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DR. 'GND

FROM 11KV LINE

DAM-DT
30/150KVA
11KV/400
Dyn11

1.1KV CABLE

DG
100KVA
400V,50Hz,3PH.

1.1KV CABLE

DG CONTROL PANEL

1.1KV CABLE

FROM 11KV LINE

BFV TR
30/150KVA
11KV/400
Dyn11

1.1KV CABLE

DESANDING BASIN DISTRIBUTION BOARD(DAMDB)

VALVE HOUSE MAIN DISTRIBUTION BOARD(VHB)

400V TPN, 400A, 10KA FOR 1 SEC,
CU BUS BAR

400V TPN, 400A, 10KA FOR 1 SEC,
CU BUS BAR

INTAKE MAIN DISTRIBUTION BOARD(INTDB)

400V TPN, 100A, 10KA FOR 1 SEC,
CU BUS BAR

LEGENDS :-

LEGEND	DESCRIPTION
A	AMMETER
ASS	ANALOG SELECTOR SWITCH
AT	CURRENT TRANSFORMER
V	VOLTMETER
VSS	VOLTMETER SELECTOR SWITCH
W	WATT METER
WH	WATT HOUR METER
FS	FUSE
CT	CURRENT TRANSFORMER
PT	POTENTIAL TRANSFORMER
MCB	AIR CIRCUIT BREAKER
MCB	MINIATURE CIRCUIT BREAKER
MCB	MINIATURE CIRCUIT BREAKER
VT	VOLTAGE TRANSFORMER
WT	WATT TRANSFORMER
WHT	WATT HOUR TRANSFORMER

SYMBOLS	DESCRIPTION	SYMBOLS	DESCRIPTION
	AIR CIRCUIT BREAKER (ACB)		INDICATING METER
	MOULDED CASE CIRCUIT BREAKER (MCCB)		ELECTROMAGNETIC TRANSFORMER
	MINIATURE CIRCUIT BREAKER (MCB)		RELAY
	DRAW-OUT TERMINAL		FUSE
			TRANSFORMER
			GENERATOR
			CURRENT TRANSFORMER
			POTENTIAL TRANSFORMER

PROTECTION RELAYS-DEVICE FUNCTION

DEVICE NO.	FUNCTION
27	UNDER VOLTAGE PROTECTION
59	OVER-VOLTAGE PROTECTION
50/51	OVER-CURRENT PROTECTION

CT DETAILS:-

NO.	CIRCUIT	RATIO	ACC. CLASS	BURDEN VA	EXNER POINT VOLTAGE V _{pk} (V)	MAG. CURRENT Im A	PHYSICAL LOCATION
DAMDB	DG METERING	300/1A	1	30VA	-	-	DG CONTROL PANEL
CT1-DDB	DESANDING BASIN DB INCOMER-1 PROTECTION	300/1A	SP10	30VA	-	-	DAMDB
CT2-DDB	DESANDING BASIN DB INCOMER-1 METERING	300/1A	1	30VA	-	-	DAMDB
CT3-DDB	DESANDING BASIN DB INCOMER-2 PROTECTION	300/1A	SP10	30VA	-	-	DAMDB
CT4-DDB	DESANDING BASIN DB INCOMER-2 METERING	300/1A	1	30VA	-	-	DAMDB
INTDB	INTAKE GATE BOARD METERING	100/1A	1	30VA	-	-	INTDB
CT1-VHB	VALVE HOUSE BOARD PROTECTION	300/1A	SP10	30VA	-	-	VHB
CT2-VHB	VALVE HOUSE BOARD METERING	300/1A	1	30VA	-	-	VHB

VT DETAILS :-

NO.	CIRCUIT	QTY/ UNIT	RATIO V/V	ACCURACY CLASS	BURDEN VA	PHASE	PHYSICAL LOCATION
DGCP	DG CONTROL PANEL METERING & PROTECTION	3	11000 / 110 / $\sqrt{3}$ / $\sqrt{3}$	1	50	1PH	DG CONTROL PANEL
DAMDB	DESANDING BOARD INCOMER-1 METERING	3	11000 / 110 / $\sqrt{3}$ / $\sqrt{3}$	1	50	1PH	DAMDB
PT1-DDB	DESANDING BOARD INCOMER-1 METERING	3	11000 / 110 / $\sqrt{3}$ / $\sqrt{3}$	1	50	1PH	DAMDB
PT2-DDB	DESANDING BOARD INCOMER-2 METERING	3	11000 / 110 / $\sqrt{3}$ / $\sqrt{3}$	1	50	1PH	DAMDB
PT3-DDB	DESANDING BOARD BUS METERING & PROTECTION	3	11000 / 110 / $\sqrt{3}$ / $\sqrt{3}$	1	50	1PH	DAMDB
DAMDB	INTAKE BOARD INCOMER METERING	3	11000 / 110 / $\sqrt{3}$ / $\sqrt{3}$	1	50	1PH	INTDB
PT1-INT	INTAKE BOARD INCOMER METERING	3	11000 / 110 / $\sqrt{3}$ / $\sqrt{3}$	1	50	1PH	INTDB
PT2-INT	INTAKE BOARD BUS METERING	3	11000 / 110 / $\sqrt{3}$ / $\sqrt{3}$	1	50	1PH	INTDB
DAMDB	VALVE HOUSE BOARD INCOMER METERING	3	11000 / 110 / $\sqrt{3}$ / $\sqrt{3}$	1	50	1PH	VHB
PT1-VHB	VALVE HOUSE BOARD INCOMER METERING	3	11000 / 110 / $\sqrt{3}$ / $\sqrt{3}$	1	50	1PH	VHB
PT2-VHB	VALVE HOUSE BOARD BUS METERING	3	11000 / 110 / $\sqrt{3}$ / $\sqrt{3}$	1	50	1PH	VHB

RAGHUGANGA HYDROPOWER LIMITED

CONSULTANT
WAPCOS LIMITED

BHARAT HEAVY ELECTRICALS LTD.
BHOPAL, INDIA
(A GOVT OF INDIA UNDERTAKING)

NAME	SIGN	DATE
PREPARED: NARESH		09.10.2020
DESIGNED: PS		09.10.2020
CHECKED: VKG		09.10.2020
APPROVED: RMP		09.10.2020

REV.	DATE	ALTERED	-	
-	-	CHECKED	-	
-	-	APPROVED	-	

PROJECT
2 x 20 MW - RAHUGAT HYDROELECTRIC PROJECT, NEPAL

DEPT. TITLE
HPE
CODE
415

SINGLE LINE DIAGRAM
400V SWITCHGEAR FOR OTHER AREAS

DWG. NO. 12900073004

REV. 00

SHEET 01 OF 01