






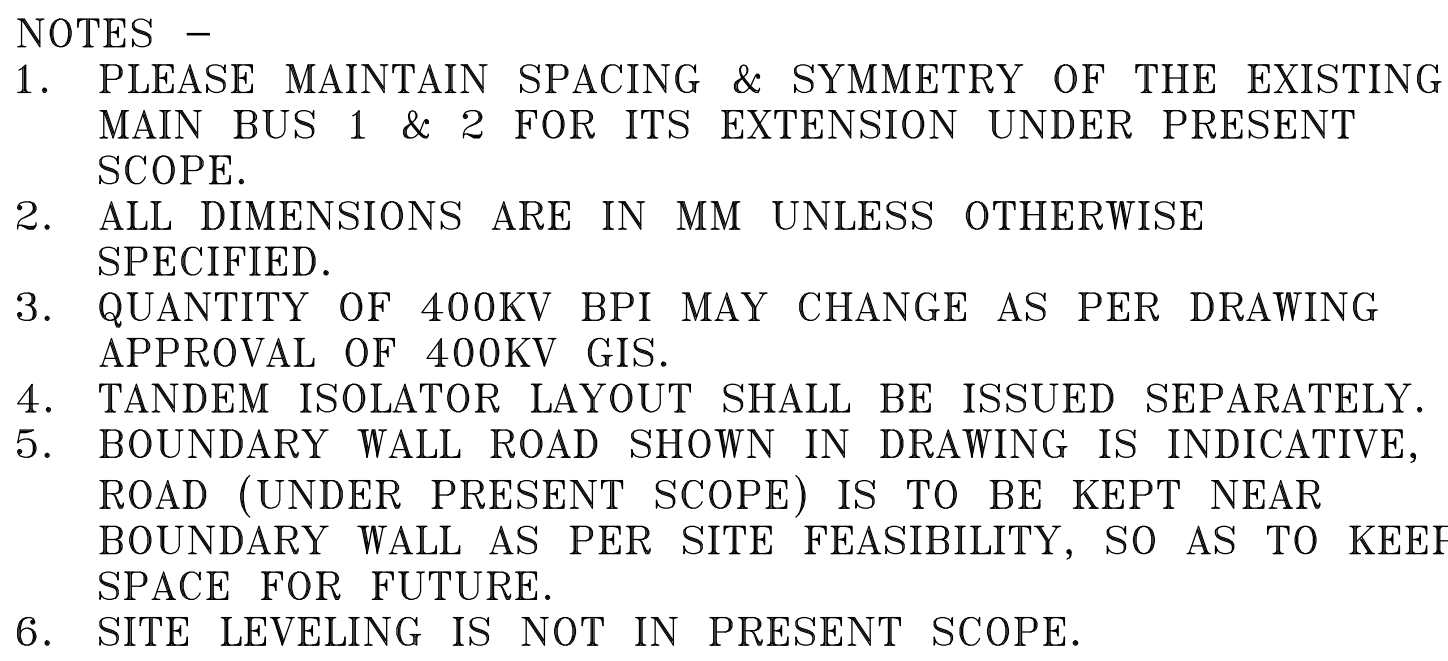


BILL OF QUANTITIES--220KV (40KA/1SEC):			
S.NO.	DESCRIPTION	SYMBOL	QTY. (NO.)
01	220KV, 1000A, 3-PH CIRCUIT BREAKER		01
02	220KV, 1000A, 3-PH, HORIZONTAL DOUBLE BREAK ISOLATOR WITH 2 E/S		01
03	220KV, 1000A, 3-PH, HORIZONTAL DOUBLE BREAK ISOLATOR WITH 1 E/S		01
04	220KV, 1000A, 3-PH, HORIZONTAL DOUBLE BREAK ISOLATOR (TANDEM TYPE) WITHOUT E/S		02
05	220KV, 1000A, 3-PH CURRENT TRANSFORMER WITH 120% EXTENDED CURRENT RATING		03
06	216KV, 1-PH, SURGE ARRESTER		03
07	220KV, BUS POST INSULATOR		14



 VERIFY THIS DIMENSION AT SITE.

BHEL REF. DRAWING:

SLD OF 400KV ITARSI EXTN. DWG. NO. TB-408-510-101	REV 00
SLD OF 220KV ITARSI EXTN. DWG. NO. TB-408-510-111	REV 00

PGCIL REF. DRAWING:

ELEC.LAYOUT DWG.NO.: 0716MP_ITARSI_SUBS_SWYD_E_DRG_42_001	REV 0
LYOUT/SECT. DWG.NO:0716MP_ITARSI_SUBS_SWYD_E_DRG_42_002	REV 0

SYSTEM PARAMETERS:		
S.NO.	DESCRIPTION	
01	SYSTEM OPERATING VOLTAGE	400kV
02	MAXIMUM OPERATING VOLTAGE OF THE SYSTEM (rms)	420kV
03	RATED FREQUENCY	50Hz
04	FULL WAVE IMPULSE WITHSTAND VOLTAGE (1/250 MICROSECS.)	1050kVp
05	SWITCHING IMPULSE WITHSTAND VOLTAGE (250/2000 MICRO SECS) DRY AND WET	1050kVp
06	ONE MINUTE POWER FREQUENCY DRY WITHSTAND VOLTAGE (rms)	630kV
07	ONE MINUTE POWER FREQUENCY DRY AND WET WITHSTAND VOLTAGE (rms)	--
08	CORONA EXTINCTION VOLTAGE	320kV
09	MAX. RADIX INTERFERENCE VOLTAGE FOR FREQUENCY BETWEEN 0.5 MHz AND 2 MHz	1000µV AT 266kV rms
10	MINIMUM CREEPAGE DISTANCE FOR EQUIPMENT OTHER THAN INSULATOR STRING	10500mm
11	SYSTEM FAULT LEVEL	40kA FOR 1 SEC
12	MINIMUM CLEARANCE PHASE TO PHASE	4000/4200mm
13	MINIMUM CLEARANCE PHASE TO EARTH	3500mm
14	SECTIONAL CLEARANCES OTHER THAN INSULATOR STRING	6500mm

CONDUCTOR & STRINGING DETAILS ~400KV:				
SL.NO.	DESCRIPTION	LEVEL FROM PLINTH	SUB-CONDUCTOR	TENSION INSULATOR STRING/PHASE
1.	MAIN BUS-I & II	(AT 8M HEIGHT)	4" IPS AL. TUBE	
2.	JACKBUS	(AT 15M HEIGHT)	TWIN MOOSE ACSR CONDUCTOR WITH 450MM SUB-CONDUCTOR SPACING	DOUBLE TENSION STRING-120KN POLYMER STRING INSULATOR
3.	DROPPERS/JUMPERING	- -	TWIN MOOSE ACSR CONDUCTOR WITH 450MM SUB-CONDUCTOR SPACING	SINGLE SUSPENSION STRING-120KN POLYMER STRING INSULATOR
4.	EQUIPMENT INTERCONNECTION	(AT 8M HEIGHT)	4" IPS AL. TUBE / TWIN ACSR MOOSE CONDUCTOR WITH 450MM SPACING	

CONDUCTOR & STRINGING DETAILS - 220kV:				
SL.NO.	DESCRIPTION	LEVEL FROM PUNTH	SUB-CONDUCTOR	TENSION INSULATOR STRING/PHASE
1.	MAIN BUS-I & II	(AT 11.7M HEIGHT)	QUAD AAC MOOSE CONDUCTOR WITH 450MM SUB-CONDUCTOR SPACING	DOUBLE TENSION STRING-120AN POLYMER STRING-INSULATOR
2.	TRANSFER BUS	(AT 11.7M HEIGHT)	TWIN AAC MOOSE CONDUCTOR WITH 450MM SUB-CONDUCTOR SPACING	DOUBLE TENSION STRING-120AN POLYMER STRING-INSULATOR
3.	JACKBUS	(AT 15M HEIGHT)	TWIN MOOSE ACSR CONDUCTOR WITH 450MM SUB-CONDUCTOR SPACING	DOUBLE TENSION STRING-120AN POLYMER STRING-INSULATOR
	DROPPERS/JUMPERING	- -	TWIN MOOSE ACSR CONDUCTOR WITH 450MM SUB-CONDUCTOR SPACING	SINGLE SUSPENSION STRING-120AN POLYMER STRING-INSULATOR
5.	EQUIPMENT INTERCONNECTION	(AT 5.9M HEIGHT)	4" IPS AL TUBE / TWIN ACSR MOOSE CONDUCTOR WITH 450MM SPACING	


DETAILS OF TOWERS/BEAMS : 400kV				
S.NO.	STR DESIGNATION	STR. HT/SPAN	QTY.	REMARKS
1	TA	15M+8.5M(PEAK)	02	
1	G1	24M	01	

DETAILS OF TOWERS/BEAMS : 220kV				
S.NO.	STR DESIGNATION	STR. HT/SPAN	QTY.	REMARKS
1	CTA	16.2M+5M(P.EAK)	02	
1	CTC	11.7+4.5+M+5M(P.EAK)	01	
1	CTG	11.7M	02	
1	CTH	11.7M	02	
1	B1	16M	02	
1	BG1	16M	03	

LEGENDS:-



REV.	DATE	ALTERED CHECKED APPROVED	REV.	DATE	ALTERED CHECKED APPROVED	REV.	DATE	ALTERED CHECKED APPROVED	REV.	DATE	ALTERED CHECKED APPROVED	DS
									02	26.12.18		JK SKS
ZONE			ZONE			ZONE			ZONE			
									1. DRAWING REVISED AS PER POWERGRID COMMENTS VIDE PREVIOUS REVISION. 2. TRANSFORMER AREA COLORED 3. GIS AREA KEPT ON HOLD TILL FINALIZATION OF GIS			

REV.	DATE	ALTERED	DS	प्रमाणित DEPT.	TBEM		अनुपात / SCALE	कॉड CARD CODE	प्रमाणित	
0	07.11.19	CHECKED	JK				NTS			
ZONE		APPROVED	SKS		422					
1. DRAWING REVISED AS PER POWERGRID COMMENTS. VIDE LETTER NO. WIDE LETTER REF NO. C-ENG-04-W-0053-20/0002/05/07/23.10.19. 2. TOWER AND GANTRY TYPE ARE ADDED.							भारतीय TITLE / SECTION LAYOUT FOR EXTN. OF 400/220KV ITARSI S/S	डाईनामिक / DRAWING NO. TB-408-316-102 पृष्ठ क्र./SHEET NO. 01	पृष्ठ क्र./ 0 अगला पृष्ठ / NEXT SHEET	