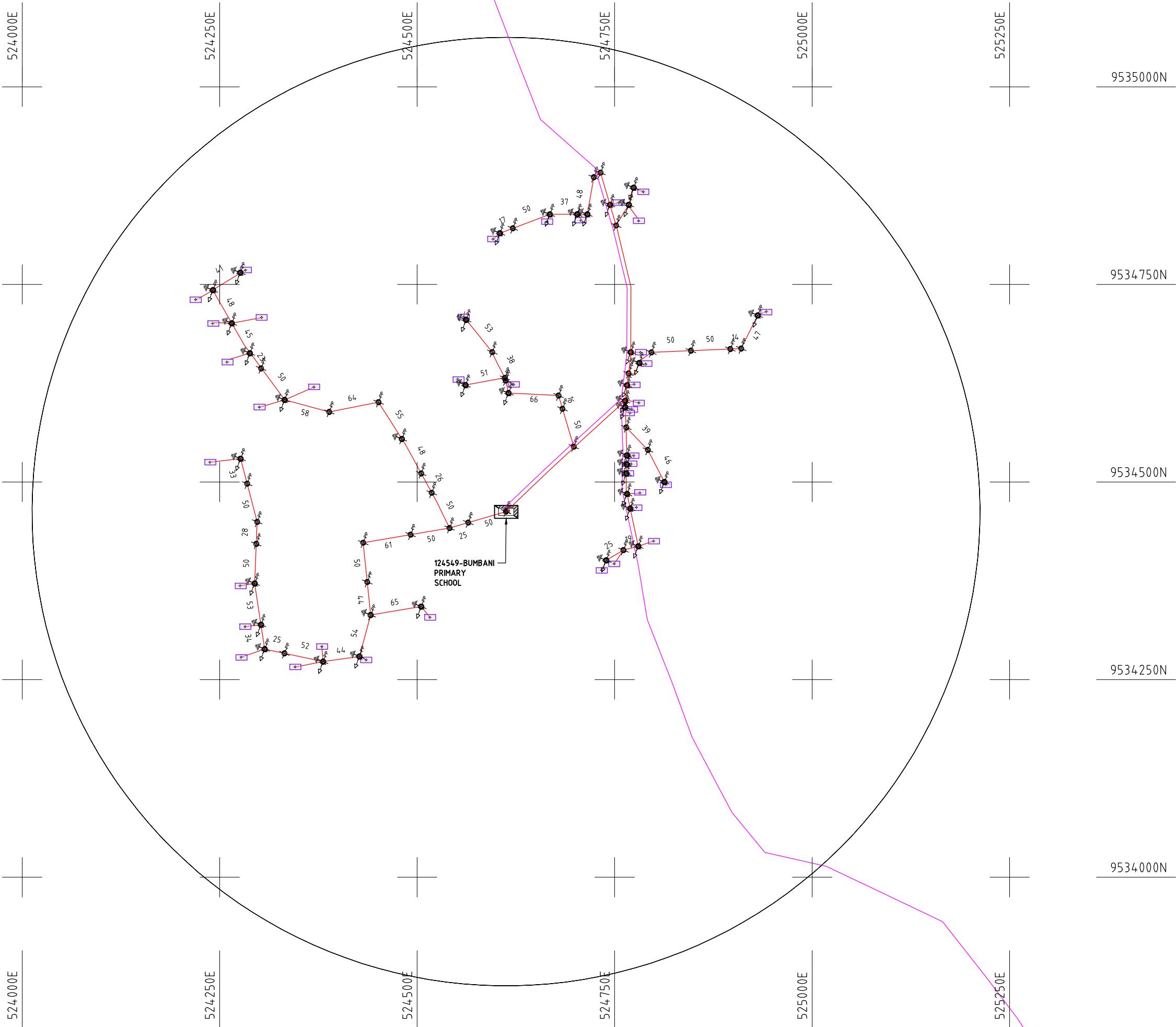
DRAW. NO. KWL-MA-82
PREPARED BY A.AKBAR
CHECKED BY S.MAETA
APPROVED BY Y.TANAKA
DATE 10th SEP 2018

NIPPON KOEI CO., LTD





953500N

**NOTES:**

- EXACT LOCATIONS OF POWER POLES TO BE DETERMINED ON SITE BY THE ENGINEER.
- CONCRETE/ WOODEN POLES TO BE DETERMINED ON SITE BY THE ENGINEER.
- LENGTH OF POLES TO BE DETERMINED ON SITE BY THE ENGINEER.
- PME TO BE AFTER EVERY 200m INTERVAL OR AFTER 4 SPANS.

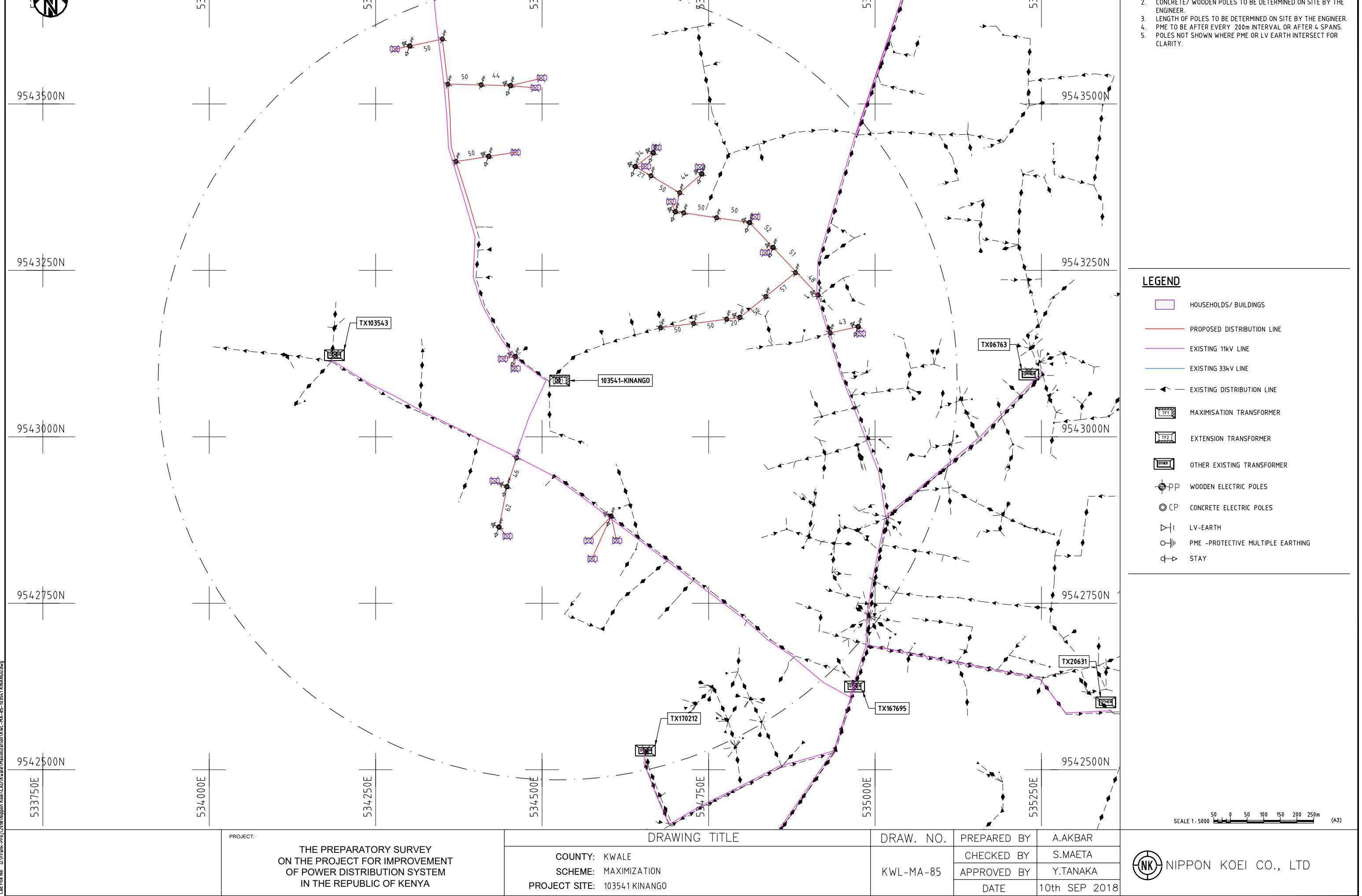
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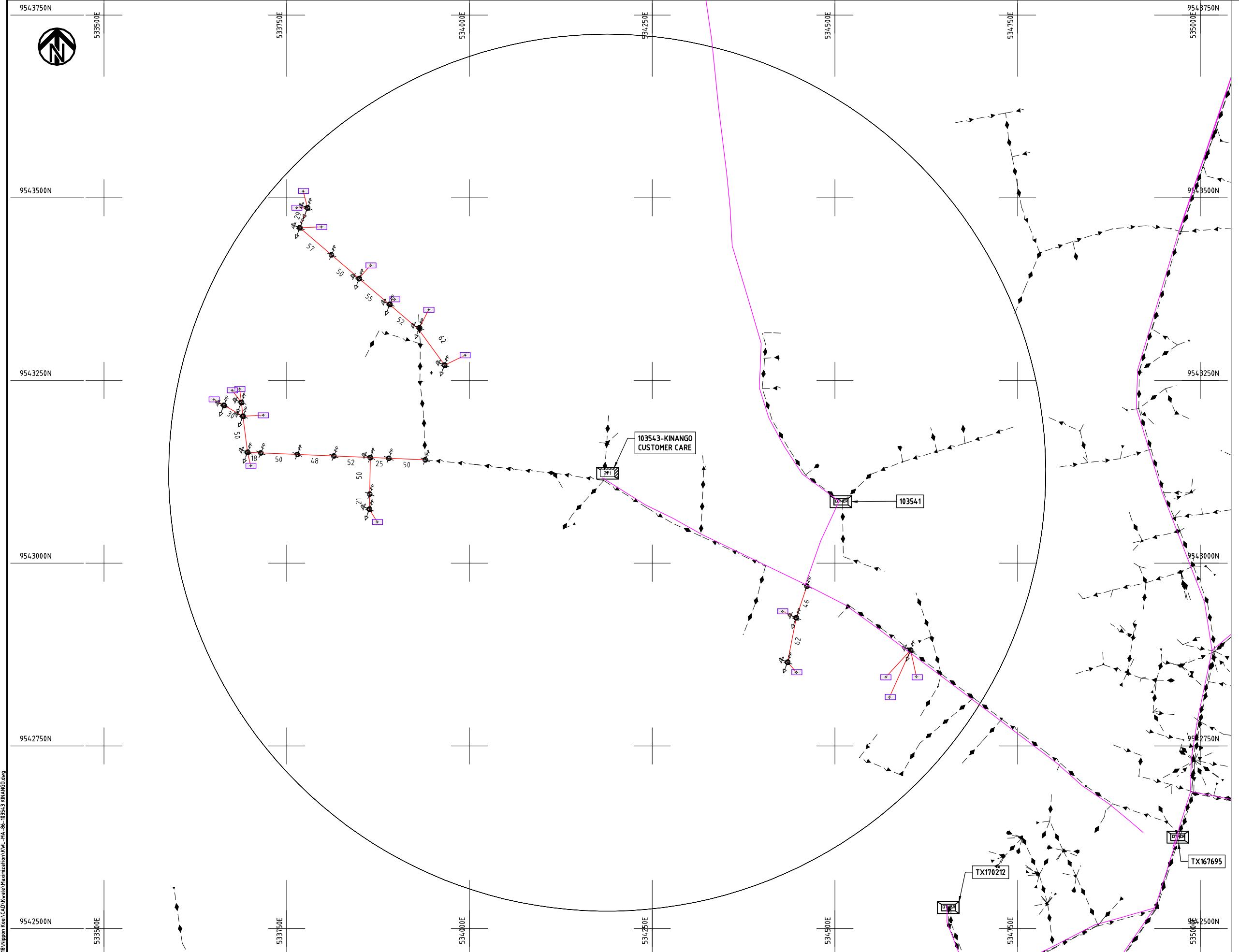
- | | |
|--|-----------------------------------|
| | HOUSEHOLDS/ BUILDINGS |
| | PROPOSED 11kV |
| | PROPOSED 33kV |
| | PROPOSED DISTRIBUTION LINE |
| | EXISTING 11kV LINE |
| | EXISTING 33kV LINE |
| | EXISTING DISTRIBUTION LINE |
| | MAXIMISATION TRANSFORMER |
| | EXTENSION TRANSFORMER |
| | WOODEN ELECTRIC POLES |
| | CP CONCRETE ELECTRIC POLES 12M |
| | CP CONCRETE ELECTRIC POLES 11M |
| | LV-EARTH |
| | PME -PROTECTIVE MULTIPLE EARTHING |
| | STAY |

SCALE 1:5000 50 0 50 100 150 200 250m (A3)



NIPPON KOEI CO., LTD





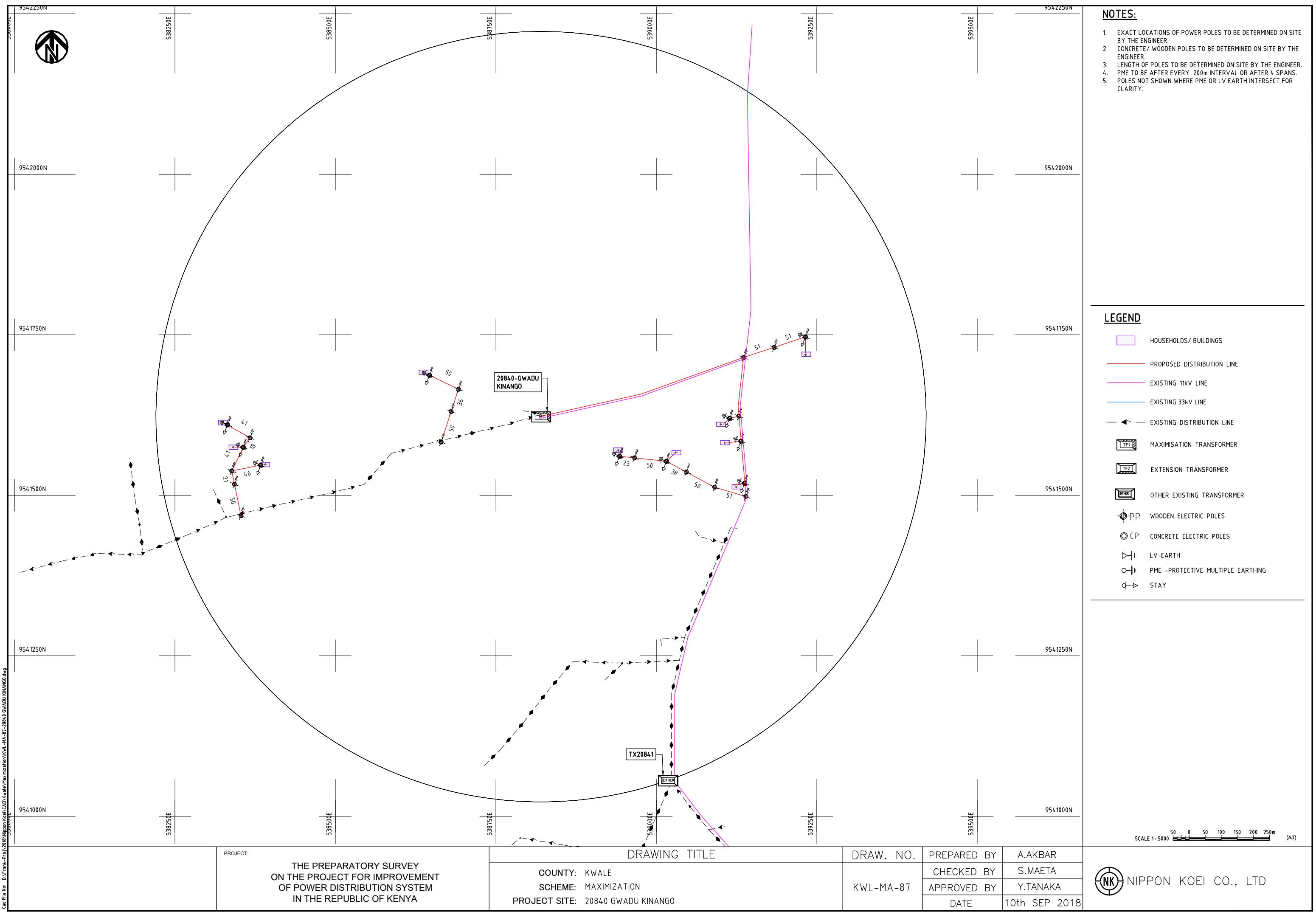
NOTES:

- EXACT LOCATIONS OF POWER POLES TO BE DETERMINED ON SITE BY THE ENGINEER.
- CONCRETE/ WOODEN POLES TO BE DETERMINED ON SITE BY THE ENGINEER.
- LENGTH OF POLES TO BE DETERMINED ON SITE BY THE ENGINEER.
- PME TO BE AFTER EVERY 200m INTERVAL OR AFTER 4 SPANS.
- POLES NOT SHOWN WHERE PME OR LV EARTH INTERSECT FOR CLARITY.

LEGEND

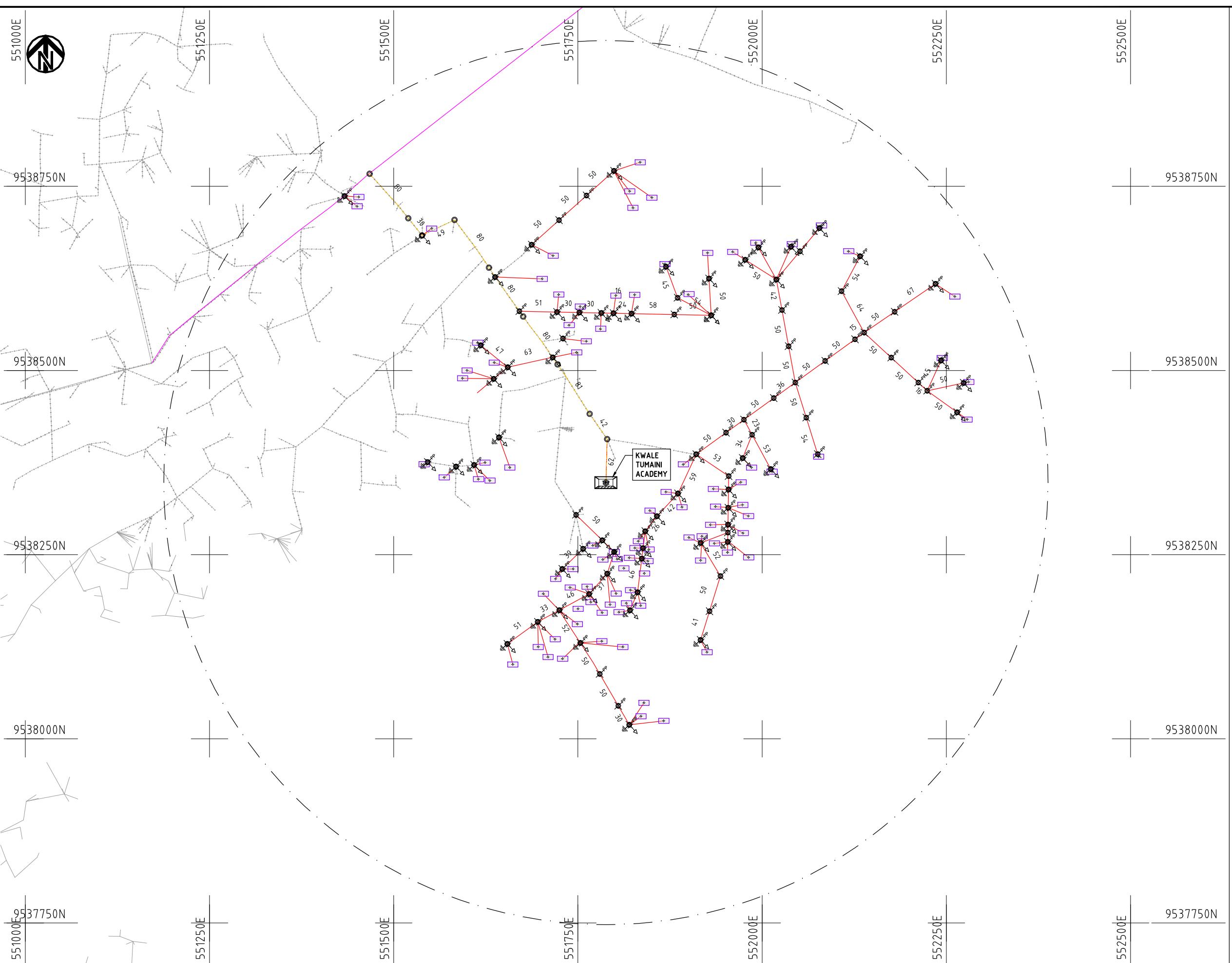
- [Icon] HOUSEHOLDS/ BUILDINGS
- [Icon] PROPOSED DISTRIBUTION LINE
- [Icon] EXISTING 11kV LINE
- [Icon] EXISTING 33kV LINE
- [Icon] EXISTING DISTRIBUTION LINE
- [Icon] MAXIMISATION TRANSFORMER
- [Icon] EXTENSION TRANSFORMER
- [Icon] OTHER EXISTING TRANSFORMER
- [Icon] PP WOODEN ELECTRIC POLES
- [Icon] CP CONCRETE ELECTRIC POLES
- [Icon] LV-EARTH
- [Icon] PME -PROTECTIVE MULTIPLE EARTHING
- [Icon] STAY

 NIPPON KOEI CO., LTD



クワレ郡

Extension and Maximization



NOTES:

1. EXACT LOCATIONS OF POWER POLES TO BE DETERMINED ON SITE BY THE ENGINEER.
2. CONCRETE/ WOODEN POLES TO BE DETERMINED ON SITE BY THE ENGINEER.
3. LENGTH OF POLES TO BE DETERMINED ON SITE BY THE ENGINEER.
4. PME TO BE AFTER EVERY 200m INTERVAL OR AFTER 4 SPANS.

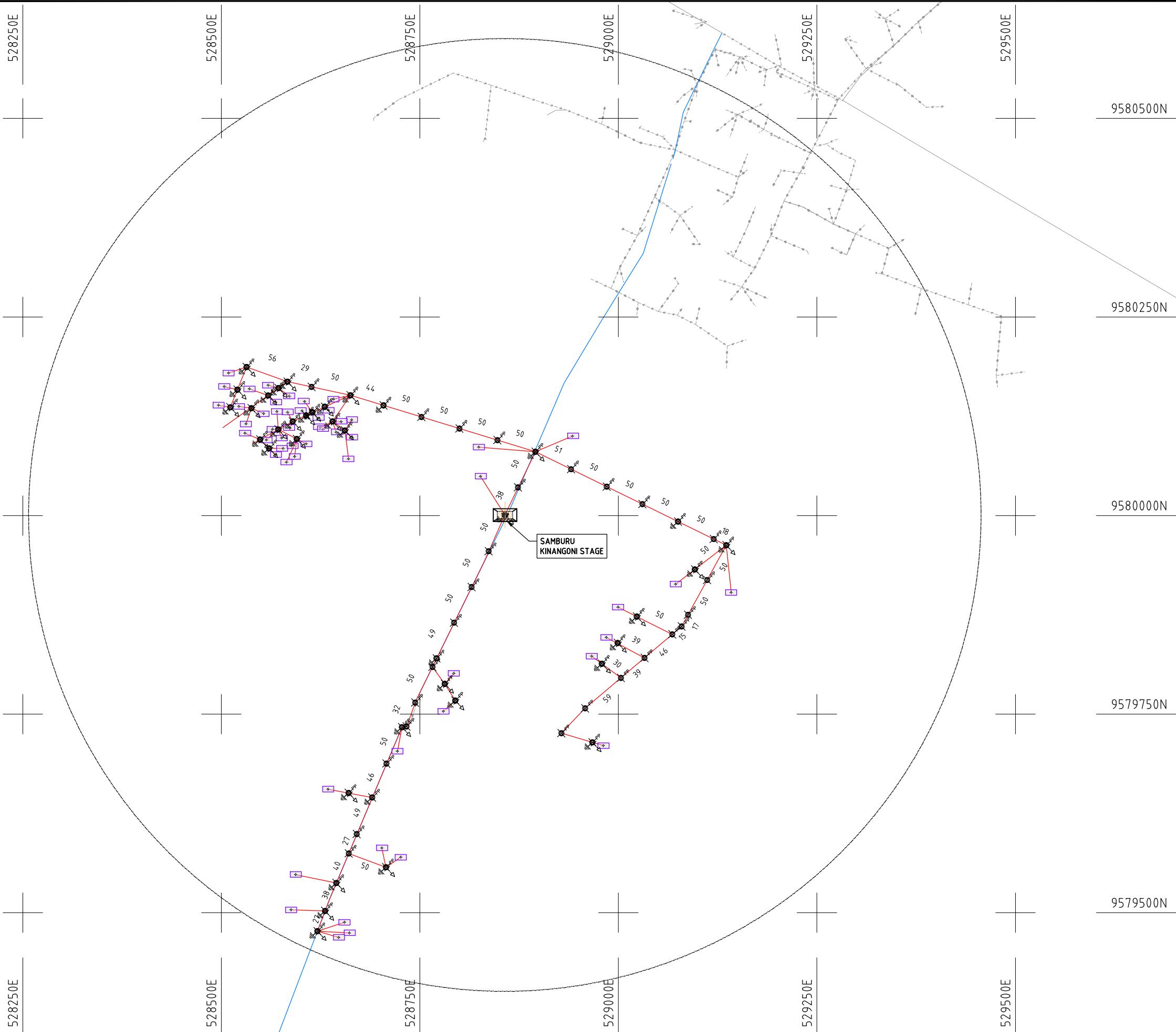
- HOUSEHOLDS/ BUILDINGS
- PROPOSED 11kV
- PROPOSED 33kV
- PROPOSED DISTRIBUTION LINE
- EXISTING 11kV LINE
- EXISTING 33kV LINE
- EXISTING DISTRIBUTION LINE
- [TF1] MAXIMISATION TRANSFORMER
- [TF2] EXTENSION TRANSFORMER
- WOODEN ELECTRIC POLES
- CP CONCRETE ELECTRIC POLES 12M
- ◎ CP CONCRETE ELECTRIC POLES 11M
- △ LV-EARTH
- PME -PROTECTIVE MULTIPLE EARTHING STAY

PROJECT:
THE PREPARATORY SURVEY
ON THE PROJECT FOR IMPROVEMENT
OF POWER DISTRIBUTION SYSTEM
IN THE REPUBLIC OF KENYA

DRAWING TITLE
COUNTY: KWALE
SCHEME: EXTENSION
PROJECT SITE: KWALE TUMAINI ACADEMY

DRAW. NO. A.AKBAR
DRAW. NO. DRAW. NO. PREPARED BY A.AKBAR
DRAW. NO. DRAW. NO. CHECKED BY S.MAETA
DRAW. NO. DRAW. NO. APPROVED BY Y.TANAKA
DRAW. NO. DRAW. NO. DATE 10th SEP 2018

(A3) NIPPON KOEI CO., LTD



NOTES:

1. EXACT LOCATIONS OF POWER POLES TO BE DETERMINED ON SITE BY THE ENGINEER.
2. CONCRETE/ WOODEN POLES TO BE DETERMINED ON SITE BY THE ENGINEER.
3. LENGTH OF POLES TO BE DETERMINED ON SITE BY THE ENGINEER.
4. PME TO BE AFTER EVERY 200m INTERVAL OR AFTER 4 SPANS.

- HOUSEHOLDS/ BUILDINGS
- - - PROPOSED 11kV
- PROPOSED 33kV
- PROPOSED DISTRIBUTION LINE
- EXISTING 11kV LINE
- EXISTING 33kV LINE
- Existing DISTRIBUTION LINE
- MAXIMISATION TRANSFORMER
- EXTENSION TRANSFORMER
- WOODEN ELECTRIC POLES
- CP CONCRETE ELECTRIC POLES 12M
- ◎ CP CONCRETE ELECTRIC POLES 11M
- △ LV-EARTH
- PME —PROTECTIVE MULTIPLE EARTHING STAY

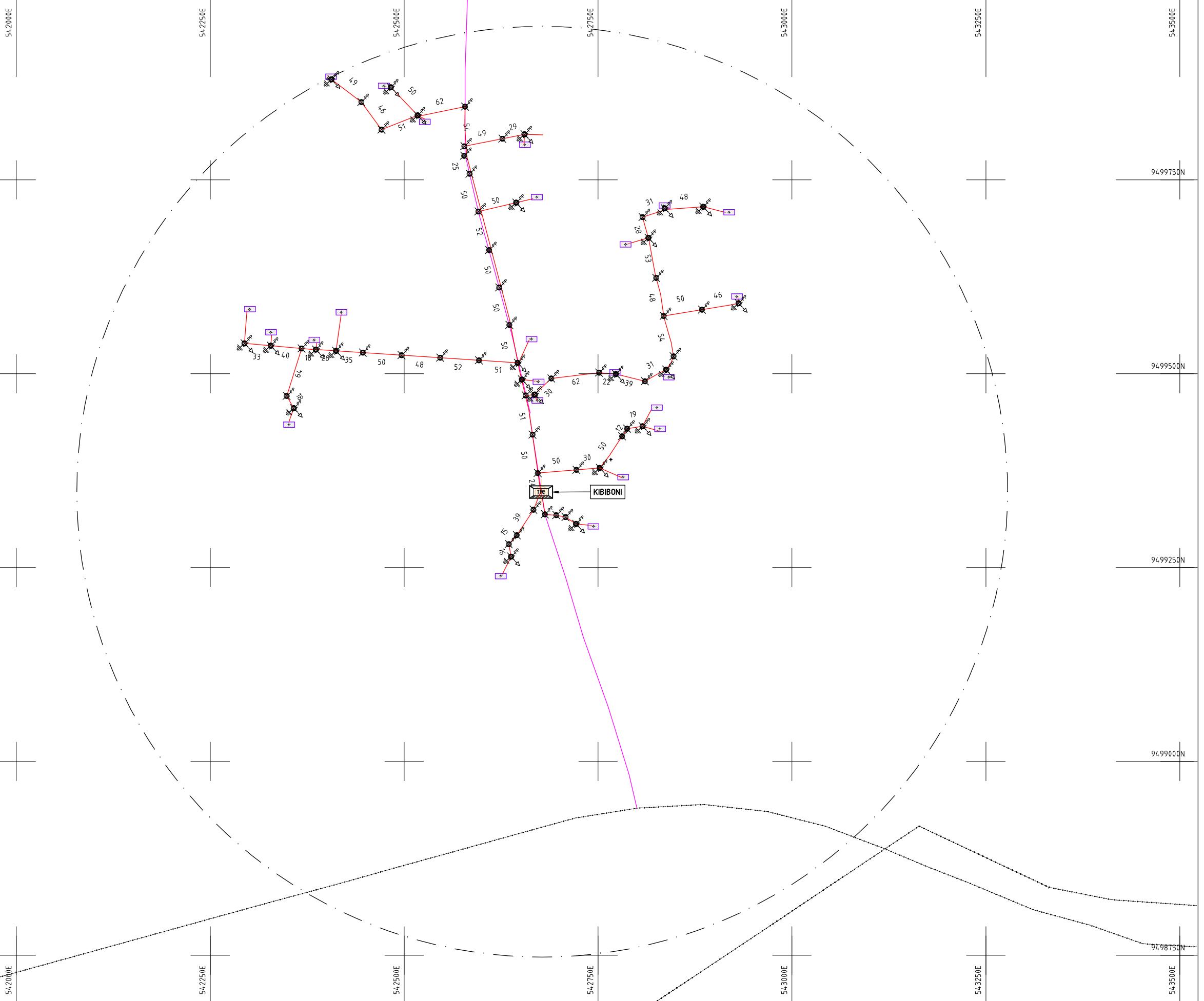
PROJECT:
THE PREPARATORY SURVEY
ON THE PROJECT FOR IMPROVEMENT
OF POWER DISTRIBUTION SYSTEM
IN THE REPUBLIC OF KENYA

DRAWING TITLE
COUNTY: KWALE
SCHEME: EXTENSION
PROJECT SITE: SAMBURU KINANGONI STAGE

DRAW. NO. KWL-EX-002
PREPARED BY A.AKBAR
CHECKED BY S.MAETA
APPROVED BY Y.TANAKA
DATE 10th SEP 2018



NIPPON KOEI CO., LTD



NOTES:

- EXACT LOCATIONS OF POWER POLES TO BE DETERMINED ON SITE BY THE ENGINEER.
- CONCRETE/ WOODEN POLES TO BE DETERMINED ON SITE BY THE ENGINEER.
- LENGTH OF POLES TO BE DETERMINED ON SITE BY THE ENGINEER.
- PME TO BE AFTER EVERY 200m INTERVAL OR AFTER 4 SPANS.

- HOUSEHOLDS/ BUILDINGS
- PROPOSED 11kV
- PROPOSED 33kV
- PROPOSED DISTRIBUTION LINE
- EXISTING 11kV LINE
- EXISTING 33kV LINE
- > EXISTING DISTRIBUTION LINE
- TF1 MAXIMISATION TRANSFORMER
- TF2 EXTENSION TRANSFORMER
- WOODEN ELECTRIC POLES
- CONCRETE ELECTRIC POLES 12M
- ◎ CONCRETE ELECTRIC POLES 11M
- △ LV-EARTH
- PME -PROTECTIVE MULTIPLE EARTHING STAY

PROJECT:
THE PREPARATORY SURVEY
ON THE PROJECT FOR IMPROVEMENT
OF POWER DISTRIBUTION SYSTEM
IN THE REPUBLIC OF KENYA

DRAWING TITLE
COUNTY: KWALE
SCHEME: EXTENSION
PROJECT SITE: KIBIBONI

DRAW. NO. A.AKBAR
KWL-EX-003
CHECKED BY S.MAETA
APPROVED BY Y.TANAKA
DATE 10th SEP 2018



NIPPON KOEI CO., LTD



538500E

9498750N

538500E

9498500N

538500E

9498250N

538500E

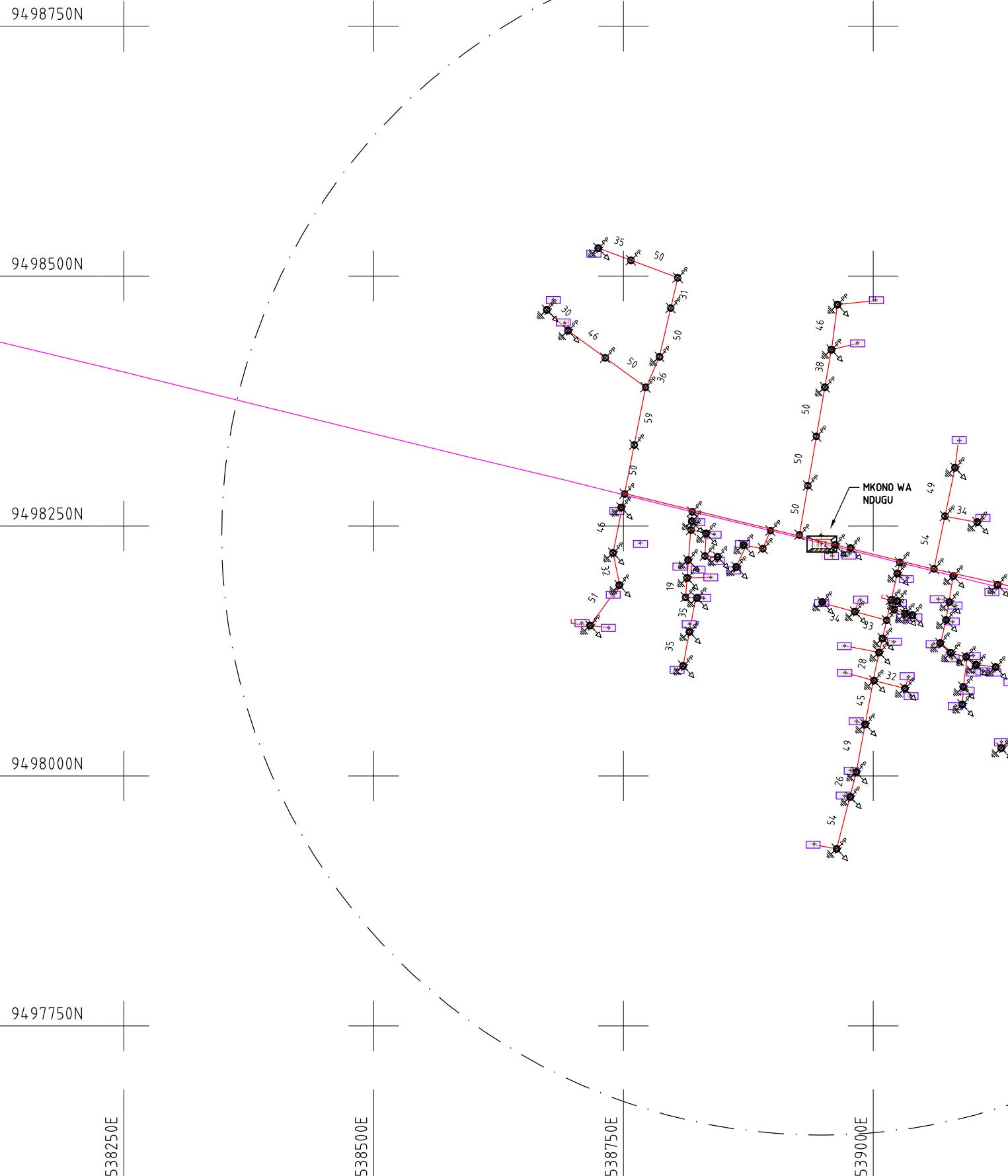
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538500E

9497750N

538500E

538250E

**NOTES:**

1. EXACT LOCATIONS OF POWER POLES TO BE DETERMINED ON SITE BY THE ENGINEER.
2. CONCRETE/ WOODEN POLES TO BE DETERMINED ON SITE BY THE ENGINEER.
3. LENGTH OF POLES TO BE DETERMINED ON SITE BY THE ENGINEER.
4. PME TO BE AFTER EVERY 200m INTERVAL OR AFTER 4 SPANS.

- HOUSEHOLDS/ BUILDINGS
- PROPOSED 11kV
- PROPOSED 33kV
- PROPOSED DISTRIBUTION LINE
- EXISTING 11kV LINE
- EXISTING 33kV LINE
- EXISTING DISTRIBUTION LINE
- TF1 MAXIMISATION TRANSFORMER
- TF2 EXTENSION TRANSFORMER
- WOODEN ELECTRIC POLES
- CONCRETE ELECTRIC POLES 12M
- ◎ CONCRETE ELECTRIC POLES 11M
- △ LV-EARTH
- PME -PROTECTIVE MULTIPLE EARTHING STAY

PROJECT:

THE PREPARATORY SURVEY
ON THE PROJECT FOR IMPROVEMENT
OF POWER DISTRIBUTION SYSTEM
IN THE REPUBLIC OF KENYA

DRAWING TITLE

COUNTY: KWALE
SCHEME: EXTENSION
PROJECT SITE: MKONO WA NDUGU

DRAW. NO.

KWL-EX-004

PREPARED BY

A.AKBAR
S.MAETA
Y.TANAKA

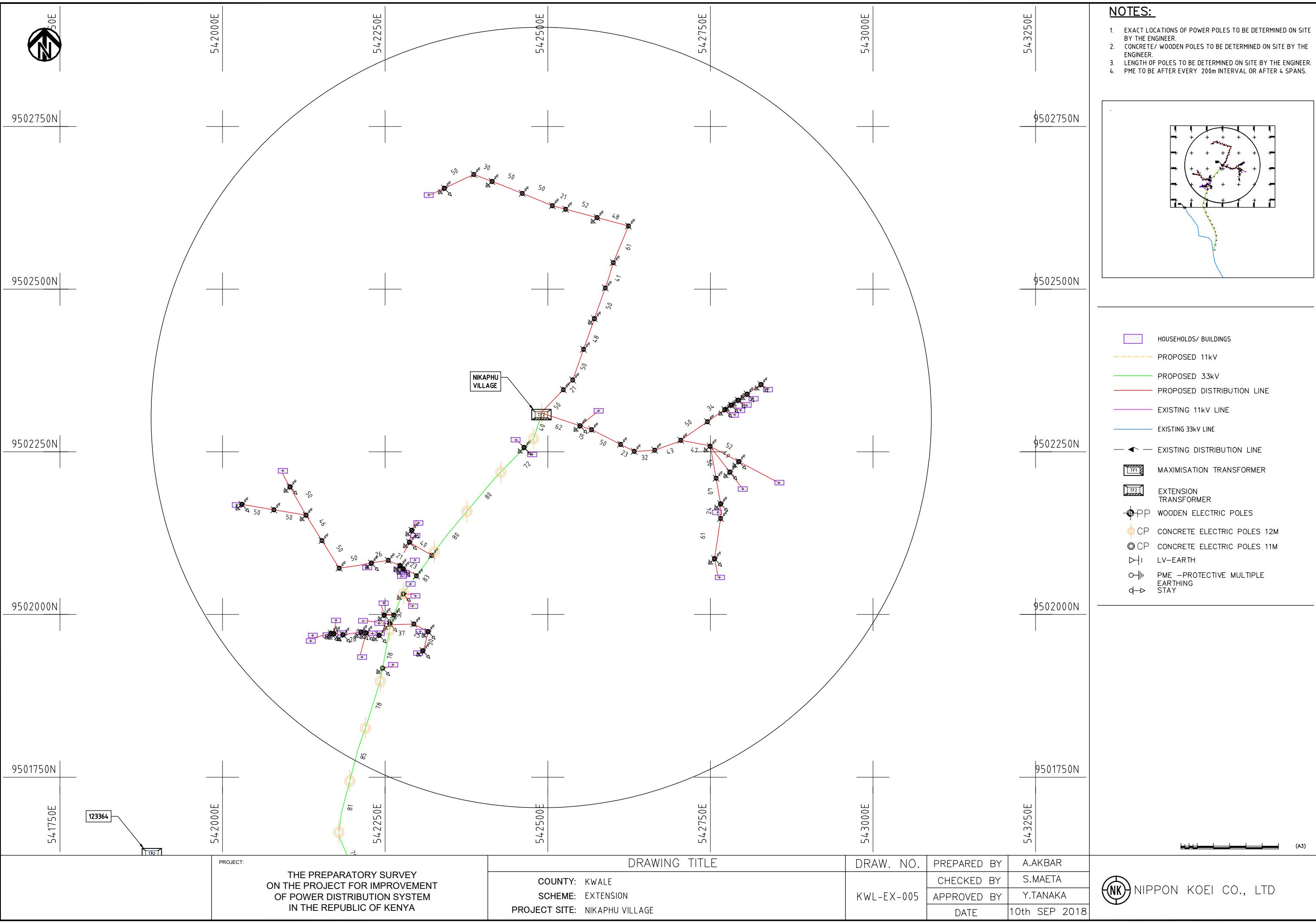
DATE

10th SEP 2018



NIPPON KOEI CO., LTD

(A3)





9499250N

536250E

536500E

536750E

537000E

537250E

537500E

537750E

9499250N

9499000N

536250E

536500E

536750E

537000E

537250E

537500E

537750E

9499000N

9498750N

536250E

536500E

536750E

537000E

537250E

537500E

9498750N

9498500N

536250E

536500E

536750E

537000E

537250E

537500E

9498500N

9498250N

536250E

536500E

536750E

537000E

537250E

537500E

9498250N

536250E

536500E

536750E

537000E

537250E

537500E

537750E

(A3)

NOTES:

1. EXACT LOCATIONS OF POWER POLES TO BE DETERMINED ON SITE BY THE ENGINEER.
2. CONCRETE/ WOODEN POLES TO BE DETERMINED ON SITE BY THE ENGINEER.
3. LENGTH OF POLES TO BE DETERMINED ON SITE BY THE ENGINEER.
4. PME TO BE AFTER EVERY 200m INTERVAL OR AFTER 4 SPANS.

- HOUSEHOLDS/ BUILDINGS
- PROPOSED 11kV
- PROPOSED 33kV
- PROPOSED DISTRIBUTION LINE
- EXISTING 11kV LINE
- EXISTING 33kV LINE
- EXISTING DISTRIBUTION LINE
- TF1 MAXIMISATION TRANSFORMER
- TF2 EXTENSION TRANSFORMER
- WOODEN ELECTRIC POLES
- CP CONCRETE ELECTRIC POLES 12M
- ◎ CP CONCRETE ELECTRIC POLES 11M
- △ LV-EARTH
- PME -PROTECTIVE MULTIPLE EARTHING STAY

PROJECT:
THE PREPARATORY SURVEY
ON THE PROJECT FOR IMPROVEMENT
OF POWER DISTRIBUTION SYSTEM
IN THE REPUBLIC OF KENYA

DRAWING TITLE
COUNTY: KWALE
SCHEME: EXTENSION
PROJECT SITE: MAJORENI BEFORE AIRTEL TOWER

DRAW. NO. KWL-EX-006
PREPARED BY A.AKBAR
CHECKED BY S.MAETA
APPROVED BY Y.TANAKA
DATE 10th SEP 2018



NIPPON KOEI CO., LTD



9544250N

566750E

566750E

567000E

567000E

567250E

567250E

567500E

567500E

567750E

567750E

568000E

568000E

9544250N

9544000N

9543750N

9543500N

9543250N

9543250N

NOTES:

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3. LENGTH OF POLES TO BE DETERMINED ON SITE BY THE ENGINEER.
4. PME TO BE AFTER EVERY 200m INTERVAL OR AFTER 4 SPANS.

-
- HOUSEHOLDS/ BUILDINGS
 - - PROPOSED 11kV
 - - Proposed 33kV
 - - PROPOSED DISTRIBUTION LINE
 - - EXISTING 11kV LINE
 - - EXISTING 33kV LINE
 - - EXISTING DISTRIBUTION LINE
 - MAXIMISATION TRANSFORMER
 - EXTENSION TRANSFORMER
 - PP WOODEN ELECTRIC POLES
 - CP CONCRETE ELECTRIC POLES 12M
 - ◎ CP CONCRETE ELECTRIC POLES 11M
 - △ LV-EARTH
 - PME -PROTECTIVE MULTIPLE EARTHING STAY

PROJECT:
THE PREPARATORY SURVEY
ON THE PROJECT FOR IMPROVEMENT
OF POWER DISTRIBUTION SYSTEM
IN THE REPUBLIC OF KENYA

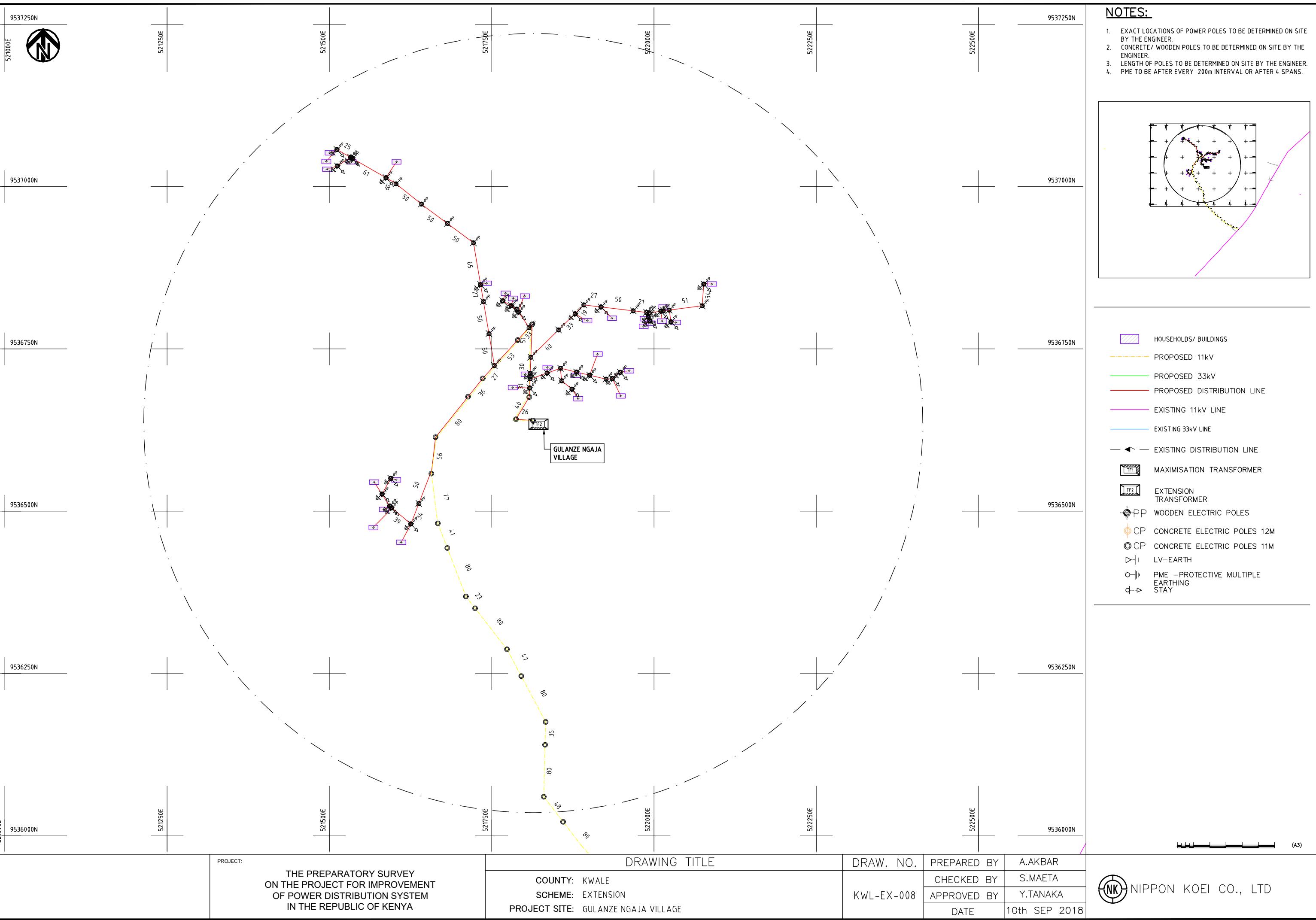
DRAWING TITLE
COUNTY: KWALE
SCHEME: EXTENSION
PROJECT SITE: KITEJE BOMBO VILLAGE

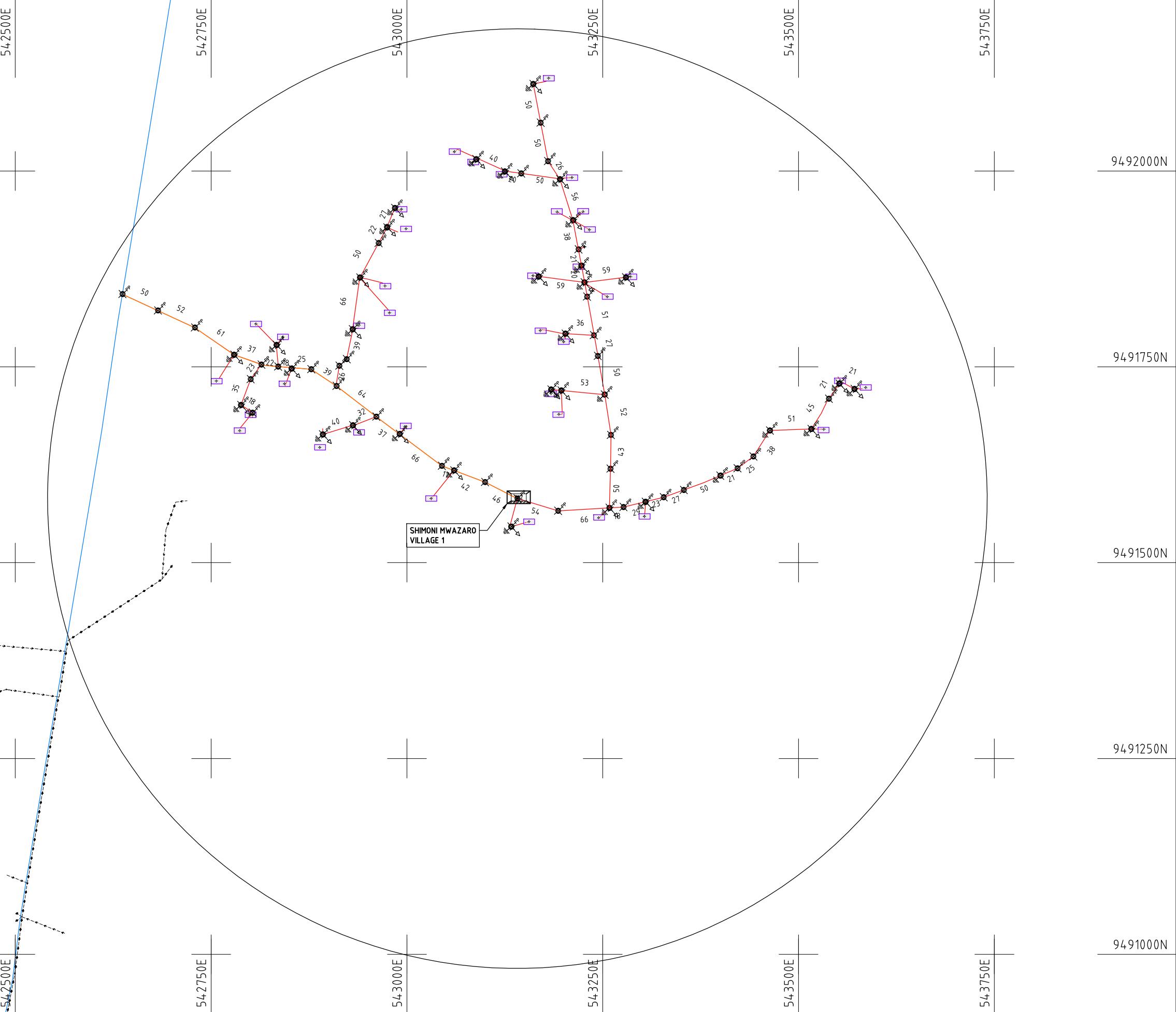
DRAW. NO. A.AKBAR
DRAW. NO. DRAW. NO. PREPARED BY A.AKBAR
CHECKED BY S.MAETA
APPROVED BY Y.TANAKA
DATE 10th SEP 2018



NIPPON KOEI CO., LTD

(A3)



**NOTES:**

- EXACT LOCATIONS OF POWER POLES TO BE DETERMINED ON SITE BY THE ENGINEER.
- CONCRETE/ WOODEN POLES TO BE DETERMINED ON SITE BY THE ENGINEER.
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- PME TO BE AFTER EVERY 200m INTERVAL OR AFTER 4 SPANS.

- HOUSEHOLDS/ BUILDINGS
- PROPOSED 11kV
- PROPOSED 33kV
- PROPOSED DISTRIBUTION LINE
- EXISTING 11kV LINE
- EXISTING 33kV LINE
- > EXISTING DISTRIBUTION LINE
- TF1 MAXIMISATION TRANSFORMER
- TF2 EXTENSION TRANSFORMER
- WOODEN ELECTRIC POLES
- CONCRETE ELECTRIC POLES 12M
- ◎ CONCRETE ELECTRIC POLES 11M
- △ LV-EARTH
- PME -PROTECTIVE MULTIPLE EARTHING STAY

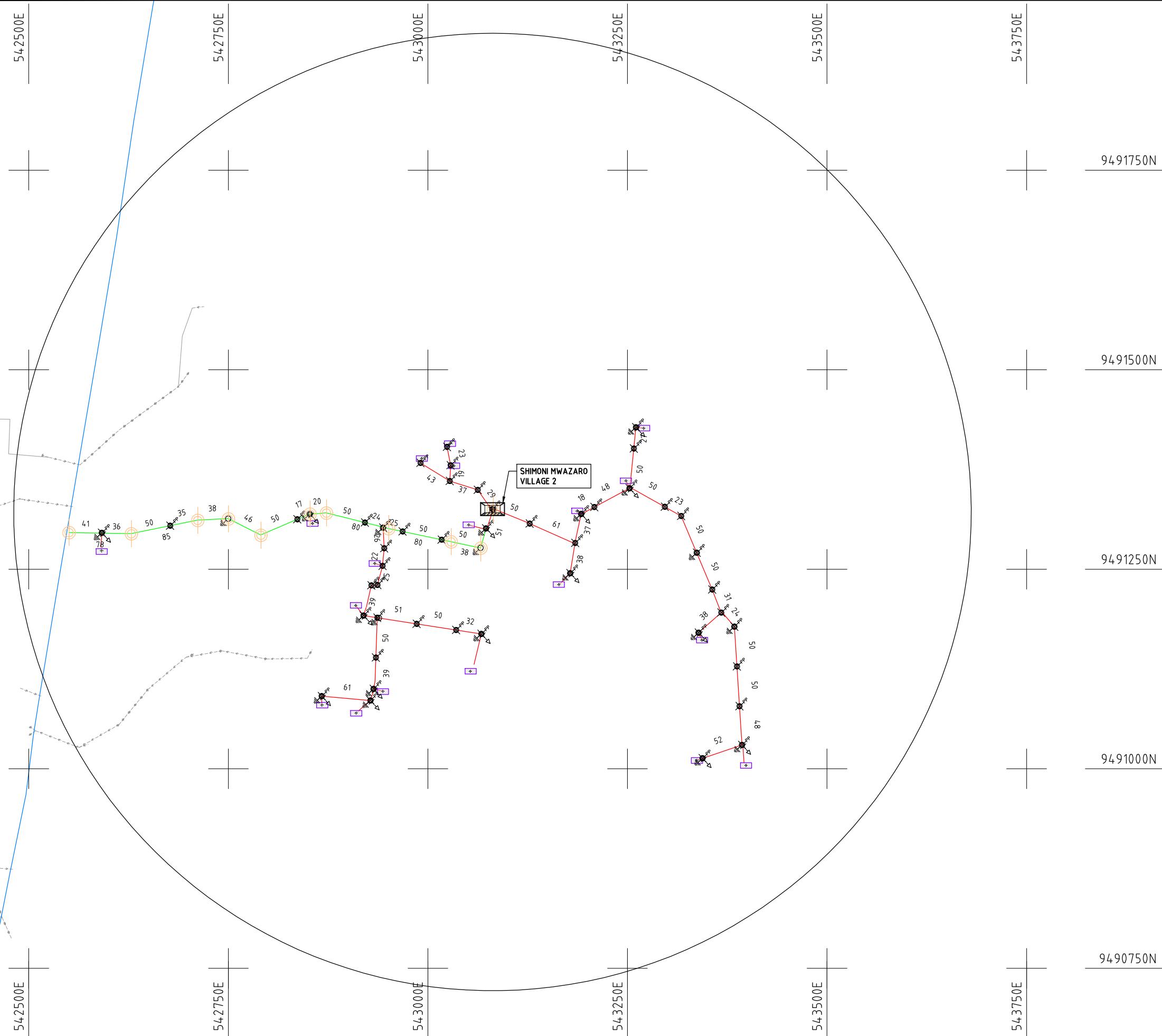
PROJECT:
THE PREPARATORY SURVEY
ON THE PROJECT FOR IMPROVEMENT
OF POWER DISTRIBUTION SYSTEM
IN THE REPUBLIC OF KENYA

DRAWING TITLE
COUNTY: KWALE
SCHEME: EXTENSION
PROJECT SITE: SHIMONI MWAZARO VILLAGE

DRAW. NO. A.AKBAR
DRAW. NO. PREPARED BY A.AKBAR
CHECKED BY S.MAETA
APPROVED BY Y.TANAKA
DATE 10th SEP 2018



NIPPON KOEI CO., LTD

**NOTES:**

1. EXACT LOCATIONS OF POWER POLES TO BE DETERMINED ON SITE BY THE ENGINEER.
2. CONCRETE/ WOODEN POLES TO BE DETERMINED ON SITE BY THE ENGINEER.
3. LENGTH OF POLES TO BE DETERMINED ON SITE BY THE ENGINEER.
4. PME TO BE AFTER EVERY 200m INTERVAL OR AFTER 4 SPANS.

	HOUSEHOLDS/ BUILDINGS
	PROPOSED 11kV
	Proposed 33kV
	PROPOSED DISTRIBUTION LINE
	EXISTING 11kV LINE
	EXISTING 33kV LINE
	EXISTING DISTRIBUTION LINE
	MAXIMISATION TRANSFORMER
	EXTENSION TRANSFORMER
	WOODEN ELECTRIC POLES
	CP CONCRETE ELECTRIC POLES 12M
	◎ CP CONCRETE ELECTRIC POLES 11M
	LV-EARTH
	PME -PROTECTIVE MULTIPLE EARTHING STAY

PROJECT:
THE PREPARATORY SURVEY
ON THE PROJECT FOR IMPROVEMENT
OF POWER DISTRIBUTION SYSTEM
IN THE REPUBLIC OF KENYA

DRAWING TITLE
COUNTY: KWALE
SCHEME: EXTENSION
PROJECT SITE: SHIMONI MWAZARO VILLAGE

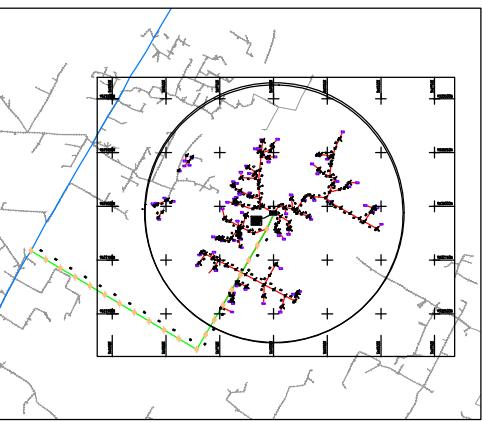
DRAW. NO. A.AKBAR
DRAW. NO. PREPARED BY A.AKBAR
CHECKED BY S.MAETA
APPROVED BY Y.TANAKA
DATE 10th SEP 2018



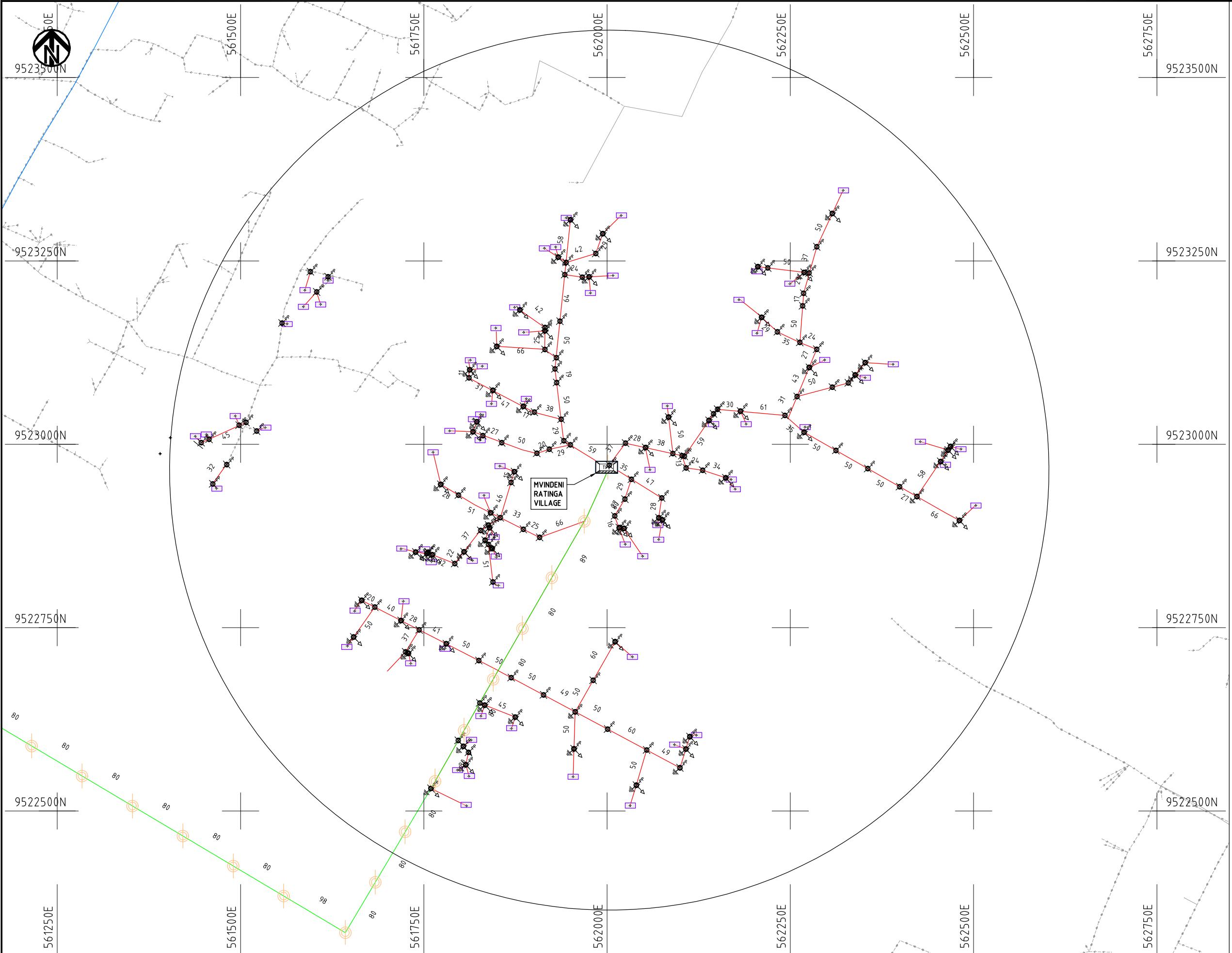
NIPPON KOEI CO., LTD

NOTES:

1. EXACT LOCATIONS OF POWER POLES TO BE DETERMINED ON SITE BY THE ENGINEER.
2. CONCRETE/ WOODEN POLES TO BE DETERMINED ON SITE BY THE ENGINEER.
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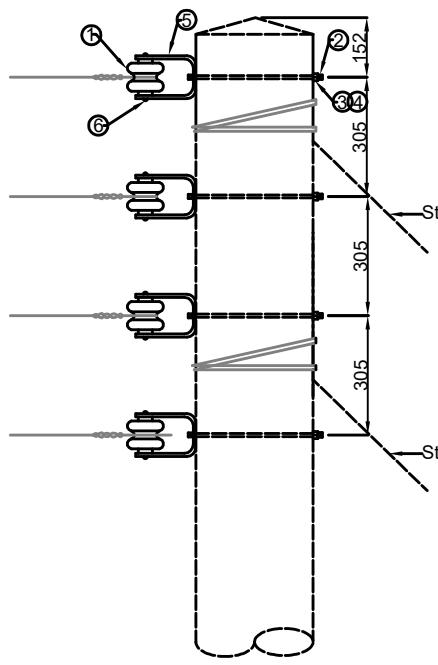
- [Households/ Buildings]
- [Proposed 11kV]
- [Proposed 33kV]
- [Proposed DISTRIBUTION LINE]
- [EXISTING 11kV LINE]
- [EXISTING 33kV LINE]
- [EXISTING DISTRIBUTION LINE]
- [MAXIMISATION TRANSFORMER]
- [EXTENSION TRANSFORMER]
- [WOODEN ELECTRIC POLES]
- [CP CONCRETE ELECTRIC POLES 12M]
- [◎ CP CONCRETE ELECTRIC POLES 11M]
- [△ LV-EARTH]
- [○ PME -PROTECTIVE MULTIPLE EARTHING STAY]



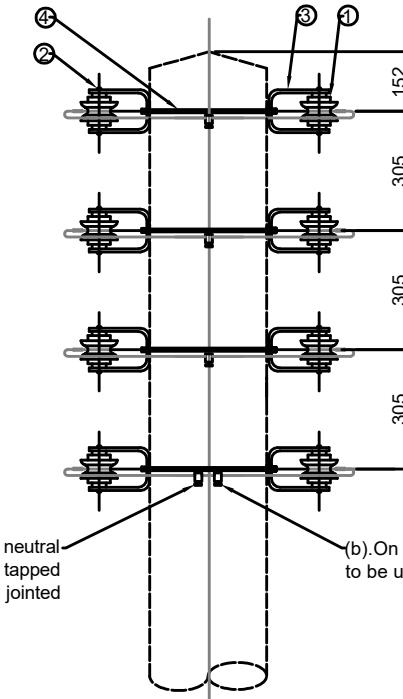
PROJECT:	COUNTY: KWALE SCHEME: EXTENSION PROJECT SITE: MVINDENI RATINGA VILLAGE	DRAWING TITLE	DRAW. NO.	PREPARED BY	A.AKBAR	NIPPON KOEI CO., LTD
		COUNTY: KWALE SCHEME: EXTENSION PROJECT SITE: MVINDENI RATINGA VILLAGE	KWL-EX-011	CHECKED BY	S.MAETA	
		APPROVED BY	Y.TANAKA	DATE	10th SEP 2018	

一般図

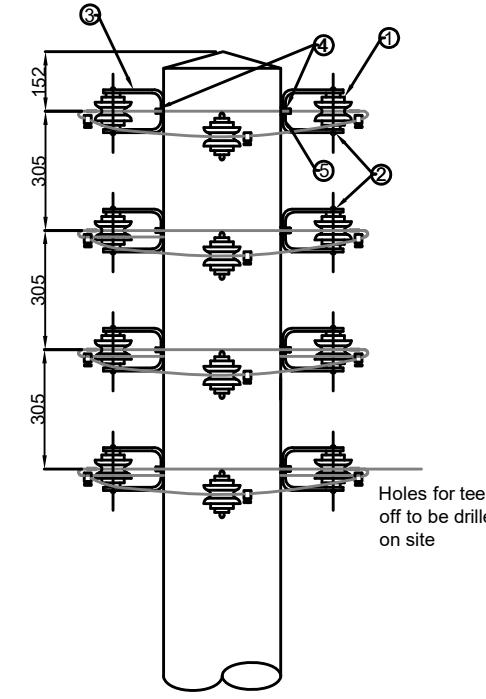
LV Intermediate pole
(Single, two and three phase)



LV Section pole
(Single, two and three phase)



Fittings LV Section pole 3 or 4 way arrangement
(Single, two and three phase)



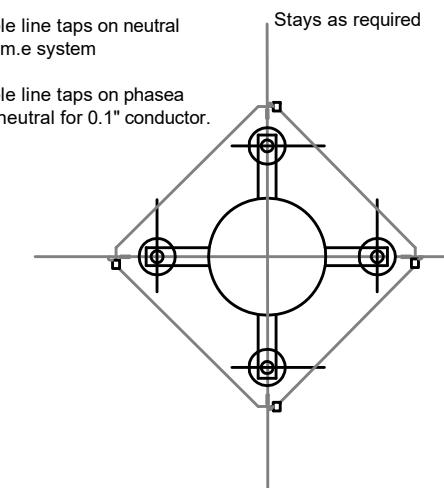
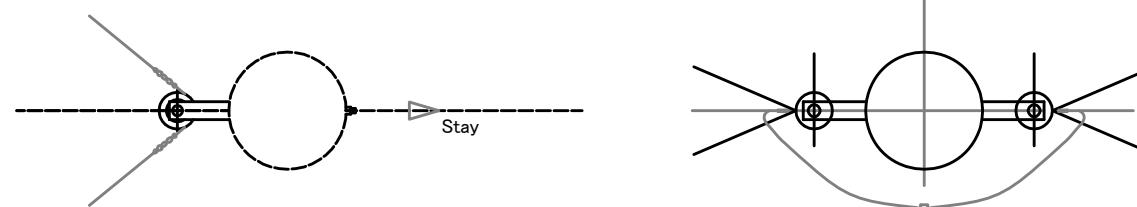
LV Intermediate pole(Single, two and three phase)				
CU	MATERIALS			
	MARK IN SKETCH	CODE	QUANTITY	DESCRIPTION
10020	1	184836	4	Insulator Shackle, LV
	2	180801	4	Bolt and nut M16 x 325mm (5/8" x 13")
	3	189622	4	Washer square curved M16 (5/8" x 2" x 2")
	4	156322	4	Washer spring M10 (3/8")
	5	181201	4	Bracket D-Iron H.D.GALV
	6	180788	4	Bolt and nut M16 x 175mm (5/8" x 7")

LV Section pole(Single, two and three phase)

LV Section pole(Single, two and three phase)				
CU	MATERIALS			
	MARK IN SKETCH	CODE	QUANTITY	DESCRIPTION
10050	1	184836	8	Insulator Shackle, LV
	2	180788	8	Bolt and nut M16 x 175mm (5/8" x 7")
	3	181201	8	Bracket D-Iron H.D.GALV
	4	180796	4	Bolt and nut M16 x 280mm (5/8" x 11")
	5	189613	4	Washer round flat M16 (5/8")

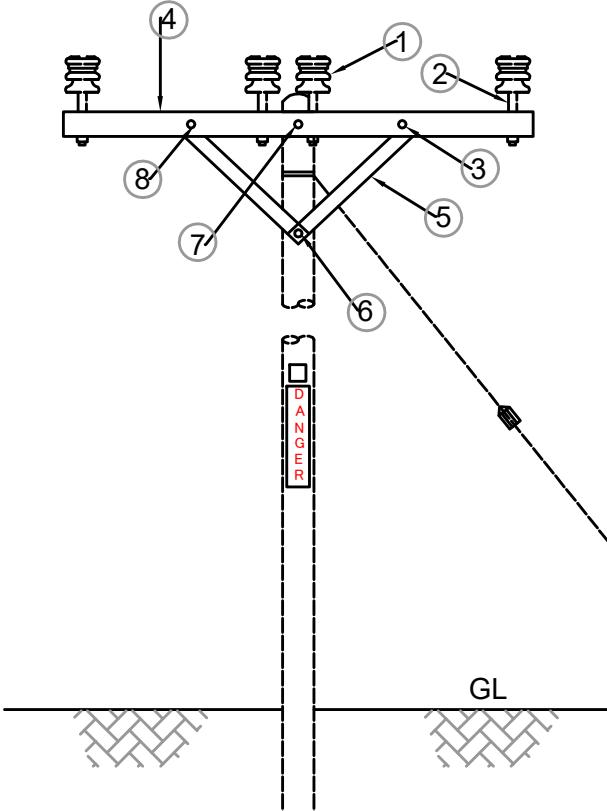
Fittings LV Section pole 3 or 4 way arrangement(Single, two and three phase)

Fittings LV Section pole 3 or 4 way arrangement(Single, two and three phase)				
CU	MATERIALS			
	MARK IN SKETCH	CODE	QUANTITY	DESCRIPTION
10090	1	184836	16	Insulator Shackle, LV
	2	180788	16	Bolt and nut M16 x 175mm (5/8" x 7")
	3	181201	16	Bracket D-Iron H.D.GALV
	4	180796	8	Bolt and nut M16 x 280mm (5/8" x 11")
	5	189613	8	Washer round flat M16 (5/8")

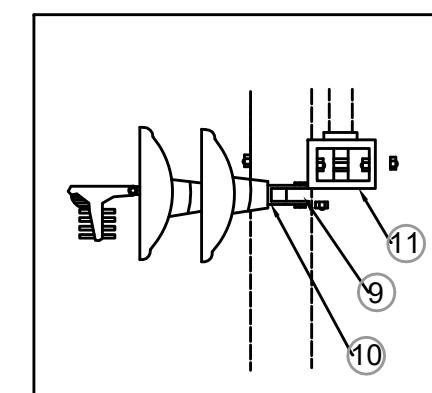
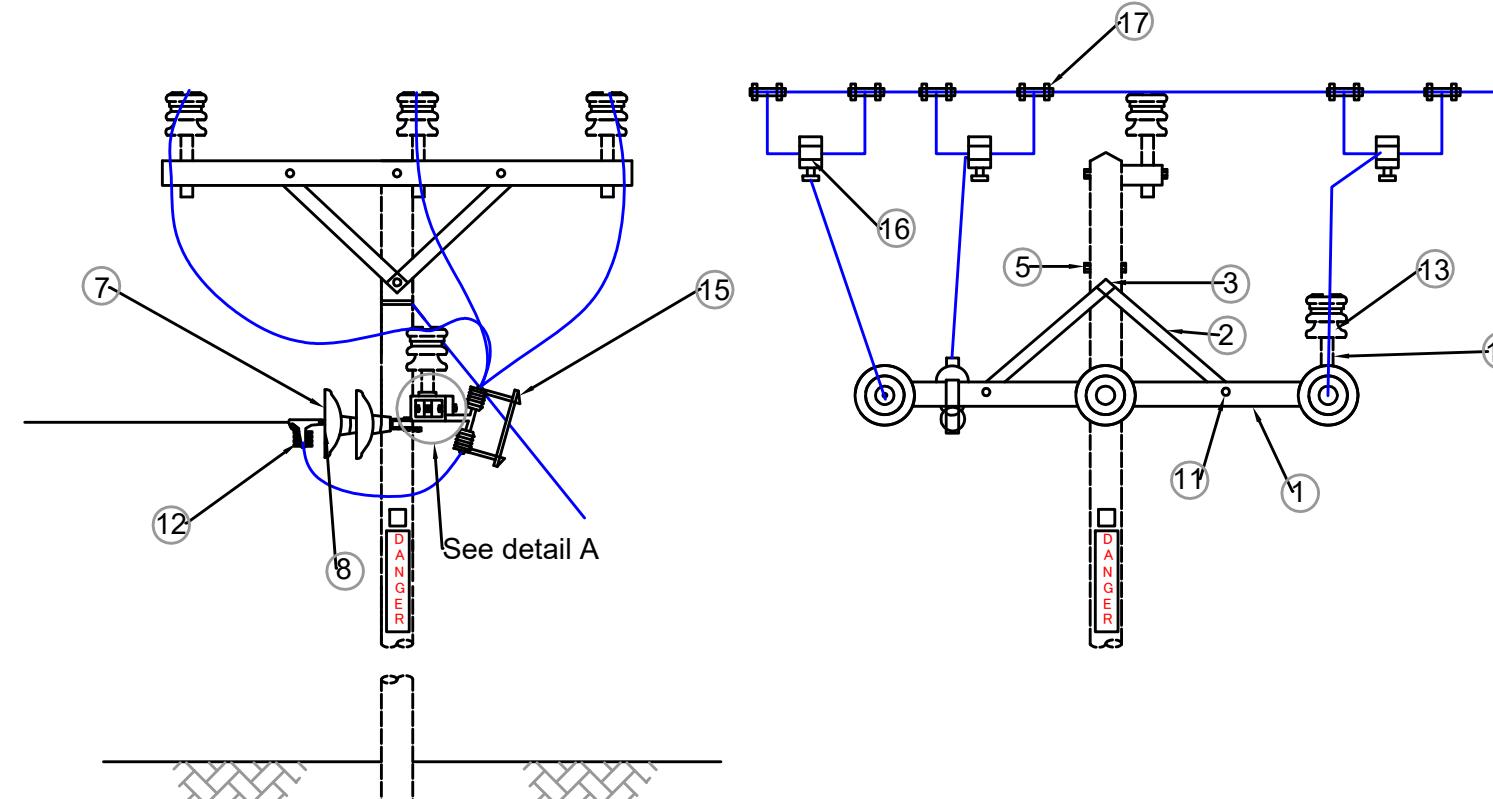


Scale 1:20

Fittings for Intermediate pole 11kV



Fittings Tee-off pole with solid links 11kV

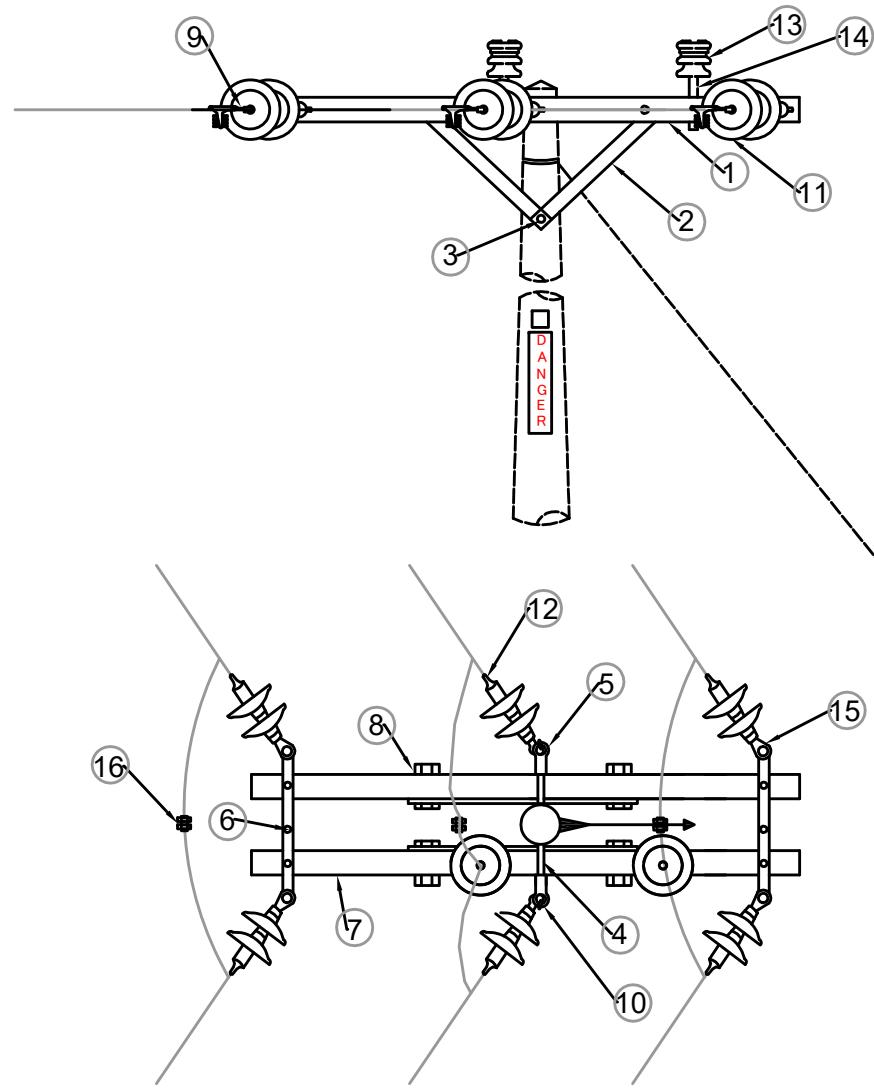


DETAIL A

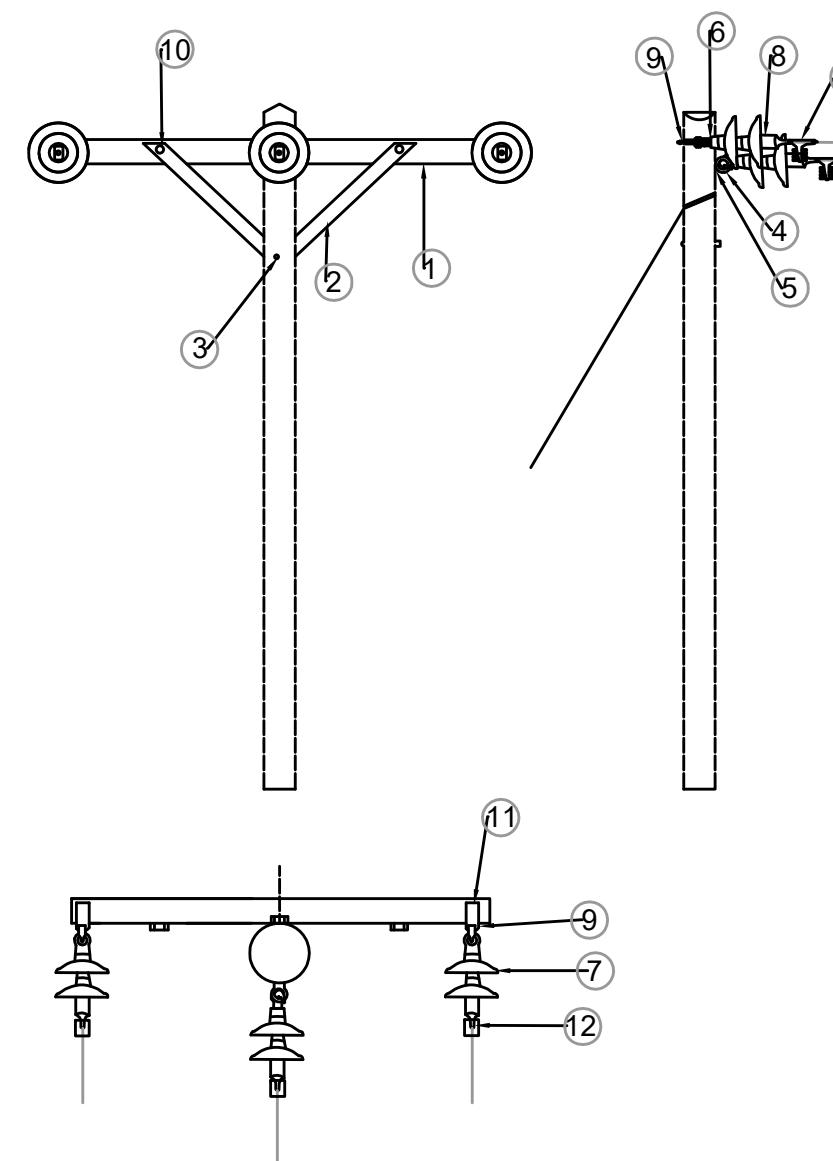
Fittings for Intermediate pole 11kV				
CU	MATERIALS			
	MARK IN SKETCH	CODE	QUANTITY	DESCRIPTION
15020	1	184805	3	Insulator pin 11kV
	2	187718	3	Spindle 11kV
	3	189626	3	Washer flat M20x64mm
	4	182911	1	Crossarm steel L1650x70x70mm BS1320
	5	188115	2	Tie strap flat steel 11kV 590x40x5mm
	6 and 7	180841	2	Bolt and nut M20x280 (1" x 3/4") pole cross-arm/Tie strap pole
	8	180822	2	Bolt and nut M20x40mm (1.5" x 3/4") Tie strap pole crossarm
Fittings Tee-off Pole with solid Links 11kV				
15330	MATERIALS			
	1	186921	1	Steel Channel U2200x100x50mm
	2	188115	2	Tie straps flat steel 11kV
	3	180841	1	Bolt and nut M20 x 280 (11" x 3/4")
	4	180912	1	Eye bolt and nut M20 x 300 (3/4" x 12")
	5	189632	2	Washer square curved M20x63.5mm
	6	184501	1	Hook ball ended 40kN (Only at central phase)
	7	184860	6	Insulator glass disk 70kN
	8	180116	3	Adaptor socket tongue single hole M16
	9	188107	2	Terminating strap flat 250x75x10mm
	10	180104	2	Adaptor ball clevis M16 (Only with the flat phase)
	11	180822	4	Bolt and nut M20 x 40mm
	12	181920	3	Clamp dead end 100-150mm ² cond.
	13	184805	2	Insulator pin 11kV
	14	187718	2	Spindle 11kV
	15	188447	3	Isolator solid link 11kV 400A
	16	188757	3	Connector live line tap 50mm ²
	17	181818	6	Connector P.G. clamp 75-150mm ² cond

Scale 1:75

Fittings Horizontal Section Pole (@ < 60) 11kV



Fittings Terminal Poles (@ < 60) 11kV



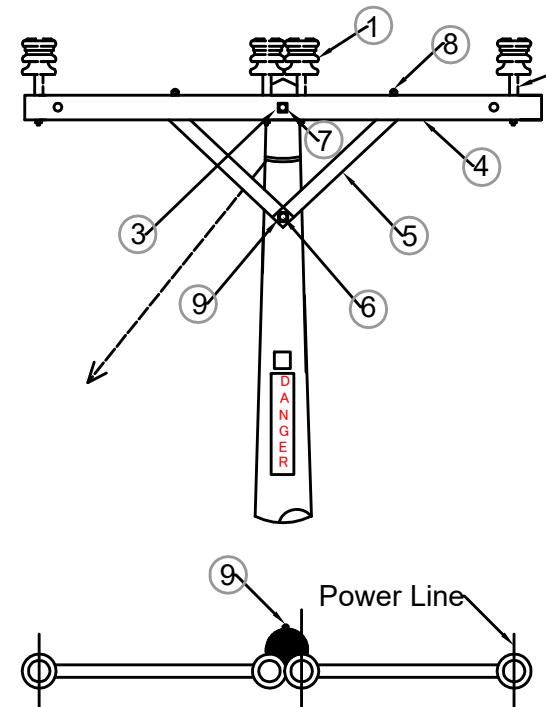
Fittings Horizontal Section Pole (@ < 60) 11kV				
CU	MATERIALS			
	MARK IN SKETCH	CODE	QUANTITY	DESCRIPTION
15110	1	182940	2	Crossarm wood 33kV 2616 x 127mm (8'8" x 5" x 4")
	2	188108	4	Tie strap angle steel 11kV
	3	180841	1	Bolt and nut M20 x 280 (11" x 3/4")
	4	180915	1	Eye bolt and nut M20 x 600 (24" x 3/4")
	5	135131	1	Eye nut M20(3/4")
	6	188109	2	Terminating strap flat 508x50x6mm (20"x2"x1/4")
	7	180833	4	Bolt and nut M20 x 175mm (7" x 3/4")
	8	189626	4	Washer flat square M20x63.5mm ²
	9	180116	6	Adaptor socket tongue single hole M16
	10	184501	2	Hook ball ended 40kN (Only at central phase)
	11	184860	12	Insulator glass disk70kN
	12	181920	6	Clamp dead end25-75mm ² cond.
	13	184805	2	Insulator pin 11kV
	14	187718	2	Spindle 11kV
	15	180104	4	Adaptor ball clevis M16 (Only with the flat phase)
	16	181816	3	Connector P.G. clamp Al 25-75mm ² cond

Fittings Terminal Poles (@ < 60) 11kV

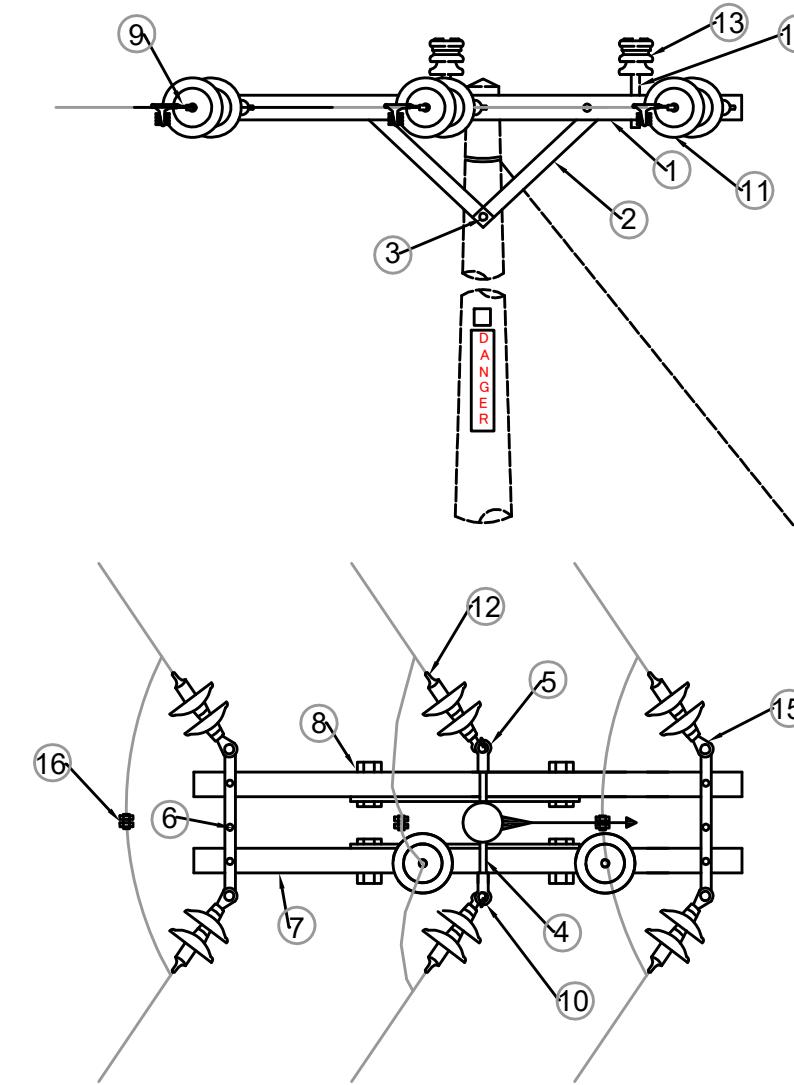
Fittings Terminal Poles (@ < 60) 11kV				
CU	MATERIALS			
	MARK IN SKETCH	CODE	QUANTITY	DESCRIPTION
15220	1	182911	1	Crossarm steel angle L 1650x70x70mm BS 1320
	2	188111	2	Tie straps steel angle L580x50x5mm
	3	180841	1	Bolt and nut M20 x 280 (11" x 3/4")
	4	180912	1	Eye bolt and nut M20 x 300 (3/4" x 12") H/D GALV
	5	189632	2	Washer square curved M20x63.5mm
	6	184501	1	Hook ball ended 40kN (Only at central phase)
	7	184860	6	Insulator glass disk70kN
	8	180116	3	Adaptor socket tongue single hole M16
	9	188107	2	Terminating strap flat 250x75x10mm
	10	180104	2	Adaptor ball clevis M16 (Only with the flat phase)
	11	180822	4	Bolt and nut M20 x 40mm
	12	181920	3	Clamp dead end25-75mm ² cond.

Scale 1:75

Fittings Intermediate and light angle pole 33kV



Fittings Horizontal Section Pole (@ < 60) 33kV

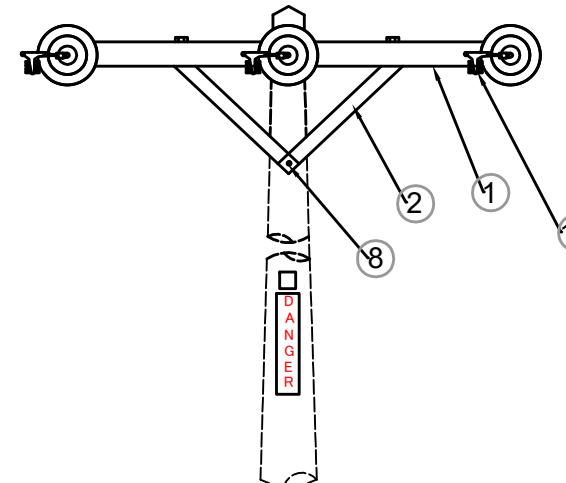


Fittings Intermediate and light angle pole 33kV				
CU	MATERIALS			
	MARK IN SKETCH	CODE	QUANTITY	DESCRIPTION
10380	1	184813	3	Insulator Pin 33kV
	2	187727	3	Spindle 33kV
	3	189626	3	Washer flat M20x64mm (tie strap)
	4	182940	1	Crossarm wood 8' 8" x 5" x 4"
	5	188108	2	Tie strap angle steel 33kV
	6	180841	1	Bolt and nut M20x280 (11" x 3/4") tie straps-pole
	7	180847	1	Bolt and nut M20x350 (14" x 3/4") pole cross-arm
	8	180833	2	Bolt and nut M20x175mm (7" x 3/4") tie strap cross-arm
	9	189632	2	Washer square curved M20x63.5mm

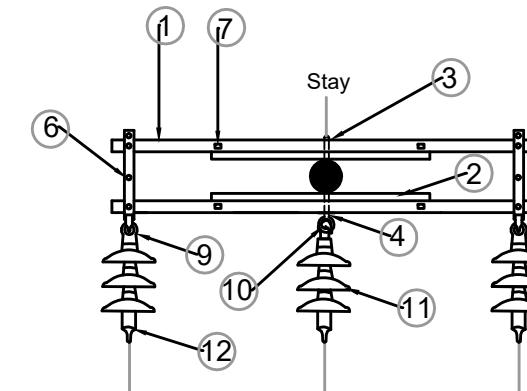
Fittings Horizontal Section Pole (@ < 60) 33kV				
CU	MATERIALS			
	MARK IN SKETCH	CODE	QUANTITY	DESCRIPTION
15430	1	182940	2	Crossarm wood (8' 8" x 5" x 4")
	2	188108	2	Tie straps angle steel 33V
	3	180841	1	Bolt and nut M20 x 280 (11" x 3/4")
	4	180915	1	Eye bolt and nut M20 x 600 (24" x 3/4")
	5	135131	1	Eye nut M20(3/4")
	6	188109	2	Terminating strap flat 508x50x6mm (20"x2"x1/4")
	7	180833	8	Bolt and nut M20 x 175mm (7" x 3/4")
	8	189626	8	Washer flat square M20x63.5mm ²
	9	180116	6	Adaptor socket tongue single hole M16
	10	184501	2	Hook ball ended 40kN (Only at central phase)
	11	184860	18	Insulator glass disk 70kN
	12	181920	6	Clamp dead end 25-75mm ² cond.
	13	184813	2	Insulator pin 33kV
	14	187727	2	Spindle 33kV
	15	180104	4	Adaptor ball clevis M16 (Only with the flat phase)
	16	181816	6	Connector P.G. clamp Al 25-75mm ² cond

Scale 1:75

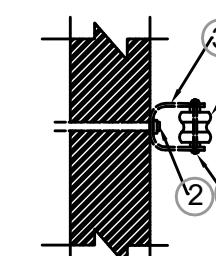
Fittings Terminal Poles (@ < 60) 33kV



Fittings Horizontal Section Pole (@ < 60) 33kV				
CU	MATERIALS			
	MARK IN SKETCH	CODE	QUANTITY	DESCRIPTION
15490	1	182940	2	Crossarm wood 33kV (8'8" x 5" x 4")
	2	188108	2	Pc 33kV Angle tie straps (steel)
	3	180841	1	Bolt and nut M20 x 280 (1" x 3/4")
	4	180915	1	Eye bolt and nut M20 x 600 (24" x 3/4")
	6	188109	2	Terminating strap flat 508x50x6mm (20"x2"x1/4")
	7	180833	8	Bolt and nut M20 x 175mm (7" x 3/4")
	8	189626	8	Washer flat square M20x63.5mm ²
	9	180116	3	Adaptor socket tongue M16
	10	184501	3	Hook ball ended 40kN (Only at central phase)
	11	184860	9	Insulator glass disk70kN
	12	181920	3	Clamp dead end25-75mm ² cond.

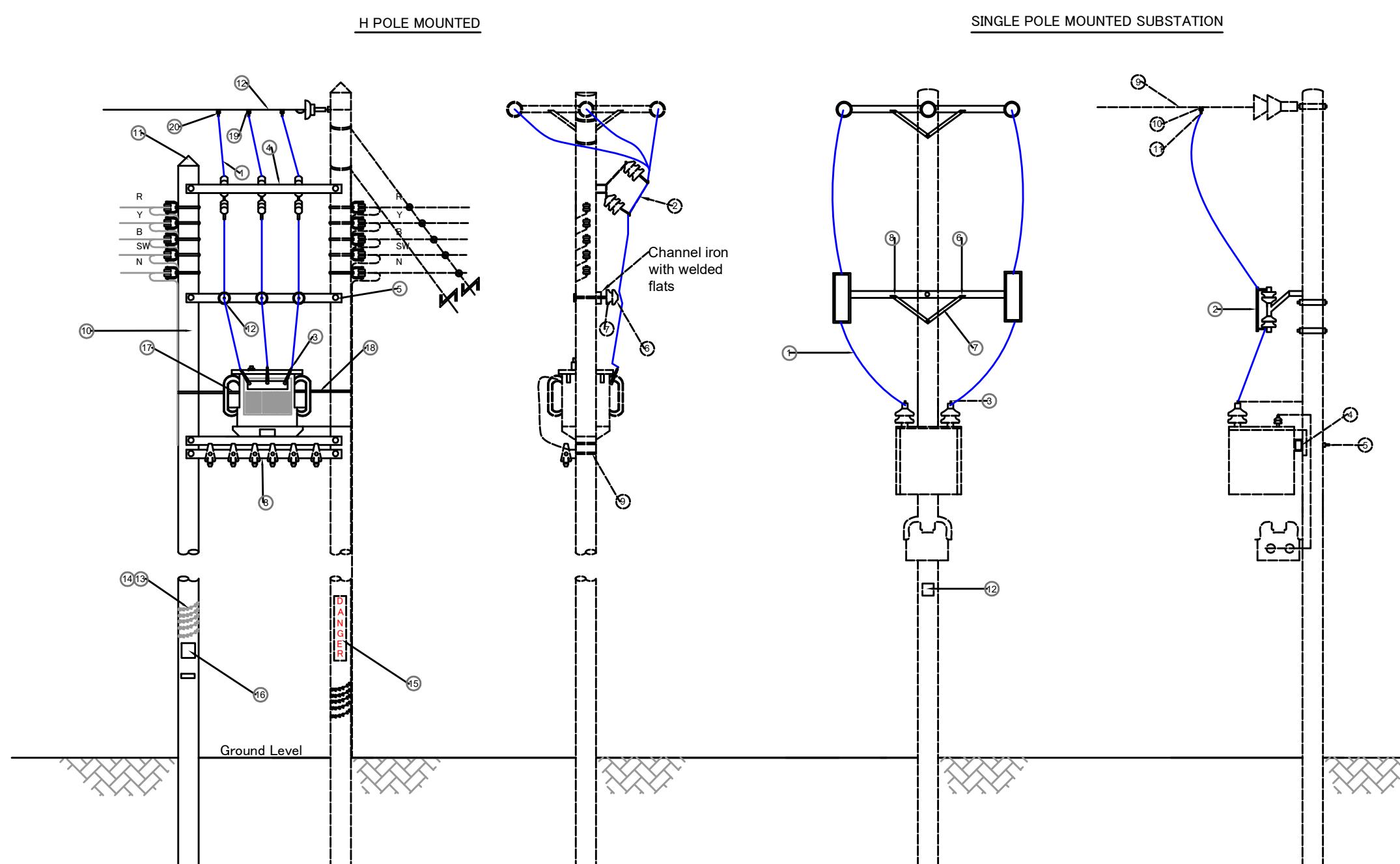


Service lines wall fittings



Service Lines Fittings				
CU	MATERIALS			
	MARK IN SKETCH	CODE	QUANTITY	DESCRIPTION
10210	1	184836	1	Insulator Shackle, LV
	2	105409	1	Bolt and washer Rawl, M12x120mm(1/2" x 5")
	3	181201	1	Bracket D-Iron H.D.GALV
	4	180788	1	Bolt and nut M16 x 175mm (5/8" x 7")

Scale 1:75



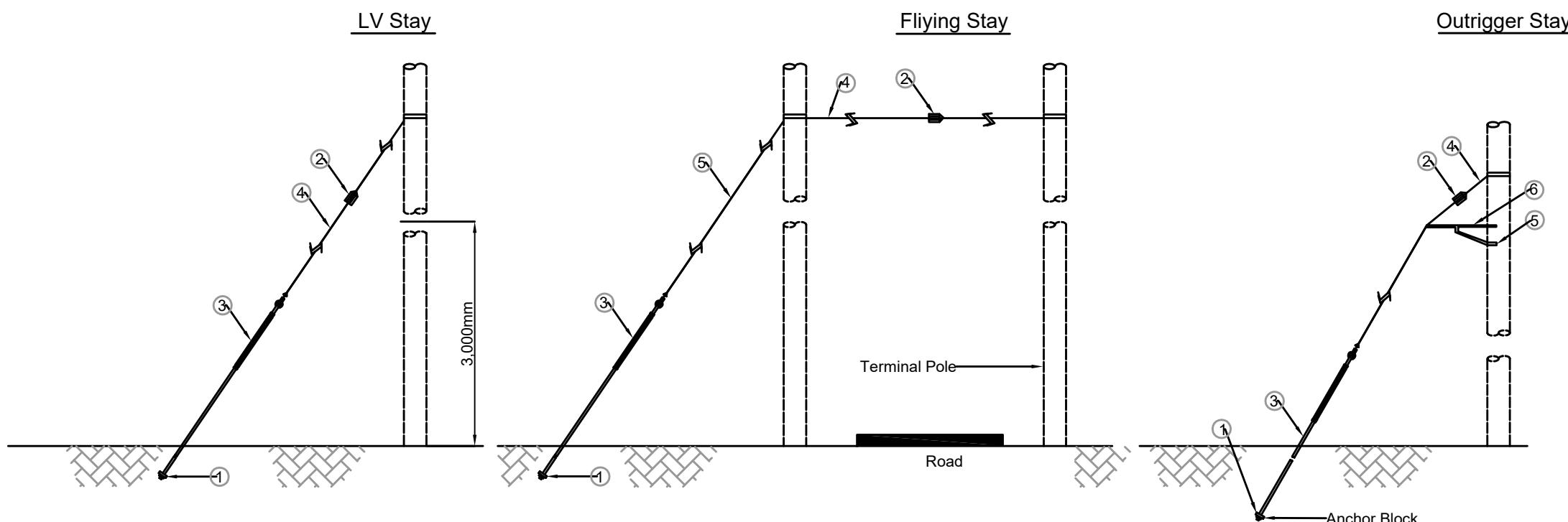
H POLE MOUNTED

CU	MATERIALS			
	MARK IN SKETCH	CODE	QUANTITY	DESCRIPTION
08030	1	182534	12m	Cable 50mm ² s/c Cu. PVC(19/ 064)
	2	185135	3	Isolator Solid link 33kv
	3	146220	3	Connector lug brass solder 70mm ² (8D)
	4	186922	4	Steel Channel steady bar U 2286 x 127 x 64mm
	5	180847	6	Bolt and nut M20 x 280mm (3/4" x 11")
	6	184813	3	Insulator pin 33kV
	7	187727	3	Spindle 33kV
	8	186932	1	Fuse bar wood 7' 6" x 5" x 4"
	9	180847	2	Bolt and nut M20 x 350mm (3/4" x 14")
	10	186187	1	Pole wood C 9.8 medium
	11	181251	1	Cover pole cap
	12	189705	12m	Binding wire No 9 AIPVC
	13	157201	7.5m	M barbed wire
	14	134301	0.1kg	Clout nails
	15	186006	1	Plate DANGER/HATARI
	16	---	1	Plate substation number
	17	189306	1	Tumbacle D/Screw 5/8" x 10"
	18	189748	4m	Stay wire 4/8
	19	182404	0.5m	Conductor 50mm ² AA HD bare
	20	188757	3	Connector live line tap 50mm ²

SINGLE POLE MOUNTED SUBSTATION

CU	MATERIALS			
	MARK IN SKETCH	CODE	QUANTITY	DESCRIPTION
08070	1	182534	12m	Cable 50mm ² s/c Cu. PVC(19/ 064)
	2	188447	3	Isolator Solid link 11kv
	3	146220	3	Connector lug brass solder 70mm ² (8D)
	4	186914	1	Single-pole mounted transformer platform
	5	180841	3	Bolt and nut M20 x 280mm (3/4" x 11")
	6	182911	1	Crossarm Steel 11kV L 1650 x 70 x 70mm
	7	188115	2	Tie strap Flat 590 x 40 x 5mm (11kV)
	8	180822	2	Bolt and nut M20 x 40mm (3/4" x 11/2")
	9	189705	12m	Binding wire No 9 AIPVC
	10	182402	1.5m	Conductor 50mm ² AA HD bare
	11	188757	3	Connector live line tap 50mm ²
	12	-----	1	Plate substation number

Scale 1:75



LV Stay				
CU	MATERIALS			
	MARK IN SKETCH	CODE	QUANTITY	DESCRIPTION
10250	1	180618	1	Stay block 3/4' Concrete
	2	184841	1	Stay Insulator
	3	186525	1	Stay Rod (1/2" x 6")
	4	189748	15m	Stay Wire 4/8

Flying Stay LV				
CU	MATERIALS			
	MARK IN SKETCH	CODE	QUANTITY	DESCRIPTION
10260	1	180618	1	Stay block 3/4' Concrete
	2	184841	1	Stay Insulator
	3	186525	1	Stay Rod (1/2" x 6")
	4	189306	1	Turnbuckel D/Screw (5/8" x 10")
	5	189748	45m	Stay Wire 4/8

Outrigger Stay				
CU	MATERIALS			
	MARK IN SKETCH	CODE	QUANTITY	DESCRIPTION
10270	1	180618	1	Stay block 3/4' Concrete
	2	184841	1	Stay Insulator
	3	186525	1	Stay Rod (1/2" x 6")
	4	189748	15m	Stay Wire 4/8
	5	143666	2	Screw Coach M12 x 80mm (1/2" x 3")
	6	181222	1	Bracket Outrigger

MV Stay				
CU	MATERIALS			
	MARK IN SKETCH	CODE	QUANTITY	DESCRIPTION
15590	1	180618	1	Stay block 3/4' Concrete
	2	184841	1	Insulator stay 11kV
	3	186531	1	Stay Rod 8x3/4"
	4	189748	20m	Stay Wire 7/8

Flying Stay MV				
CU	MATERIALS			
	MARK IN SKETCH	CODE	QUANTITY	DESCRIPTION
10260	1	180618	1	Stay block 3/4' Concrete
	2	184841	1	Insulator stay 11kV
	3	186531	1	Stay Rod 8x3/4"
	4	189306	1	Turn buckel double screw GALV. 10" 5/8"
	5	189737	20m	Stay Wire 7/8

Scale 1:75

THE PREPARATORY SURVEY
ON THE PROJECT FOR IMPROVEMENT
OF POWER DISTRIBUTION SYSTEM
AROUND NAIROBI CITY
IN THE REPUBLIC OF KENYA

DRAWING TITLE

Typical Drawing
- Stay LV / MV -

DRAW. NO.

TD-07

PREPARED BY

J. GEOFRY

CHECKED BY

S. MAETA

APPROVED BY

Y. TANAKA

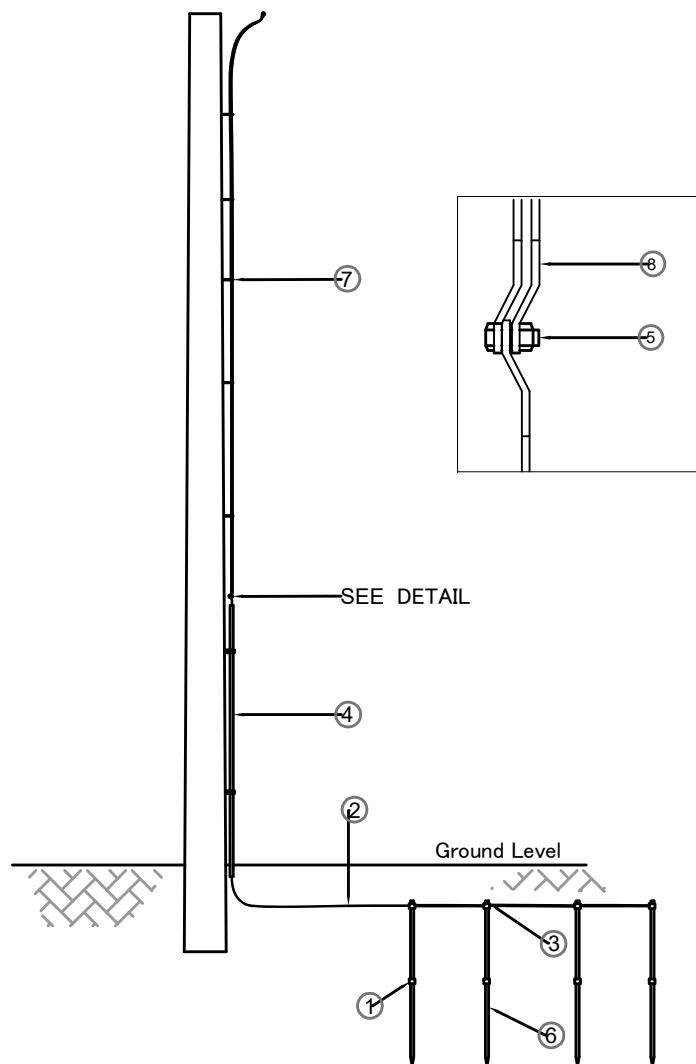
DATE

Aug-15,2018

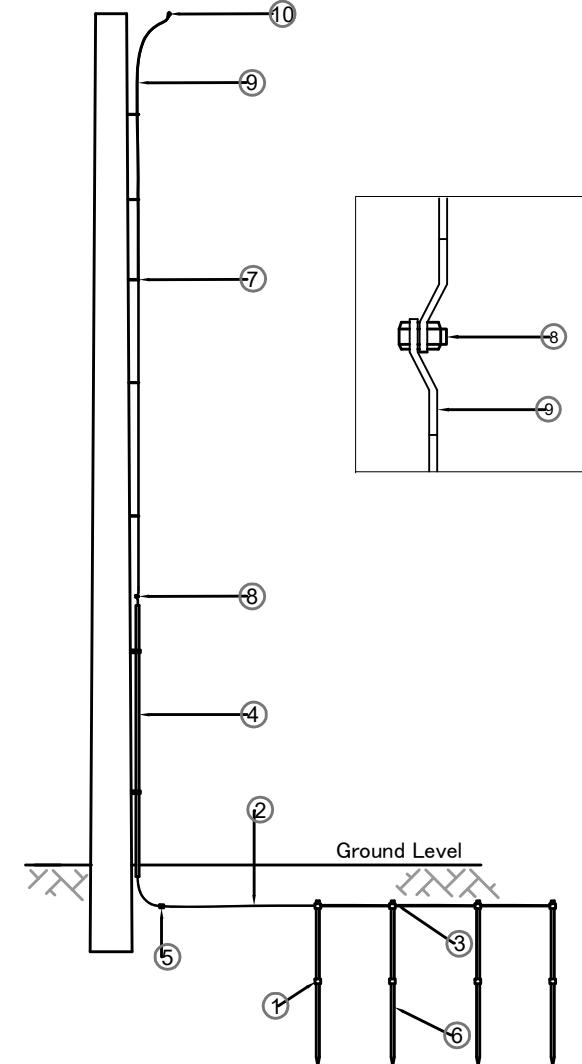


NIPON KOEI CO., LTD

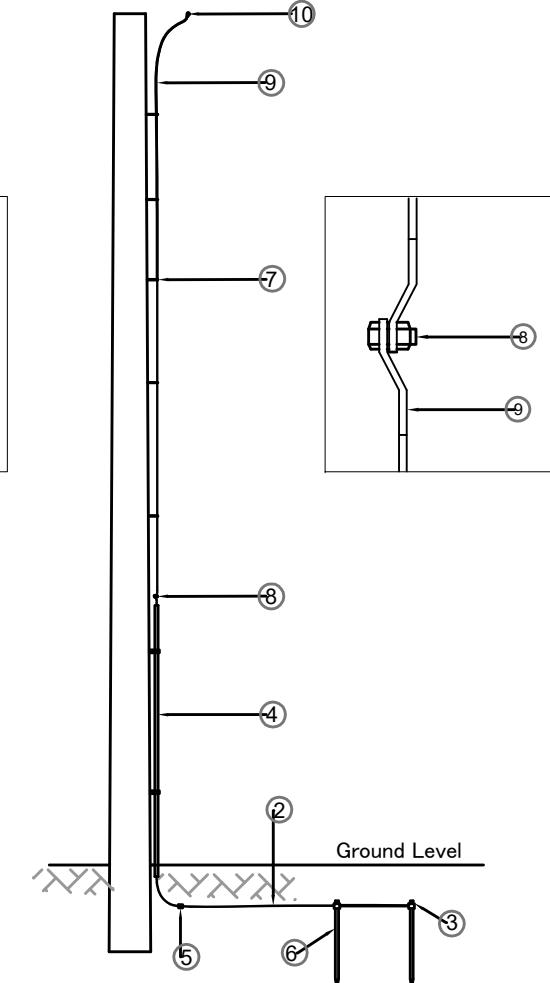
**MEDIUM VOLTAGE SUBSTATION
EARTH/SURGE EARTH**



LOW VOLTAGE EARTHING



PROTECTIVE MULTIPLE EARTH



**MEDIUM VOLTAGE SUBSTATION
EARTH/SURGE EARTH**

CU	MATERIALS			
	MARK IN SKETCH	CODE	QUANTITY	DESCRIPTION
14010	1	186546	4	Couplings for earth rods 1/2"
	2	182534	20	Cable 50mm ² S/C Cu. PVC
	3	186550	4	Earth rod clamp 5/8 "
	4	112631	1	Cable guard PVC 1/2 " x 8' 6"
	5	105563	1	Bolt and nut brass M20 x 25mm (3/8" x 1")
	6	186544	8	Earth rod copper 1/2 "x 5"
	7	142802	6	Saddles for cables 5/8 "
	8	146220	3	Connector lug brass solder 70mm ² (8D)
	9	134301	0.1kg	Clout nails 1"
LOW VOLTAGE EARTHING				
14030	MATERIALS			
	1	186546	4	Couplings for earth rods 1/2"
	2	182534	12	Cable 50mm ² S/C Cu. PVC
	3	186550	4	Earth rod clamp
	4	112631	1	Cable guard PVC 1/2 " x 8' 6"
	5	182532	8	Conductor 50mm ² AA A/D bare
	6	186544	8	Earth rod copper 1/2 "x 5"
	7	142802	6	Saddles for cables 5/8 "
	8	105563	1	Bolt and nut brass M20 x 25mm (3/8" x 1")
	9	146220	3	Connector line tap Al. 70mm ² (8D)
	10	188743	1	Connector line tap Al. 100mm ²
14060	MATERIALS			
	2	182534	12	Cable 50mm ² S/C Cu. PVC
	3	186550	2	Earth rod clamp 5/8 "
	4	112631	1	Cable guard PVC 1/2 " x 8' 6"
	5	182532	8	Conductor 50mm ² AA A/D bare
	6	186544	2	Earth rod copper 1/2 "x 5"
	7	142802	6	Saddles 5/8 "
	8	105563	1	Bolt and nut brass 3/8 " x 1"
	9	146220	3	Connector lug brass solder 70mm ² (8D)
	10	188743	1	Connector line tap Al. 100mm ²
	11	134301	0.1kg	Clout nails 1"

Scale 1:75

THE PREPARATORY SURVEY
ON THE PROJECT FOR IMPROVEMENT
OF POWER DISTRIBUTION SYSTEM
AROUND NAIROBI CITY
IN THE REPUBLIC OF KENYA

DRAWING TITLE

Typical Drawing
- Earthing -

DRAW. NO.

TD-08

PREPARED BY

J. GEOFRY

CHECKED BY

S. MAETA

APPROVED BY

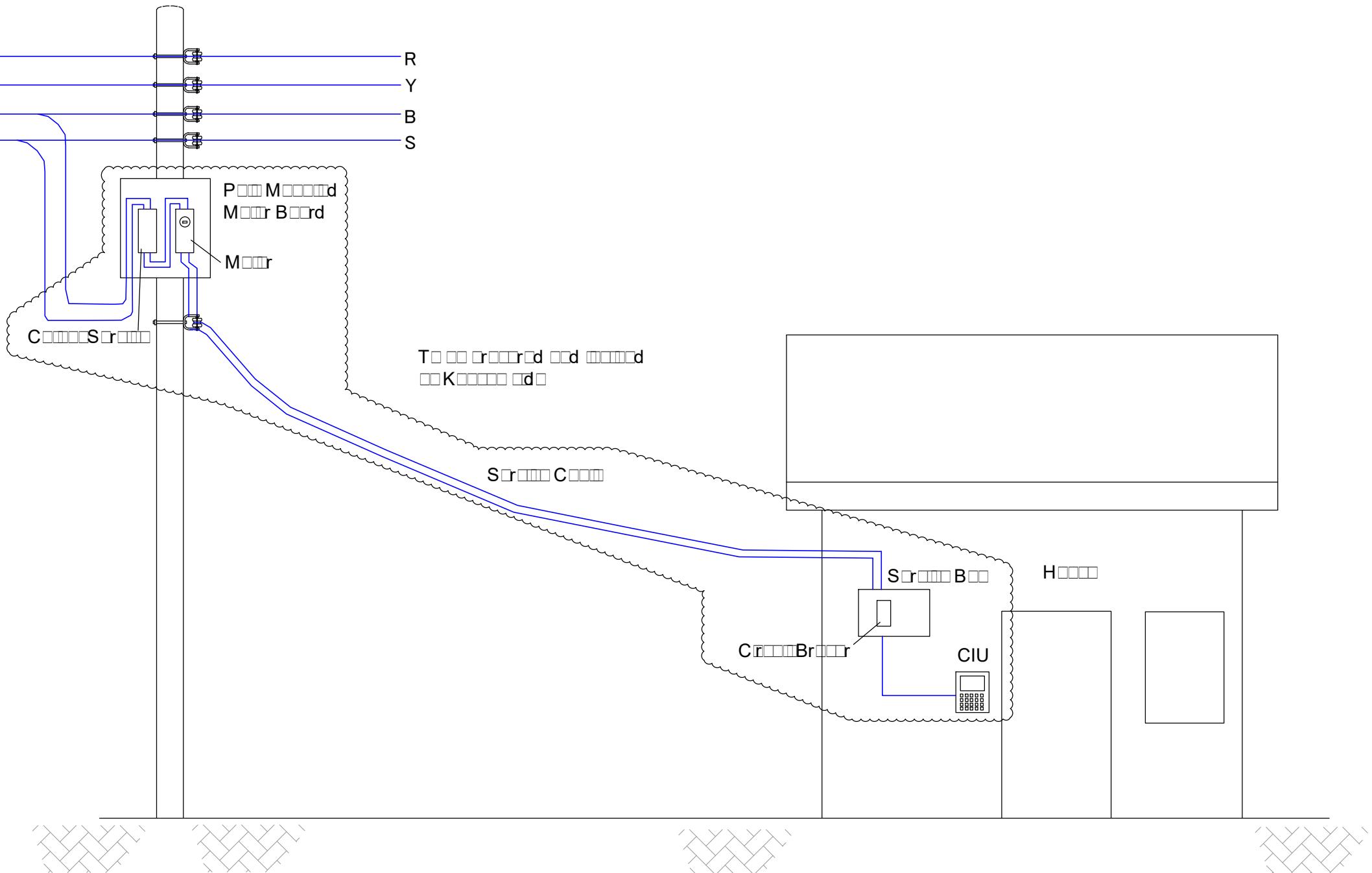
Y. TANAKA

DATE

Aug-15,2018



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THE PREPARATORY SURVEY
 ON THE PROJECT FOR IMPROVEMENT
 OF POWER DISTRIBUTION SYSTEM
 AROUND NAIROBI CITY
 IN THE REPUBLIC OF KENYA

DRAWING TITLE

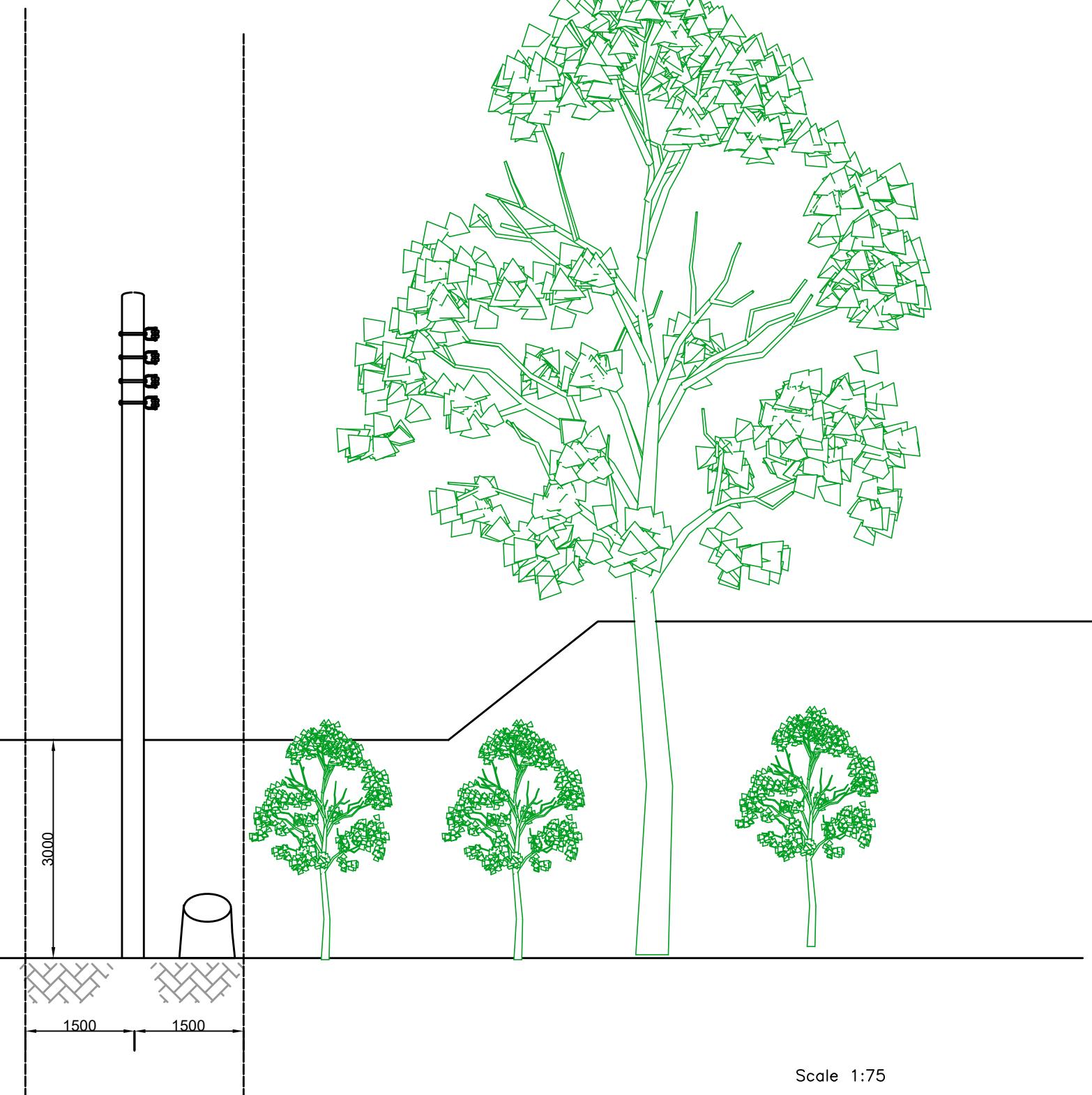
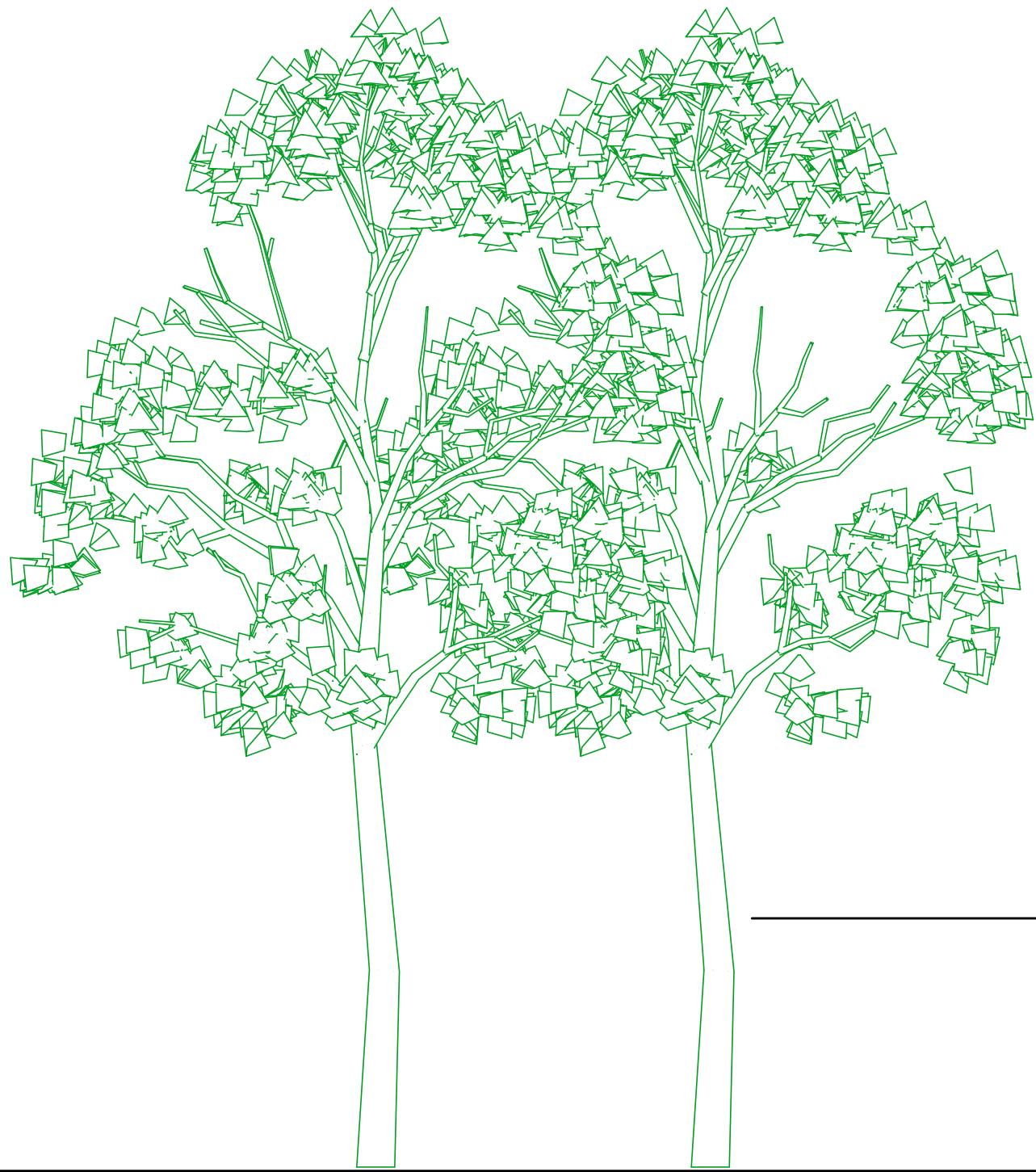
Typical Drawing
 - Service Line -

DRAW. NO.
TD-09

PREPARED BY	J. GEOFRY
CHECKED BY	S. MAETA
APPROVED BY	Y. TANAKA
DATE	Aug-15, 2018



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THE PREPARATORY SURVEY
ON THE PROJECT FOR IMPROVEMENT
OF POWER DISTRIBUTION SYSTEM
AROUND NAIROBI CITY
IN THE REPUBLIC OF KENYA

DRAWING TITLE

Typical Drawing
- Tree Cutting -

DRAW. NO.

TD-10

PREPARED BY J. GEOFRY

CHECKED BY S. MAETA

APPROVED BY Y. TANAKA

DATE Aug-15,2018



NIPPON KOEI CO., LTD