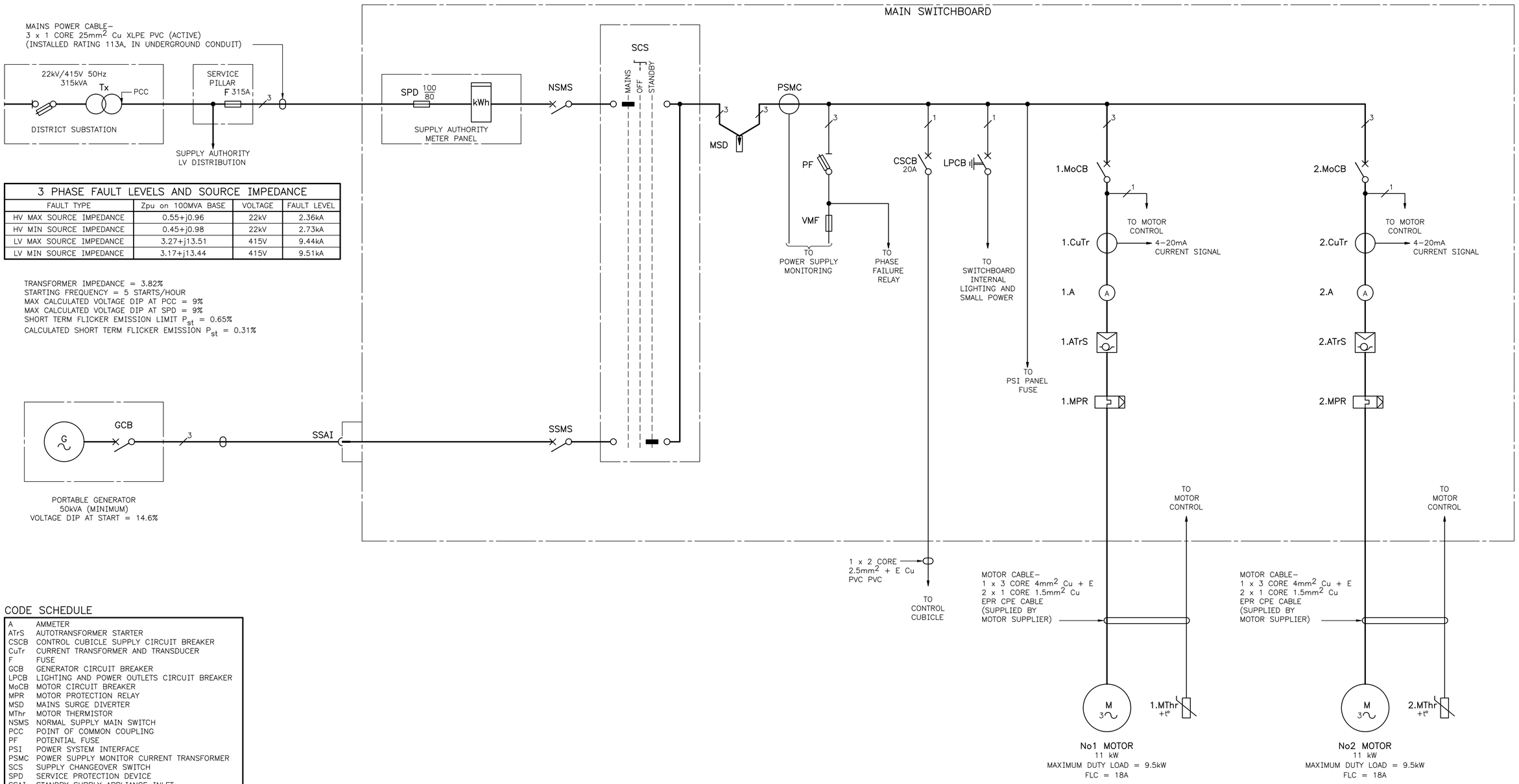

3 PHASE FAULT LEVELS AND SOURCE IMPEDANCE

FAULT TYPE	Zpu on 100MVA BASE	VOLTAGE	FAULT LEVEL
HV MAX SOURCE IMPEDANCE	0.55+j0.96	22kV	2.36kA
HV MIN SOURCE IMPEDANCE	0.45+j0.98	22kV	2.73kA
LV MAX SOURCE IMPEDANCE	3.27+j13.51	415V	9.44kA
LV MIN SOURCE IMPEDANCE	3.17+j13.44	415V	9.51kA

TRANSFORMER IMPEDANCE = 3.82%
STARTING FREQUENCY = 5 STARTS/HOUR
MAX CALCULATED VOLTAGE DIP AT PCC = 9%
MAX CALCULATED VOLTAGE DIP AT SPD = 9%
SHORT TERM FLICKER EMISSION LIMIT P_{st} = 0.65%
CALCULATED SHORT TERM FLICKER EMISSION P_{st} = 0.31%

CODE SCHEDULE

A	AMMETER
ATrS	AUTOTRANSFORMER STARTER
CSCB	CONTROL CUBICLE SUPPLY CIRCUIT BREAKER
CuTr	CURRENT TRANSFORMER AND TRANSDUCER
F	FUSE
GCB	GENERATOR CIRCUIT BREAKER
LPCB	LIGHTING AND POWER OUTLETS CIRCUIT BREAKER
MoCB	MOTOR CIRCUIT BREAKER
MPR	MOTOR PROTECTION RELAY
MSD	MAINS SURGE DIVERTER
MThr	MOTOR THERMISTOR
NSMS	NORMAL SUPPLY MAIN SWITCH
PCC	POINT OF COMMON COUPLING
PF	POTENTIAL FUSE
PSI	POWER SYSTEM INTERFACE
PSMC	POWER SUPPLY MONITOR CURRENT TRANSFORMER
SCS	SUPPLY CHANGEOVER SWITCH
SPD	SERVICE PROTECTION DEVICE
SSAI	STANDBY SUPPLY APPLIANCE INLET
SSMS	STANDBY SUPPLY MAIN SWITCH
Tx	TRANSFORMER
VMF	VOLTAGE MONITORING FUSE

GENERAL NOTES

1. CONSTRUCT SWITCHBOARD IN ACCORDANCE WITH THE WATER CORPORATION STANDARD SPECIFICATION DS26.9 FOR GENERAL SWITCHBOARD REQUIREMENTS DS26.36 FOR SWITCHBOARDS RATED ≤ 100A
2. NEUTRAL AND EARTH CONNECTIONS NOT SHOWN

CAUTION
VALUES SHOWN ARE INDICATIVE ONLY, DRAWING IS ONLY A PRESENTATION EXAMPLE OF A COMPLETED DESIGN

ISSUE	DATE	GRID	REVISION	DRN	REC	APPD
D	07/2021		SUPPLY INFORMATION REVISED; CAUTION NOTE ADDED	PH	TL	EG
C	02/2019		MSD, CHANGE OVER SWITCH, ANCILLIARY CIRCUITS AND SUPPLY INFORMATION REVISED	PH	EG	NJ
B	05/2018		CABLE CORE LABELLING DELETED	PH	EF	KOG

DESIGN SURVEY NONE | VERTICAL DATUM NONE | COORDINATE SYS NONE | ASCON SURVEY NONE | DES REF | DES CALC E FONG | DES CHD K O'GRADY | DRN P HARVEY | Q.C. CHD S MEMORY

NORTH POINT

SUBMITTED 24/07/2017 E FONG (SIGNED) SENIOR ENGINEER – ELECTRICAL

RECOMMENDED 24/07/2017 K O'GRADY (SIGNED) PRINCIPAL ENGINEER – ELECTRICAL

APPROVED 24/07/2017 N JOHNSON (SIGNED) SNR PRINCIPAL ENGINEER – ELECT

ENGINEERING

WATER CORPORATION

ELECTRICAL STANDARD SWITCHBOARD DESIGNS
SMALL PUMP STATIONS
ELECTRICAL PRIMARY DESIGN – DRAWING EXAMPLE
WASTEWATER 100A – POWER DIAGRAM

FILE | PLAN | CAD | ISSUE D | ORIGINAL SHEET SIZE A1
PROJECT | MN01–31–2 | MF

566
810

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STANDARDS\APPROVED\MN01\MN01–031–002–01D 13:26 26/04/2022 HARVEYPO/NB46193