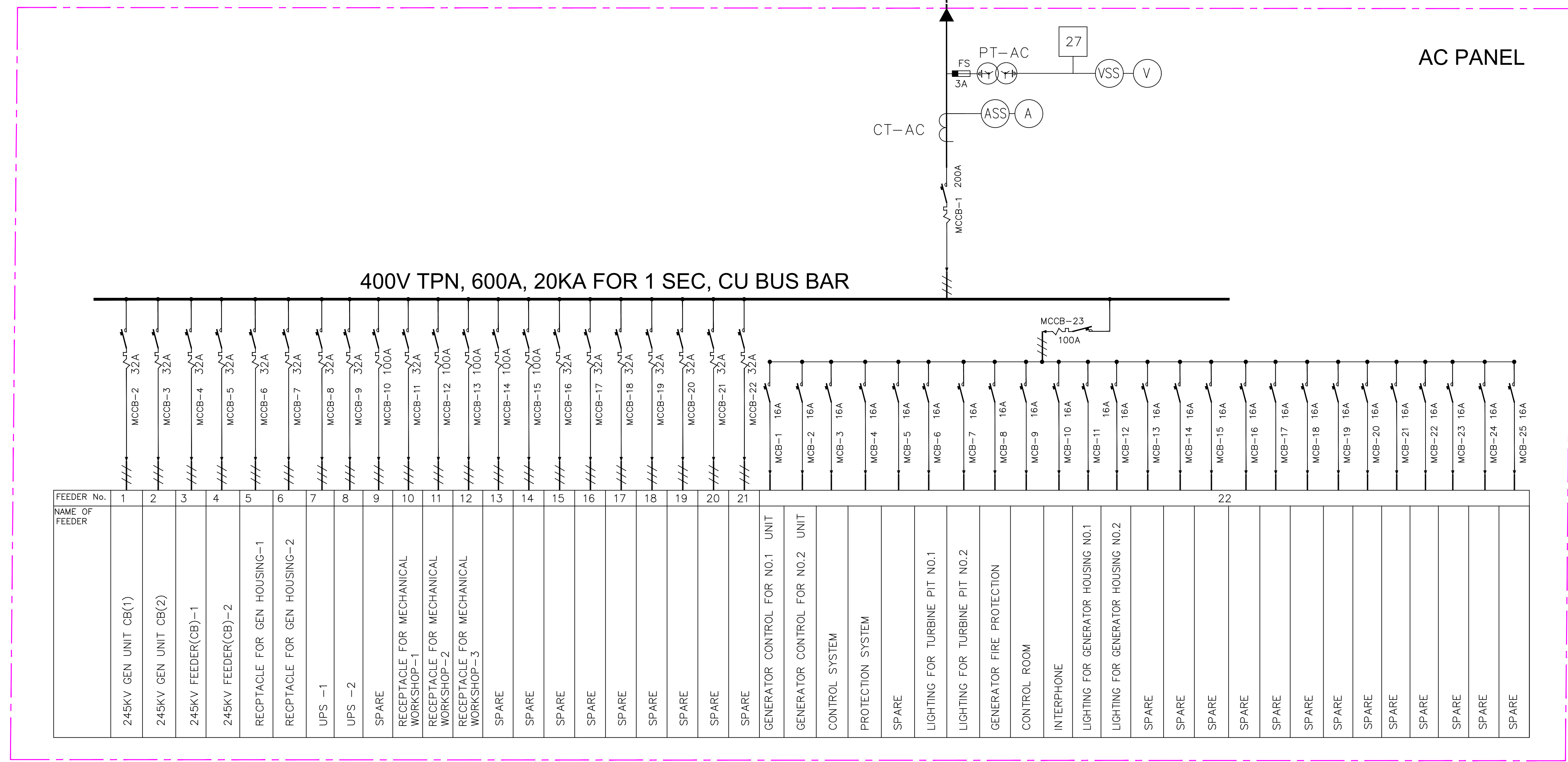
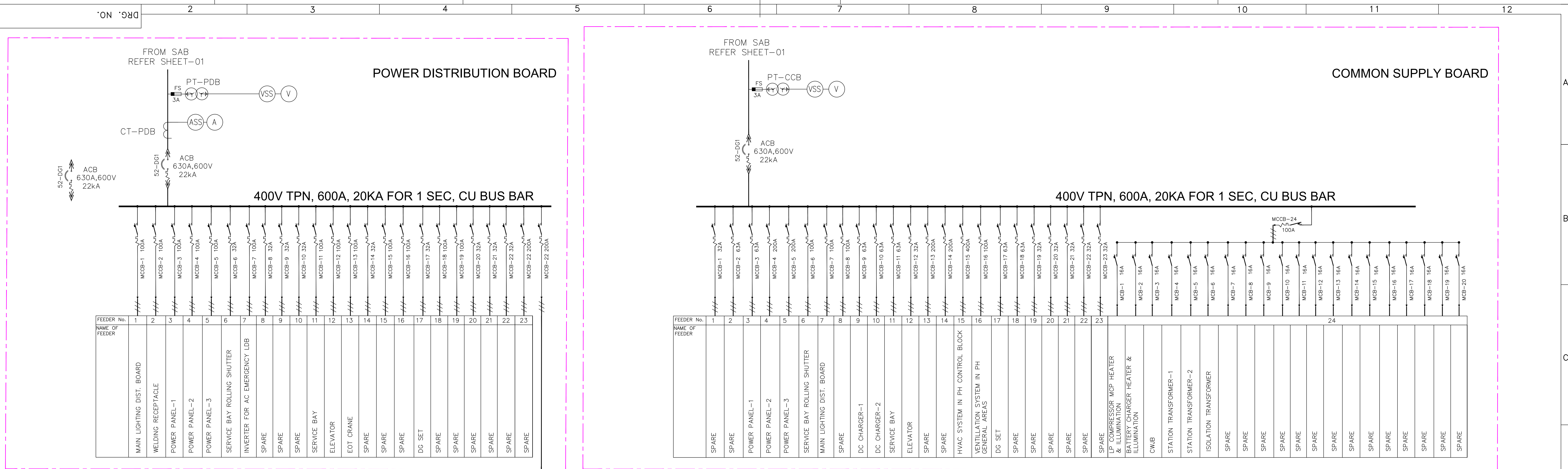














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| SYMBOLS | DESCRIPTION | SYMBOLS | DESCRIPTION |
|---|-------------------------------------|---|--|
|  | AIR CIRCUIT BREAKER (ACB) |  | INDICATING METER ELECTROMAGNETIC |
| | |  | TRANSDUCER / MULTI FUNCTION TRANSDUCER |
| | |  | RELAY |
|  | MOULDED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

LEGENDS :-

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

| PT DETAILS :- | | | | | | | |
|-----------------------------|--|----------|--|----------------|-----------|-------|-------------------|
| NO. | CIRCUIT | QTY/UNIT | RATIO V/V | ACCURACY CLASS | BURDEN VA | PHASE | PHYSICAL LOCATION |
| SAB PTs | | | | | | | |
| PT-S1 | SAB INCOMER-1 METERING AND PROTECTION | 3 | $\frac{400}{\sqrt{3}} / \frac{110}{\sqrt{3}}$ | 1.0 | 50 | 1PH | SAB |
| PT-S2 | SAB BUS-1 METERING AND PROTECTION | 3 | $\frac{400}{\sqrt{3}} / \frac{110}{\sqrt{3}}$ | 1.0 | 50 | 1PH | SAB |
| PT-S3 | SAB INCOMER-2 METERING AND PROTECTION | 3 | $\frac{400}{\sqrt{3}} / \frac{110}{\sqrt{3}}$ | 1.0 | 50 | 1PH | SAB |
| PT-S4 | SAB BUS-2 METERING AND PROTECTION | 3 | $\frac{400}{\sqrt{3}} / \frac{110}{\sqrt{3}}$ | 1.0 | 50 | 1PH | SAB |
| PT-S5 | SAB DG INCOMER METERING AND PROTECTION | 3 | $\frac{400}{\sqrt{3}} / \frac{110}{\sqrt{3}}$ | 1.0 | 50 | 1PH | SAB |
| UAB PTs | | | | | | | |
| PT-U1 | UAB-1 INCOMER METERING | 3 | $\frac{400}{\sqrt{3}} / \frac{110}{\sqrt{3}}$ | 1.0 | 50 | 1PH | UAB-1 |
| PT-U2 | UAB-2 INCOMER METERING | 3 | $\frac{400}{\sqrt{3}} / \frac{110}{\sqrt{3}}$ | 1.0 | 50 | 1PH | UAB-2 |
| DG CONTROL PANEL PTs | | | | | | | |
| PT-DG | DG CONTROL PANEL METERING AND PROTECTION | 3 | $\frac{400}{\sqrt{3}} / \frac{110}{\sqrt{3}} / \frac{110}{\sqrt{3}}$ | 3P/1.0 | 50 | 1PH | DGCP |
| CCB PTs | | | | | | | |
| PT-CCB | CCB INCOMER METERING | 3 | $\frac{400}{\sqrt{3}} / \frac{110}{\sqrt{3}}$ | 1.0 | 50 | 1PH | CCB |
| PDB PTs | | | | | | | |
| PT-PDB | PDB INCOMER METERING | 3 | $\frac{400}{\sqrt{3}} / \frac{110}{\sqrt{3}}$ | 1.0 | 50 | 1PH | PDB |
| AC PANEL PTs | | | | | | | |
| PT-AC | AC PANEL INCOMER METERING & PROTECTION | 3 | $\frac{400}{\sqrt{3}} / \frac{110}{\sqrt{3}}$ | 1.0 | 50 | 1PH | AC PANEL |

| CT DETAILS:- | | | | | | | |
|---------------------|---------------------------|--------|------------|-----------|--|--------------------------------|-------------------|
| NO. | CIRCUIT | RATIO | ACC. CLASS | BURDEN VA | KNEE POINT VOLTAGE V _{kp} (V) | MAG. CURRENT I _{in} A | PHYSICAL LOCATION |
| SAB CTs | | | | | | | |
| CT-S1 | SAB INCOMER-1 METERING | 800/5A | 1.0 | 30VA | — | — | SAB |
| CT-S2 | SAB INCOMER-2 METERING | 800/5A | 1.0 | 30VA | — | — | SAB |
| CT-S3 | SAB DG INCOMER METERING | 800/5A | 1.0 | 30VA | — | — | SAB |
| PDB CTs | | | | | | | |
| CT-PDB | PDB INCOMER METERING | 800/5A | 1.0 | 30VA | — | — | PDB |
| AC PANEL CTs | | | | | | | |
| CT-AC | AC PANEL INCOMER METERING | 800/5A | 1.0 | 30VA | — | — | AC PANEL |

| PROTECTION RELAYS—DEVICE FUNCTION | |
|-----------------------------------|-----------------------------|
| DEVICE NO. | FUNCTION |
| 27 | UNDER VOLTAGE PROTECTION |
| 50/51 | INST. & IDMT O/C PROTECTION |
| 59 | OVER—VOLTAGE PROTECTION |

NOTE: ALL ACBs SHALL BE PROVIDED WITH INBUILT OVERCURRENT & UNDER VOLTAGE PROTECTION.

| | | | | | | | | | |
|------|------|----------|---|--|--|-------------|---|------|----------------|
| REV. | DATE | ALTERED | - | | | PROJECT | 2 x 20 MW - RAHUGHAT HYDROELECTRIC PROJECT, NEPAL | | |
| | | CHECKED | - | | | | | | |
| | | APPROVED | - | | | | | | |
| | - | | | | | DEPT. TITLE | SINGLE LINE DIAGRAM | | |
| | | | | | | HPE | | | |
| | | | | | | CODE | 400V SWITCHGEAR FOR POWERHOUSE | | |
| | | | | | | 415 | | | |
| | | | | | | DWG. NO. | 1 2900073003 | REV. | 00 |
| | | | | | | | | | SHEET 02 OF 02 |