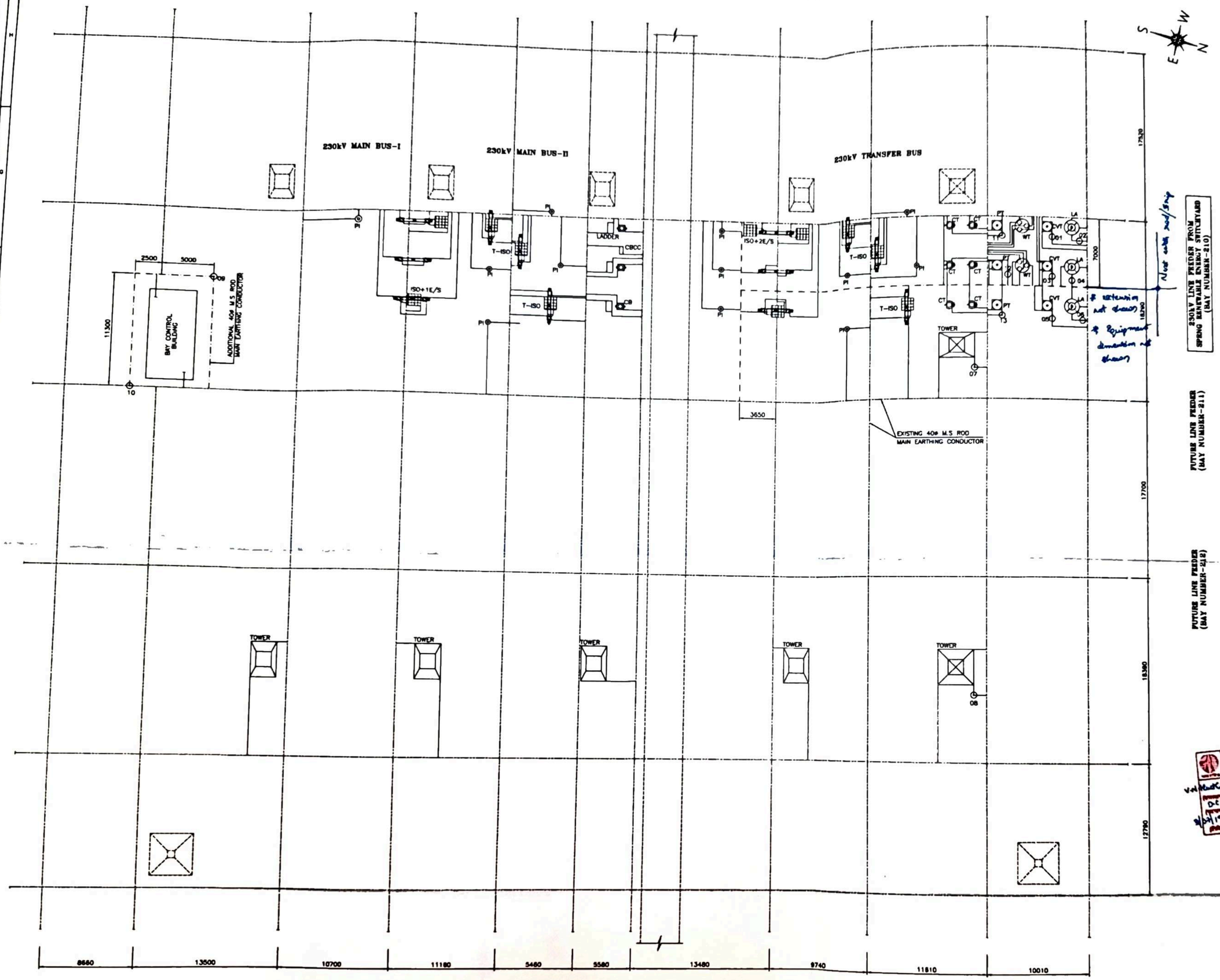

PART PLAN

NOTES:

1. EARTHING SHALL BE IN ACCORDANCE WITH
   i) IS:3043-1987-CODE OF PRACTICE FOR EARTHING.
   ii) IEEE-80-1986
2. ALL EQUIPMENTS AND TOWERS SHALL BE EARTHED AT TWO DIAGONALLY OPPOSITE POINTS.
3. 75x12 mm G.S. FLAT SHALL BE USED FOR EQUIPMENT EARTHING AND 40mm DIA M.S. ROD SHALL BE USED FOR RISER.
4. ALL ABOVE GROUND CONNECTIONS SHALL BE BOLTED TYPE AND BELOW GROUND SHALL BE WELDED TYPE.
5. EARTHING CONDUCTOR CROSSING THE ROAD, TRENCH & PIPE SHALL BE LAID IN G.I. PIPE TO SUIT SITE CONDITIONS.
6. EARTH CONDUCTORS RUNNING ON STRUCTURES SHALL BE SUPPORTED BY SUITABLE CLAMPS AT EVERY 1000mm INTERVALS IN PERFORATED CABLE TRAYS OF SUITABLE WIDTH.
7. EARTHING LAYOUT/EARTHING PIT LOCATION IN DRAWING IS DIAGRAMMATIC ONLY. THE ELECTRODES AND EARTH STRIPS CAN BE CHANGED SLIGHTLY TO SUIT SITE CONDITIONS.
8. ALL EQUIPMENT STRUCTURES, COLUMNS, FENCE ETC. SHALL BE CONNECTED TO EARTHMAT RISERS AND SUBSIDIARY EARTH STRIP AT SUITABLE LOCATIONS.
9. EARTH STRIP SHALL BE COVERED ON ALL SIDES BY A LAYER OF GOOD SOIL FREE FROM ROCKS, STONES, LUMPS AND THEN PLLUP
10. WHENEVER THE EARTH STRIP CROSSES THE FOUNDATION IT SHALL BE TAKEN AROUND THE FOUNDATION.
11. THE SURFACES TO BE WELDED SHOULD BE CLEANED OF DIRT, OIL, GREASE & OXIDES BEFORE WELDING ANY OXIDE THAT MAY HAVE FORMED DURING WELDING MUST BE REMOVED FROM THE WELDED JOINT.
12. ALL WELDED JOINTS TO BE PAINTED WITH BITUMEN AFTER CLEANING THE JOINTS.
13. A MINIMUM DISTANCE OF 6M SHALL BE MAINTAINED BETWEEN TWO EARTH PITS.
14. EARTHING TERMINAL OF EACH LA SHALL BE DIRECTLY CONNECTED TO ROD EARTH ELECTRODE WHICH IN TURN, SHALL BE CONNECTED TO STATION EARTHING GRID.
15. A 40 MM DIA, 3000 mm LONG M.S EARTH ELECTRODE WITH TEST LINK, CI FRAME AND COVER SHALL BE PROVIDED TO CONNECT DOWN CONDUCTOR OF LA.
16. THE CONNECTION BETWEEN EARTHING PADS AND THE EARTHING GRID SHALL BE MADE BY TWO SHORT EARTHING LEADS (ONE DIRECT & ANOTHER THROUGH THE SUPPORT STRUCTURE) FREE FROM LINKS AND SPLICES.
17. FOR EARTHING OF EQUIPMENT REFER DETAIL OF EARTHING. (STANDARD EARTHING DETAILS GIVEN WITH SECTION : SWITCHYARD ERECTION, REV. 07 OF TECHNICAL SPECIFICATION – DOC. REF C/ENG/STD/EARTHINGS (28 SHEETS)
18. EARTHING OF RAIL TRACKS, CABLE TRENCHES, JUNCTION BOXES & MARSHALLING BOX SHALL BE DONE AS PER TECHNICAL SPECIFICATION REQUIREMENT.

If any deviation between given details and technical specifications, technical specification shall prevails.

BILL OF QUANTITY FOR EARTHING:

SYMBOL	DESCRIPTION	UNIT	QUANTITY
– – –	40mm DIA M.S ROD – ADDITIONAL MAIN EARTHING CONDUCTOR	m	115
———	40ø M.S ROD – RISER & AUXILARY MAT	m	1300
⊙	40ø, 3000 LONG M.S. ROD ELECTRODE	Nos.	13
	75 x 12 G.S FLAT – ABOVE GROUND EARTHING CONDUCTOR (FOR MAIN EQUIPMENT)	m	425
	50 x 6 G.S FLAT – ABOVE GROUND EARTHING CONDUCTOR (FOR JB, CBCC, BMK ETC.)	m	50
	30 x 6 M.S FLAT – FOR CABLE TRENCH EARTHING	m	125

LEGEND:

- – – – – ADDITIONAL MAIN MAT CONSIDERED (40ø M.S ROD)
- ——— RISER (40ø M.S ROD)
- ——— EXISTING 40ø MAIN MAT EARTHING CONDUCTOR
- ISO+2E/S – ISOLATOR WITH 2 E/S
- ISO+1E/S – ISOLATOR WITH 1 E/S
- T-ISO – TANDEM ISOLATOR
- CT – CURRENT TRANSFORMER
- CB – CIRCUIT BREAKER
- PI – POST INSULATOR
- LA – LIGHTNING ARRESTER
- WT – WAVE TRAP
- ⊙ – 40ø, 3000 LONG M.S ROD ELECTRODE
- ▦ – AUXILARY MAT FOR ISOLATOR AND EARTH SWITCH MECHANISM BOX (40ø M.S ROD)

CMT-2

ALL DIMENSIONS ARE IN MILLIMETRES UNLESS OTHERWISE SPECIFIED

CONTRACTOR REFERENCE DRAWING:

1. GENERAL ARRANGEMENT – 230kV PUGALUR SUBSTATION EXTENSION – DRG. No. KPIC-SPR-PUG-DRG-E-001
2. ELECTRICAL LAYOUT – PLAN & SECTION – 230kV PUGALUR SUBSTATION EXTENSION – DRG. No. KPIC-SPR-PUG-DRG-E-003

EXISTING EARTHING LAYOUT REFERENCE:

1. EARTH MAT LAYOUT FOR 400/230kV PUGALUR SUBSTATION (NEW) AT K.PARAMATY VILLAGE – DRG. No. SYS-CS2619-P-EMAT-007 (M/s AREVA T&D INDIA LTD DRAWING)

REV.	DESCRIPTION	APPD.	DATE	REF.DRG.
1	DRAWING REVISED BASED ON POWERGRID COMMENTS.		22.07.19	

PROJECT CONSULTANT: POWER GRID CORPORATION OF INDIA LIMITED (A GOVERNMENT OF INDIA ENTERPRISE)

PROJECT: EXTENSION OF 400/230kV PUGALUR SUBSTATION (POWERGRID) FOR 1No. 230kV LINE BAY-BAY No. #210

OWNER: SPRNG RENEWABLE ENERGY PVT LTD, PUNE – 411013

OEM EPC: NORDEX INDIA PVT LTD, BANGALORE-560008

CONTRACT/LOA No.: SECI/C&PWPD/T4/LOA/SETL/P1/22067

TITLE: EARTHING LAYOUT

EPC: KSHEMA POWER & INFRASTRUCTURE COMPANY PRIVATE LTD

DRAWN	KIRCES	SCALE 1:200
CHECKED	V.C.MOHAN	
APPROVED	A.K.CHIRAM	DATE 25.05.2019
PASSED		
SHEET No. 1 OF 1	REVISION – 'Y'	
DRAWING No.	KPIC-SPR-PUG-DRG-E-003	