

**List of Drawings - 400kV Jamshedpur S/s Extn.**

SI No	Doc No.	Document Details
1	TB-370-316-005	Single Line Diagram for Jamshedpur S/s Extn.
2	TB-1-370-316-012	Layout Plan & Elevation for 400 kV Jamshedpur S/s Extn.





110-915-025-0-01

SYSTEM PARAMETERS :-

1. NOMINAL SYSTEM VOLTAGE	400KV
2. HIGHEST SYSTEM VOLTAGE	400KV
3. RATED FREQUENCY	50Hz
4. RATED SHORT TIME CURRENT FOR 1 SEC	40kA
5. RATED FULL WAVE IMPULSE WITHSTAND VOLTAGE	1500kVp
6. SWITCHING IMPULSE WITHSTAND VOLTAGE	1050kVp
7. ONE MINUTE POWER FREQUENCY DRY WITHSTAND VOLTAGE	550kVrms
8. MINIMUM CREEPING (CSW/MV)	1050kVrms
9. SYSTEM NEUTRAL EARTHING	EFFECTIVELY EARTHED

STRINGING DETAILS :-

CONDUCTOR	INS. STRING
JACK BUS & JUMPING	TWIN MOOSE
ALL EQUIPMENT INTERCONNECTION	TWIN MOOSE
SUB CONDUCTOR SPACING FOR TWIN MOOSE	450 mm
EARTHWIRE	-

CLEARANCE TABLE :-

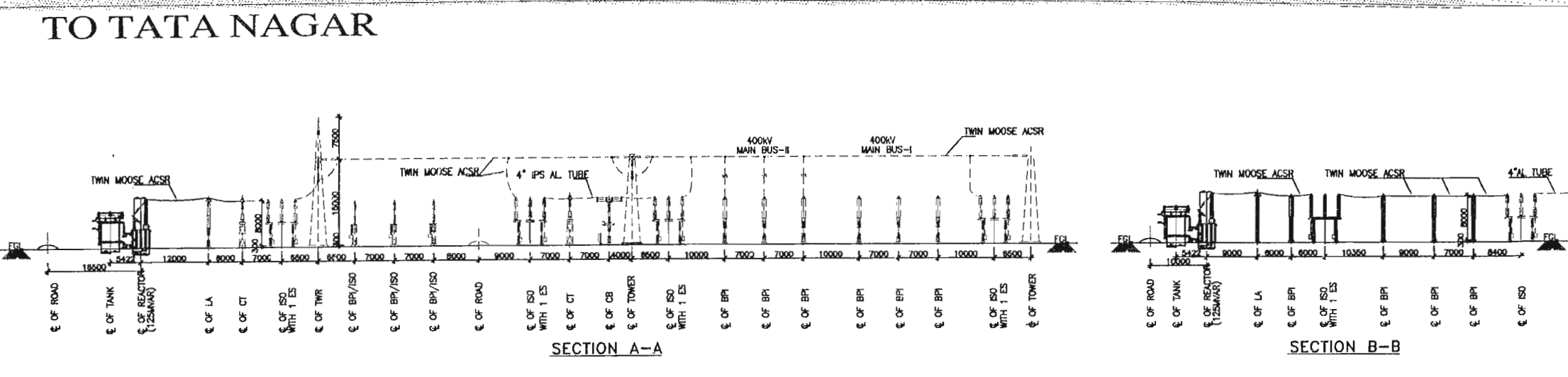
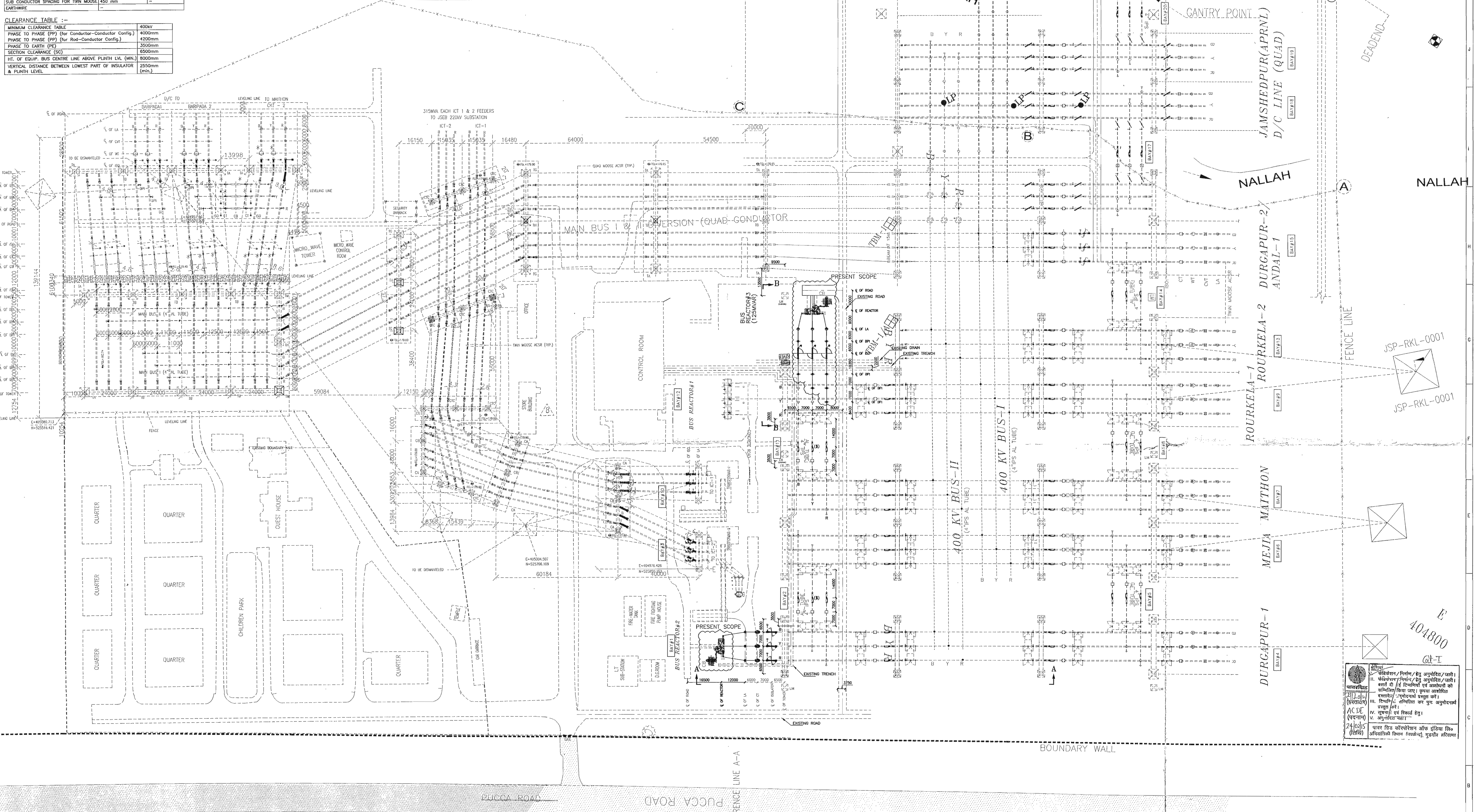
MINIMUM CLEARANCE TABLE	400KV
PHASE TO PHASE (PP) (for Conductor-Conductor Config.)	4000mm
PHASE TO PHASE (PP) (for Rod-Conductor Config.)	4000mm
PHASE TO EARTH (PE)	2500mm
SECTION CLEARANCE (SC)	8000mm
HT. OF EQUIP. BUS CENTRE LINE ABOVE PLINTH LVL. (MIN.)	2500mm
VERTICAL DISTANCE BETWEEN LOWEST PART OF INSULATOR & PLINTH LEVEL	2500mm (min.)

LEGEND TABLE :-

---	PRESENT SCOPE
- - -	FUTURE/EXISTING
□	SSD AND S/S BOX

BILL OF QUANTITY

ITEM CODE	DESCRIPTION	SYMBOL	QTY.	MAKE
1	420KV, 125 MVAR BUS REACTOR (3-PH)		02	BHEL
2	420KV, 3150A, 40MVA/1A HDB ISOLATOR WITH 1 1/2 S (3-PH) (ELECTRICALLY GANGED)		01	SIEMENS
3	30kV SURGE ARRESTER (1-PH)		03	COIL
4	420KV POST INSULATOR		01	
5	CONTROLLED SWITCHING DEVICE (CSD) FOR EXISTING 400KV CB (ABB MAKE) IN THE BAY#2		01	
6	CONTROLLED SWITCHING DEVICE (CSD) FOR EXISTING 400KV CB (ABB MAKE) IN THE BAY#1		01	



NOTES:-

- ALL DIMENSIONS ARE IN MM UNLESS SPECIFIED OTHERWISE.
- PLINTH LEVEL 300mm ABOVE FGL.
- 1 NO. 420KV, 125MVAR BUS REACTOR-3 SHALL BE KEPT IN PARALLEL WITH EXISTING 420KV, 50MVAR (EXISTING) BUS REACTOR-1.
- 1 NO. EXISTING 420KV, 50MVAR (3-PH) BUS REACTOR-2 SHALL BE REPLACED BY 125MVAR (3-PH) BUS REACTOR-2.
- DISMANTLING OF EXISTING 400KV (3-PH) BUS REACTOR ALONG WITH ALL ACCESSORIES AND STORING AT A SUITABLE LOCATION AT JAMSHEDPUR S/S AS PER DIRECTIONS OF POWERGRID SITE IN-CHARGE.
- MODIFICATION OF EXISTING 420KV, 50MVAR (3-PH) BUS REACTOR-2 FOUNDATION TO SUIT 420KV 125MVAR BUS REACTOR-2 ALONG WITH JACKING PADS, RAIL TRACK, Pylon SUPPORTS UNDER PRESENT SCOPE.
- CONTROL SWITCHING DEVICE SHALL BE PROVIDED FOR EXISTING 400KV 125 BAY CIRCUIT BREAKERS ASSOCIATED WITH 125MVAR BUS REACTORS UNDER PRESENT SCOPE.
- FIRE PROTECTION SYSTEM (HYDRANT SYSTEM & HYDRANT SYSTEM) FOR 2 NO. BUS REACTOR-EXISTING ADJACENT PIPING FOR FIRE PROTECTION SYSTEM OF EXISTING 50MVAR BUS REACTOR-1&2 SHALL FURTHER BE EXTENDED FOR THIS PURPOSE. EXISTING FIRE PROTECTION SYSTEM OF EXISTING BUS REACTOR-2 ALONG WITH DELUXE VALVE IS TO BE DISMANTLED AND HANDOVER TO THE STORE AS PER INSTRUCTION OF POWERGRID SITE INCHARGE.
- MAIN EARTH MAT ALREADY EXISTS IN THE EXTENSION AREA UNDER PRESENT SCOPE. ALL THE EQUIPMENTS, BUS REACTORS, CABLE TRENCHES, AUXILIARY EARTH MAT FOR ISOLATORS ETC. SHALL BE EARTHED BY CONNECTING THEM TO THE MAIN EARTH MAT.
- ILLUMINATION SYSTEM SWITCHYARD EXTENSION AREA UNDER PRESENT SCOPE. (SEPARATE Dwg SHALL BE SUBMITTED).
- A STONE HAS ALREADY BEEN LAID IN THE SWITCHYARD AREA UNDER PRESENT SCOPE. REMOVAL, CLEANING AND WASHING OF EXISTING STONE AND RE-SPREADING AFTER DOING ANTI-WEED TREATMENT & FILL AS PER

SECTION-CIVIL WORKS IS IN THE SCOPE OF BHEL.

- IN THE AREA UNDER PRESENT SCOPE WHERE STONE SPREADING DOES NOT EXIST, THE SAME SHALL BE PROVIDED ALONG WITH ANTI-WEED TREATMENT & PCC AS PER SECTION-CIVIL WORKS.
- THE REQUIRED CLEARANCES AS PER CLEARANCE TABLE ABOVE AND AS PER PROVISION OF I.E. RULE & OTHER STATUTORY REGULATION ETC SHALL BE MAINTAINED BY BHEL - ACHIEVED/AVAILABLE.
- DIRECT STROKE LIGHTNING PROTECTION COVERAGE IS CONSIDERING EXISTING LMS FOR 400KV SWITCHYARD AREA UNDER PRESENT SCOPE.
- COLLER BANK OF 420KV, 125MVAR REACTOR-2 SHALL BE LEFT HAND SIDE AND 420KV, 125MVAR REACTOR-3 SHALL BE RIGHT HAND SIDE BASED ON SITE CONDITIONS.

REFERENCE DWG :-

DWG. NO.	TITLE
C/ENG/ER-1/4/IMP/125S-1/4/GA/01	GENERAL ARRANGEMENT (TENDER Dwg.)
C/ENG/ER-1/4/IMP/125S-1/4/PLAN/SECTION/01	ELECTRICAL PLAN & SECTION LAYOUT FOR 400 KV JAMSHEDPUR S/S EXTN. (TENDER Dwg.)
1B-3-370-316-005	SINGLE LINE DIAGRAM FOR 400KV JAMSHEDPUR S/S EXTN.

REV.	DATE	ALTERED BY	CHECKED BY	APPROVED BY	ZONE
01	17.02.15	SKS	SKS	SKS	01

ADDITIONAL INFORMATION

STATUS OF DRAWING

DISTRIBUTION OF PRINTS

TO KANDRA

TO TATA NAGAR

TO JAMSHEDPUR

TO BHEL

TO POWERGRID

TO DISCOM

TO OTHERS

TO TOTAL

TO REMAIN

TO BE USED

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